UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 20-F

(Mark One) ☐ **REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) or (g) OF THE SECURITIES EXCHANGE ACT OF 1934**

OR

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2018

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

OR

☐ **SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Date of event requiring this shell company report __________
For the transition period from ________ to ________
Commission file number: 001-37668

Ferroglobe PLC
(Exact name of Registrant as specified in its charter)

England and Wales
(Jurisdiction of incorporation or organization)

2nd Floor West Wing, Lansdowne House, 57 Berkeley Square
London W1J 6ER, United Kingdom
+44-(0)203-129-2420
(Address of principal executive offices)

Phillip Murnane Chief Financial Officer and Principal Accounting Officer
2nd Floor West Wing, Lansdowne House, 57 Berkeley Square
London W1J 6ER, United Kingdom
+44-(0)203-129-2420
(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act

Title of each class	Name of each exchange on which registered
Ordinary Shares (nominal value of $0.01)	**NASDAQ Global Select Market**

Securities registered or to be registered pursuant to Section 12(g) of the Act.
None
Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act.
None

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.

Ordinary Shares (nominal value of $0.01) 169,122,682

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes ☐ No ☒

Note—Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," and "emerging growth company" in Rule 12b-2 of the Exchange Act:

Large accelerated filer ☒ Accelerated filer ☐ Non-accelerated filer ☐
Emerging growth company☐

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards† provided pursuant to Section 13(a) of the Exchange Act. ☐

† The term "new or revised financial accounting standard" refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP ☐ International Financial Reporting Standards as issued by the International Accounting Standards Board ☒ Other ☐

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow.

Item 17 ☐ Item 18 ☐

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

TABLE OF CONTENTS

CAUTIONARY STATEMENTS REGARDING FORWARD-LOOKING STATEMENTS		1
PART I		5
ITEM 1.	IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS	5
ITEM 2.	OFFER STATISTICS AND EXPECTED TIMETABLE	5
ITEM 3.	KEY INFORMATION	5
ITEM 4.	INFORMATION ON THE COMPANY	36
ITEM 4A.	UNRESOLVED STAFF COMMENTS	62
ITEM 5.	OPERATING AND FINANCIAL REVIEW AND PROSPECTS	63
ITEM 6.	DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES	90
ITEM 7.	MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS	104
ITEM 8.	FINANCIAL INFORMATION	111
ITEM 9.	THE OFFER AND LISTING	114
ITEM 10.	ADDITIONAL INFORMATION	115
ITEM 11.	QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.	129
ITEM 12.	DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES.	134
PART II		135
ITEM 13.	DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES.	135
ITEM 14.	MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS.	135
ITEM 15.	CONTROLS AND PROCEDURES.	135
ITEM 16.	[RESERVED]	136
ITEM 16A.	AUDIT COMMITTEE FINANCIAL EXPERT.	136
ITEM 16B.	CODE OF ETHICS.	136
ITEM 16C.	PRINCIPAL ACCOUNTANT FEES AND SERVICES.	136
ITEM 16D.	EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES.	137
ITEM 16E.	PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS.	137
ITEM 16F.	CHANGE IN REGISTRANT’S CERTIFYING ACCOUNTANT.	138
ITEM 16G.	CORPORATE GOVERNANCE.	138
ITEM 16H.	MINE SAFETY DISCLOSURE	139
PART III		140
ITEM 17.	FINANCIAL STATEMENTS.	140
ITEM 18.	FINANCIAL STATEMENTS.	140
ITEM 19.	EXHIBITS.	140

CAUTIONARY STATEMENTS REGARDING FORWARD-LOOKING STATEMENTS

This annual report includes statements that are, or may be deemed to be, forward-looking statements within the meaning of the securities laws of certain applicable jurisdictions. These forward-looking statements include, but are not limited to, all statements other than statements of historical facts contained in this annual report, including, without limitation, those regarding our future financial position and results of operations, our strategy, plans, objectives, goals and targets, future developments in the markets in which we operate or are seeking to operate or anticipated regulatory changes in the markets in which we operate or intend to operate. These statements are often, but not always, made through the use of words or phrases such as "believe," "anticipate," "could," "may," "would," "should," "intend," "plan," "potential," "predict(s)," "will," "expect(s)," "estimate(s)," "project(s)," "positioned," "strategy," "outlook," "aim," "assume," "continue," "forecast," "guidance," "projected," "risk" and similar expressions.

By their nature, forward-looking statements involve risks and uncertainties because they relate to events and depend on circumstances that may or may not occur in the future. Forward-looking statements are not guarantees of future performance and are based on numerous assumptions. Our actual results of operations, financial condition and the development of events may differ materially from (and be more negative than) those made in, or suggested by, the forward-looking statements. Investors should read the section entitled "Item 3.D.—Key Information—Risk Factors" and the description of our segments in the section entitled "Item 4.B.—Information on the Company—Business Overview" for a more complete discussion of the factors that could affect us. All such forward-looking statements involve estimates and assumptions that are subject to risks, uncertainties and other factors that could cause actual results to differ materially from the results expressed in, or suggested by, the statements. Among the key factors that could cause actual results to differ materially from those projected in the forward-looking statements are the following:

- the outcomes of pending or potential litigation;
- operating costs, customer loss and business disruption (including, without limitation, difficulties in maintaining relationships with employees, customers, clients or suppliers) may be greater than expected;
- the retention of certain key employees may be difficult;
- intense competition and expected increased competition in the future;
- our ability to adapt services to changes in technology or the marketplace;
- our ability to maintain and grow relationships with customers and clients;
- the historic cyclicality of the metals industry and the attendant swings in market price and demand;
- increases in energy costs and the effect on costs of production;
- energy prices, disruptions in the supply of power and changes in governmental regulation of the power sector;
- availability of raw materials and transportation;
- the cost of raw material inputs and the ability to pass along those costs to customers;
- costs associated with labor disputes and stoppages;
- our ability to maintain our liquidity and to generate sufficient cash to service indebtedness;
- integration and development of prior and future acquisitions;

- our ability to implement strategic initiatives and actions taken to increase sales growth;
- our ability to compete successfully;
- the availability and cost of maintaining adequate levels of insurance;
- our ability to protect trade secrets, trademarks and other intellectual property;
- equipment failures, delays in deliveries or catastrophic loss at any of our manufacturing facilities, which may not be covered under any insurance policy;
- exchange rate fluctuations;
- changes in laws protecting U.S., Canadian and European Union companies from unfair foreign competition (including antidumping and countervailing duty orders and laws) or the measures currently in place or expected to be imposed under those laws;
- compliance with, or potential liability under, environmental, health and safety laws and regulations (and changes in such laws and regulations, including in their enforcement or interpretation);
- risks from international operations, such as foreign exchange fluctuations, tariffs, duties and other taxation, inflation, increased costs, political risks and our ability to maintain and increase business in international markets;
- risks associated with mining operations, metallurgical smelting and other manufacturing activities;
- our ability to manage price and operational risks including industrial accidents and natural disasters;
- our ability to acquire or renew permits and approvals;
- potential losses due to unanticipated cancellations of service contracts;
- risks associated with potential unionization of employees or work stoppages that could adversely affect our operations;
- changes in tax laws (including under applicable tax treaties) and regulations or to the interpretation of such tax laws or regulations by governmental authorities;
- changes in general economic, business and political conditions, including changes in the financial markets;
- uncertainties and challenges surrounding the implementation and development of new technologies;
- risks related to our capital structure; and
- risks related to our ordinary shares.

These and other factors are more fully discussed in the “Item 3.D.—Key Information—Risk Factors” and “Item 4.B.—Information on the Company—Business Overview” sections and elsewhere in this annual report.

The risks set forth in “Item 3.D.—Key Information—Risk Factors” section are not exhaustive. Other sections of this annual report describe additional factors that could adversely affect our business, financial condition or results of operations. Moreover, we operate in a very competitive and rapidly changing commercial environment. New risk factors emerge from time to time and it is not possible for us to predict or list all such risks, nor can we assess the impact of all possible risks

on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained, or implied by, in any forward-looking statements.

The forward-looking statements made in this annual report relate only to events or information as of the date on which the statements are made in this annual report. Except as required by law, we undertake no obligation to update or revise publicly any forward-looking statements, whether as a result of new information, future events or otherwise, after the date on which the statements are made or to reflect the occurrence of unanticipated events. You should read this annual report and the documents we reference herein carefully and completely, with the understanding that our actual future results or performance may be materially different from what we anticipate.

CURRENCY PRESENTATION AND DEFINITIONS

In this annual report, references to "$," "US$" and "U.S. Dollars" are to the lawful currency of the United States of America, references to "Euro" and "€" are to the single currency adopted by participating member states of the European Union relating to Economic and Monetary Union and references to "Pound Sterling" and "£" are to the lawful currency of the United Kingdom.

Unless otherwise specified or the context requires otherwise, all financial information for the Company provided in this annual report is denominated in U.S. Dollars.

Definitions

Unless otherwise specified or the context requires otherwise in this annual report:

- the terms (1) "we," "us," "our," "Company," "Ferroglobe," and "our business" refer to Ferroglobe PLC and its subsidiaries, Globe Specialty Metals, Inc. ("Globe") and its consolidated subsidiaries and Grupo FerroAtlántica, S.A.U. ("FerroAtlántica") and its consolidated subsidiaries; (2) "Globe" refers solely to Globe Specialty Metals, Inc. and its consolidated subsidiaries and (3) "FerroAtlántica" or the "FerroAtlántica Group" refers solely to FerroAtlántica and its consolidated subsidiaries;

- "Borrower" refers to Ferroglobe PLC as borrower under the Revolving Credit Facility;

- "Business Combination" refers to the business combination of Globe and FerroAtlántica as wholly-owned subsidiaries of Ferroglobe PLC on December 23, 2015;

- "Class A Ordinary Shares" refers to share capital issued in connection with the Business Combination, which has subsequently been converted into ordinary shares of Ferroglobe PLC as a result of the distribution of beneficial interest units in the Ferroglobe Representation and Warranty Insurance Trust to certain Ferroglobe PLC shareholders on November 18, 2016;

- "Consolidated Financial Statements" refers to the audited consolidated financial statements of Ferroglobe PLC and its subsidiaries as of December 31, 2018 and December 31, 2017 and for each of the years ended December 31, 2018, 2017 and 2016, including the related notes thereto, prepared in accordance with IFRS (as such terms are defined herein);

- "IFRS" refers to International Financial Reporting Standards as issued by the International Accounting Standards Board;

- "Indenture" refers to the indenture, dated as of February 15, 2017, among Ferroglobe PLC and Globe as co-issuers, certain subsidiaries of Ferroglobe PLC as guarantors, and Wilmington Trust, National Association as trustee, registrar, transfer agent and paying agent;

- "Notes" refer to the $350,000,000 aggregate principal amount of Senior Notes due 2022;

- “Predecessor” refers to FerroAtlántica for all periods prior to the Business Combination;
- “Revolving Credit Facility” refers to the revolving credit facility available pursuant to the Revolving Credit Facility Agreement;
- “Revolving Credit Facility Agreement” refers to the credit agreement, dated as of February 27, 2018, as amended on or about October 31, 2018 and February 22, 2019, among Ferroglobe PLC, as Borrower, certain subsidiaries of Ferroglobe PLC from time to time party thereto as guarantors, the financial institutions from time to time party thereto as lenders, PNC Bank, National Association, as administrative agent, issuing lender and swing loan lender, PNC Capital Markets LLC, Citizens Bank, National Association and BMO Capital Markets Corp., as joint legal arrangers and bookrunners, Citizens Bank, National Association, as syndication agent, and BMO Capital Markets Corp., as documentation agent, as amended from time to time;
- “shares” or “ordinary shares” refer to the authorized share capital of Ferroglobe PLC;
- “tons” refer to metric tons (approximately 2,204.6 pounds or 1.1 short tons);
- “U.S. Exchange Act” refers to the U.S. Securities Exchange Act of 1934, as amended; and
- “U.S. Securities Act” refers to the U.S. Securities Act of 1933, as amended.

PRESENTATION OF FINANCIAL INFORMATION

The selected financial information as of December 31, 2018 and December 31, 2017 and for the years ended December 31, 2018, 2017 and 2016 is derived from our Consolidated Financial Statements, which are included elsewhere in this annual report and which are prepared in accordance with IFRS. The selected financial information related to other periods is derived as noted in “Item 3.—Key Information Selected Financial Data”.

Certain numerical figures set out in this annual report, including financial data presented in millions or thousands and percentages describing market shares, have been subject to rounding adjustments, and, as a result, the totals of the data in this annual report may vary slightly from the actual arithmetic totals of such information. Percentages and amounts reflecting changes over time periods relating to financial and other data set forth in “Item 5.—Operating and Financial Review and Prospects” are calculated using the numerical data in our Consolidated Financial Statements or the tabular presentation of other data (subject to rounding) contained in this annual report, as applicable, and not using the numerical data in the narrative description thereof.

PART I

ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not applicable.

ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

ITEM 3. KEY INFORMATION

A. Selected Financial Data

The following selected financial information as of December 31, 2018 and 2017 and for the years ended December 31, 2018, 2017 and 2016 is derived from our Consolidated Financial Statements, prepared in accordance with IFRS, which are included elsewhere in this annual report. The selected financial information as of December 31, 2015 reflect the consolidated statement of financial position of the Company as previously reported.

Ferroglobe was formed with the consummation of the Business Combination on December 23, 2015. FerroAtlántica is the Company's "Predecessor" for accounting purposes. Therefore, the selected consolidated income statement of the Company for the year ended December 31, 2015 were composed of the following results:

- Ferroglobe PLC for the period beginning February 5, 2015 (inception of the entity) and ended December 31, 2015;
- FerroAtlántica, the Company's "Predecessor," for the year ended December 31, 2015; and
- Globe for the eight-day period ended December 31, 2015.

The selected financial information as of and for the year ended December 31, 2014 corresponds to the Predecessor, FerroAtlántica.

The selected consolidated financial information as of and for the years ended December 31, 2018, 2017, 2016, 2015 and 2014 is not intended to be an indicator of our financial condition or results of operations in the future. The following tables should be read in conjunction with "Item 5.A.—Operating and Financial Review and Prospects—Operating Results," and our Consolidated Financial Statements included elsewhere in this annual report.

Consolidated Income Statement Data

($ thousands)	Year ended December 31, 2018	2017	2016 (3)	2015 (2)	2014 (1)
Sales	2,274,038	1,741,693	1,576,037	1,316,590	1,466,304
Cost of sales	(1,447,354)	(1,043,395)	(1,043,412)	(818,736)	(889,561)
Other operating income	46,037	18,199	26,215	15,751	6,891
Staff costs	(341,064)	(301,963)	(296,399)	(205,869)	(218,043)
Other operating expense	(283,930)	(239,926)	(243,946)	(200,296)	(165,491)
Depreciation and amortization charges, operating allowances and write-downs	(119,137)	(104,529)	(125,677)	(67,050)	(74,752)
Impairment losses	(58,919)	(30,957)	(268,089)	(52,042)	(399)
Net (loss) gain due to changes in the value of assets	(7,623)	7,504	1,891	(912)	(9,472)
Gain (loss) on disposal of non-current assets	14,564	(4,316)	340	(2,214)	555
Bargain purchase gain	40,142	—	—	—	—
Other losses	—	(2,613)	(40)	(347)	(60)
Operating profit (loss)	116,754	39,697	(373,080)	(15,125)	115,972
Finance income	5,374	3,708	1,536	1,096	4,771
Finance costs	(62,022)	(65,412)	(30,251)	(30,405)	(37,105)
Financial derivative gain (loss)	2,838	(6,850)	—	—	—
Exchange differences	(14,136)	8,214	(3,513)	35,904	7,800
Profit (loss) before tax	**48,808**	**(20,643)**	**(405,308)**	**(8,530)**	**91,438**
Income tax (expense) benefit	(24,235)	14,821	46,695	(49,942)	(59,707)
Profit (loss) for the year	**24,573**	**(5,822)**	**(358,613)**	**(58,472)**	**31,731**
Loss attributable to non-controlling interests	19,088	5,144	20,186	15,204	6,706
Profit (loss) attributable to the Parent	**43,661**	**(678)**	**(338,427)**	**(43,268)**	**38,437**

Earnings (loss) per share

($ thousands except for share amounts)	2018	2017	2016	2015 (2)	2014 (1)
Profit (loss) attributable to the Parent	43,661	(678)	(338,427)	(43,268)	38,437
Weighted average basic shares outstanding	171,406,272	171,949,128	171,838,153	99,699,262	98,078,163
Basic profit (loss) per ordinary share	**0.25**	**—**	**(1.97)**	**(0.43)**	**0.39**
Weighted average basic shares outstanding	171,406,272	171,949,128	171,838,153	99,699,262	98,078,163
Effect of dilutive securities	123,340	—	—	—	—
Weighted average dilutive shares outstanding	171,529,612	171,949,128	171,838,153	99,699,262	98,078,163
Diluted earnings (loss) per ordinary share	**0.25**	**—**	**(1.97)**	**(0.43)**	**0.39**

Cash dividends declared

($ thousands except for share amounts)	2018	2017	2016	2015 (2)	2014 (1)
Cash dividends declared	20,642	—	54,988	21,479	40,116
Cash dividends declared per ordinary share	0.12	—	0.32	0.12	0.41

Consolidated Statement of Financial Position Data

	As of December 31,				
($ thousands)	2018	2017	2016	2015 (2)	2014 (1)
Cash and cash equivalents	216,647	184,472	196,931	116,666	48,651
Total assets	2,123,817	2,000,257	2,019,301	2,391,161	1,388,158
Non-current liabilities	740,368	612,303	500,503	603,500	468,585
Current liabilities	499,077	450,196	626,756	492,688	411,896
Equity	884,372	937,758	892,042	1,294,973	507,677

(1) Financial data for the Predecessor, FerroAtlántica, except for share and per share data, which has been updated to reflect the shares received by the owners of FerroAtlántica as a result of the Business Combination for the year ended December 31, 2014.

(2) Financial data for Ferroglobe is derived from the results and financial position of: (a) Ferroglobe PLC for the period beginning February 5, 2015 (inception of the entity) and ended December 31, 2015; (b) FerroAtlántica for the year ended December 31, 2015; and (c) Globe for the eight-day period ended December 31, 2015.

(3) Our Spanish hydroelectric operations were determined to be discontinued and classified as held for sale in 2016. In July 2017, we announced that we did not receive the necessary regulatory approvals to divest these assets and the sale did not proceed and our Spanish hydroelectric operations ceased to be classified as held for sale. Accordingly, the results of such operations are presented within continuing operations for the years ended December 31, 2018 and 2017 and the consolidated income statements for prior periods have been re-presented to show the results of the Spanish energy business within income from continuing operations.

B. Capitalization and indebtedness.

Not applicable.

C. Reasons for the offer and use of proceeds.

Not applicable.

D. Risk factors.

An investment in our ordinary shares carries a significant degree of risk. You should carefully consider the following risks and all other information in this annual report, including our Consolidated Financial Statements. Additional risks and uncertainties we are not presently aware of, or that we currently deem immaterial, could also affect our business operations and financial condition. If any of these risks are realized, our business, results of operations and financial condition could be adversely affected to a material degree. As a result, the trading price of our ordinary shares could decline and you could lose part or all of your investment.

Risks Related to Our Business and Industry

Our operations depend on industries including the aluminum, steel, polysilicon, silicone and photovoltaic/solar industries, which, in turn, rely on several end-markets. A downturn or change in these industries or end-markets could adversely affect our business, results of operations and financial condition.

Because we primarily sell the silicon metal, silicon-based alloys, manganese-based alloys and other specialty alloys we produce to manufacturers of aluminum, steel, polysilicon, silicones, and photovoltaic products, our results are significantly affected by the economic trends in the steel, aluminum, polysilicon, silicone and photovoltaic industries. Primary end users that drive demand for steel and aluminum include construction companies, shipbuilders, electric appliance and car manufacturers, and companies operating in the rail and maritime industries. Primary end users that drive demand for polysilicon and silicones include the automotive, chemical, photovoltaic, pharmaceutical, construction and consumer products industries. Demand for steel, aluminum, polysilicon and silicones from such companies is driven primarily by gross domestic product growth and is affected by global economic conditions. Fluctuations in steel and aluminum prices may occur due to sustained price shifts reflecting underlying global economic and geopolitical factors, changes in industry supply-demand balances, the substitution of one product for another in times of scarcity, and changes in national tariffs. An easing of demand for steel and aluminum can quickly cause a substantial build-up of steel and aluminum stocks, resulting in a decline in demand for silicon metal, silicon-based alloys, manganese-based alloys, and other specialty alloys. Polysilicon and silicone producers are subject to fluctuations in crude oil, platinum, methanol and natural gas prices, which could adversely affect their businesses. Changes in power regulations in different countries, fluctuations in the relative costs of different sources of energy, and supply-demand balances in the different parts of the value chain, among other factors, may significantly affect the growth prospects of the photovoltaic industry. A significant and prolonged downturn in the end-markets for steel, aluminum, polysilicon, silicone and photovoltaic products, could adversely affect these industries and, in turn, our business, results of operations and financial condition.

The metals industry is cyclical and has been subject in the past to swings in market price and demand which could lead to volatility in our revenues.

Our business has historically been subject to fluctuations in the price of our products and market demand for them, caused by general and regional economic cycles, raw material and energy price fluctuations, competition and other factors. The timing, magnitude and duration of these cycles and the resulting price fluctuations are difficult to predict. For example, we experienced a weakened economic environment in national and international metals markets, including a sharp decrease in silicon metal prices in all major markets, from late 2014 to late 2017. During the second half of 2018, we experienced a fast and unexpected decline in the prices of products which adversely affected our results.

Historically, our subsidiary Globe Metallurgical Inc., has been affected by recessionary conditions in the end-markets for its products, such as the automotive and construction industries. In April 2003, Globe Metallurgical Inc. sought protection under Chapter 11 of the U.S. Bankruptcy Code following its inability to restructure or refinance its indebtedness amidst a confluence of several negative economic and other factors, including an influx of low-priced, dumped imports, which caused it to default on then-outstanding indebtedness. A recurrence of such economic factors could have a material adverse effect on our business, results of operations and financial condition.

Additionally, as a result of unfavorable conditions in the end-markets for its products, Globe Metales S.R.L. ("Globe Metales") became subject to reorganization proceedings ("*concurso preventivo*") in 1999, which ended in February 2019. While such reorganization proceedings were ongoing (until February 2019), Globe Metales could not dispose of or encumber its registered assets (including its real estate) or perform any action outside its ordinary course of business without prior court approval.

In calendar years 2009 and 2016, the global silicon metal, manganese and silicon based alloys industries suffered from unfavorable market conditions. We have also observed a deterioration of market conditions for several of our products in the second half of 2018 and the beginning of 2019 and these conditions may continue in the near future. Any decline in the global silicon metal, manganese and silicon based alloys industries could have a material adverse effect on our business, results of operations and financial condition. In addition, our business is directly related to the production levels of our

customers, whose businesses are dependent on highly cyclical markets, such as the automotive, residential and non-residential construction, consumer durables, polysilicon, steel, and chemical industries. In response to unfavorable market conditions, customers may request delays in contract shipment dates or other contract modifications. If we grant modifications, these could adversely affect our anticipated revenues and results of operations. Also, many of our products are traded internationally at prices that are significantly affected by worldwide supply and demand. Consequently, our financial performance will fluctuate with the general economic cycle, which could have a material adverse effect on our business, results of operations and financial condition.

Our business is particularly sensitive to increases in energy costs, which could materially increase our cost of production.

Electricity is one of our largest production components. The price of electricity is determined in the applicable domestic jurisdiction and is influenced both by supply and demand dynamics and by domestic regulations. Changes in local energy policy, increased costs due to scarcity of energy supply, climate conditions, the termination or non-renewal of any of our power purchase contracts and other factors may affect the price of electricity supplied to our plants and adversely affect our results of operations and financial conditions.

Because electricity is indispensable to our operations and accounts for a high percentage of our production costs, we are particularly vulnerable to supply limitations and cost fluctuations in energy markets. For example, at our Spanish, Argentine, South African and Chinese plants, production must be modulated to reduce consumption of energy in peak hours or in seasons with higher energy prices, in order for us to maintain profitability. Our Venezuelan operations depend on national hydraulic energy production (rainfall) to produce sufficient power to provide a reliable source of supply, which is not always possible. Generation of electricity in Spain and France by our own hydroelectric power operations partially mitigates our exposure to price increases in those two markets. However, we have pursued in the past the possibility of disposing of those operations, and may do so in the future. Such a divestiture, if completed, would result in a greater exposure to increases in electricity prices.

Electrical power to our U.S. and Canada facilities is supplied mostly by American Electric Power Co., Alabama Power Co., Brookfield Renewable Partners L.P., Hydro-Québec, the Tennessee Valley Authority, and Niagara Mohawk Power Corporation through dedicated lines. Our Alloy, West Virginia facility obtains approximately 45% of its power needs under a fixed-price power purchase agreement with a nearby hydroelectric facility owned by a Brookfield affiliate. This facility is over 70 years old and any breakdown could result in the Alloy facility having to purchase more grid power at higher rates. The energy supply for our Mendoza, Argentina facility is supplied by both the national network administrator Cammesa and by the local utility Edemsa (approximately 50% each) under a power agreement expiring in December 2019 with a low rate specifically approved for ultra electrointensive industries. The extension of this rate after December 2019 is being negotiated. There can be no assurance that such negotiations will be completed on terms we consider to be commercially reasonable, or at all.

Energy supply to our facilities in South Africa is provided by Eskom (State-owned power utility) through rates that are approved annually by the national power regulator (NERSA). These rates have had an upward trend in the past years, due to the instability of available supply, and are likely to continue increasing. Also, NERSA applies certain revisions to rates based on cost variances for Eskom that are not within our control. We have completed negotiations with Eskom for a new power contract for 2018 and 2019.

In Spain, power is purchased in a competitive wholesale market. Our facilities have to pay access tariffs to the national grid and get certain payments in exchange for providing services to the grid (*i.e.*, interruptibility services). The volatile nature of the wholesale market in Spain results in price uncertainty that can be only partially offset by financial hedging contracts. Also, the payment we receive for the services provided to the grid are a major component of our power supply arrangements in Spain, and regulation for such services has been altered several times during the past years and the economic benefits of such services vary significantly from one year to the next, affecting our production cost and results from our operations.

In addition, France, South Africa and the U.S., our energy purchase arrangements depend to a certain extent on rebates or revenues that we get for providing different services to the grid (interruptibility, load shaving, off-peak consumption, etc.). These rebates may be significant and the arrangements with the grid operator or with the regulator may vary, which may affect our production costs and results from our operations.

Energy prices in Spain are volatile and such volatility could have a material adverse effect on our business, results of operations, and financial condition.

Almost all of the revenues from Ferroglobe's energy segment are tied, either directly or indirectly, to wholesale market prices for electricity in Spain, which are volatile and may decline due to a number of factors that are not within our control. These include the price of fuels used to generate electricity by other means, the amount of excess generating capacity relative to load in particular markets, the cost of controlling polluting emissions, the structure and regulation of the electricity market overall, and fluctuations in demand, including weather conditions that impact electrical load. In addition, other power generators may develop new technologies or improvements to traditional technologies to produce power that could increase the supply of electricity and cause a sustained reduction in market prices for electricity.

The possible divestiture in the future of any of our hydroelectric power operations would result in a greater exposure to increases in electricity prices in that market.

Our energy operations and revenues depend largely on government regulation of the power sector and our business may be adversely affected if such policies are amended or eliminated.

Our energy operations and revenues depend largely on government regulation of the power sector. For example, in 2013, Spain introduced a new regulatory regime for renewable energies, which, among other things, suspended the pre-existing feed-in tariff support scheme for renewable energy producers that had benefitted us. This has had an adverse effect on the profitability of our energy operations, as prices at which we are able to sell electricity are now substantially dependent on the volatile wholesale market. If other power sector programs and regulations are adversely amended, reduced, eliminated, or subjected to new restrictions, it could have a material adverse effect on the profitability of our energy operations.

Losses caused by disruptions in the supply of power would reduce our profitability.

Large amounts of electricity are used to produce silicon metal, manganese- and silicon-based alloys and other specialty alloys, and our operations are heavily dependent upon a reliable supply of electrical power. We may incur losses due to a temporary or prolonged interruption of the supply of electrical power to our facilities, which can be caused by unusually high demand, blackouts, equipment failure, natural disasters or other catastrophic events, including failure of the hydroelectric facilities that currently provide power under contract to our West Virginia, New York, Québec and Argentina facilities. Additionally, on occasion, we have been instructed to suspend operations for several hours by the sole energy supplier in South Africa due to a general power shortage in the country. It is possible that this supplier may instruct us to suspend our operations for a similar or longer period in the future. Such interruptions or reductions in the supply of electrical power adversely affect production levels and may result in reduced profitability. Our insurance coverage does not cover all interruption events and may not be sufficient to cover losses incurred as a result.

In addition, investments in Argentina's electricity generation and transmission systems have been lower than the increase in demand in recent years. If this trend is not reversed, there could be electricity supply shortages as the result of inadequate generation and transmission capacity. Given the heavy dependence on electricity of our manufacturing operations, any electricity shortages could adversely affect our financial results.

Government regulations of electricity in Argentina give priority of use of hydroelectric power to residential users and subject violators of these restrictions to significant penalties. This preference is particularly acute during Argentina's winter months due to a lack of natural gas. We have previously successfully petitioned the government to exempt us from these restrictions given the demands of our business for continuous supply of electric power. If we are unsuccessful in our petitions or in any action we take to ensure a stable supply of electricity, our production levels may be adversely affected and our profitability reduced.

Any decrease in the availability, or increase in the cost, of raw materials or transportation could materially increase our costs.

Principal components in the production of silicon metal, silicon-based alloys and manganese-based alloys include metallurgical-grade coal, charcoal, graphite and carbon electrodes, manganese ore, quartzite, wood chips, steel scrap, and other metals. While we own certain sources of raw materials, we also buy raw materials on a spot or contracted basis. The availability of these raw materials and the prices at which we purchase them from third-party suppliers depend on market supply and demand and may be volatile. Our ability to obtain these materials in a cost efficient and timely manner is dependent on certain suppliers, their labor union relationships, mining and lumbering regulations and output and general local economic conditions. In 2018, manganese ore prices remained at historically high levels throughout the year. As a result, the profitability of our manganese-based operations was adversely affected.

Over the previous years, certain raw materials (particularly graphite electrodes, coal, manganese ore, and other electrode components) have experienced significant price increases and quick price moves in relatively short periods of time. In some cases, this has been combined with certain shortage in the availability of such raw materials. While we try to anticipate potential shortages in the supply of critical raw materials with longer term contracts and other purchasing strategies, these price swings and supply shortages may affect our cost of production or even cause interruptions in our operations, which may have a material adverse effect on our business, results of operations and financial condition.

We make extensive use of shipping by sea, rail and truck to obtain the raw materials used in our production and deliver our products to customers, depending on the geographic region and product or input. Raw materials and products often must be transported over long distances between mines and other production sites and the plants where raw materials are consumed, and between those sites and our customers. Any severe delay, interruption or other disruption in such transportation, any material damage to raw materials utilized by us or to our products while being transported, or a sharp rise in transportation prices could have a material adverse effect on our business, results of operations and financial condition. In addition, because we may not be able to obtain adequate supplies of raw materials from alternative sources on terms as favorable as our current arrangements, or at all, any disruption or shortfall in the production and delivery of raw materials could result in higher raw materials costs and likewise materially adversely affect our business, results of operations and financial condition.

Cost increases in raw material inputs may not be passed on to our customers, which could negatively impact our profitability.

The prices of our raw material inputs are determined by supply and demand, which may be influenced by, *inter alia*, economic growth and recession, changes in world politics, unstable governments in exporting nations, and inflation. The market prices of raw material inputs will thus fluctuate over time, and we may not be able to pass significant price increases on to our customers. If we do try to pass them on, we may lose sales and thereby revenue, in addition to having the higher costs. Additionally, decreases in the market prices of our products will not necessarily enable us to obtain lower prices from our suppliers.

Metallurgical manufacturing and mining are inherently dangerous activities and any accident resulting in injury or death of personnel or prolonged production shutdowns could adversely affect our business and operations.

Metallurgical manufacturing generally, and smelting in particular, is inherently dangerous and subject to risks of fire, explosion and sudden major equipment failure. Quartz and coal mining are also inherently dangerous and subject to numerous hazards, including collisions, equipment failure, accidents arising from the operation of large mining and rock transportation equipment, dust inhalation, flooding, collapse, blasting operations and operating in extreme climatic conditions. These hazards have led to accidents resulting in the serious injury and death of production personnel and prolonged production shutdowns in the past. We may experience fatal accidents or equipment malfunctions in the future, which could have a material adverse effect on our business and operations.

In 2018, there was regrettably a fatal accident involving one of our employees following an explosion at our plant in Selma, Alabama.

We are heavily dependent on our mining operations, which are subject to certain risks that are beyond our control and which could result in materially increased expenses and decreased production levels.

We mine quartz and quartzite at open pit mining operations and coal at underground and surface mining operations. We are heavily dependent on these mining operations for our quartz and coal supplies. Certain risks beyond our control could disrupt our mining operations, adversely affect production and shipments, and increase our operating costs, such as: a major incident at the mine site that causes all or part of the operations of the mine to cease for some period of time; mining, processing and plant equipment failures and unexpected maintenance problems; changes in reclamation costs; the inability to renew mining concessions upon their expiration; the expropriation of territory subject to a valid concession without sufficient compensation; and adverse weather and natural disasters, such as heavy rains or snow, flooding and other natural events affecting operations, transportation or customers.

Regulatory agencies have the authority under certain circumstances following significant health and safety violations or incidents to order a mine to be temporarily or even permanently closed. If this occurs, we may be required to incur significant legal and capital expenditures to re-open the affected mine. In addition, environmental regulations and enforcement could impose unexpected costs on our mining operations, and future regulations could increase those costs or limit our ability to produce quartz and sell coal. A failure to obtain and renew permits necessary for our mining operations could limit our production and negatively affect our business. It is also possible that we have extracted or may in the future extract quartz from territory beyond the boundary of our mining concession or mining right, which could result in penalties or other regulatory action or liabilities.

We are subject to environmental, health and safety regulations, including laws that impose substantial costs and the risk of material liabilities.

Our operations are subject to extensive foreign, federal, national, state, provincial and local environmental, health and safety laws and regulations governing, among other things, the generation, discharge, emission, storage, handling, transportation, use, treatment and disposal of hazardous substances; land use, reclamation and remediation; waste management and pollution prevention measures; greenhouse gas emissions; and the health and safety of our employees. We are also required to obtain permits from governmental authorities for certain operations, and to comply with related laws and regulations. We may not have been and may not be at all times in full compliance with such permits and related laws and regulations. If we violate or fail to comply with these permits and related laws and regulations, we could be subject to penalties, restrictions on operations or other sanctions, obligations to install or upgrade pollution control equipment and legal claims, including for alleged personal injury or property or environmental damages. Such liability could adversely affect our reputation, business, results of operations and financial condition. In addition, in the context of an investigation, the government may impose obligations to make technology upgrades to our facilities that could result in our incurring material capital expenses. For example, we have received two Notices and Findings of Violation (“NOV/FOV”) from the U.S. federal government, alleging numerous violations of the Clean Air Act relating to Globe Metallurgical Inc.’s (“GMI”) Beverly, Ohio facility. Should GMI and the federal government be unable to reach a negotiated resolution of the NOV/FOVs, the U.S. government could file a formal lawsuit in U.S. federal court for injunctive relief, potentially requiring GMI to implement emission reduction measures, and for civil penalties. The statutory maximum penalty is $93,750 per day per violation, from April, 2013 to the present. See “Item 8.A.—Financial Information—Consolidated Financial Statements and Other Financial Information—Legal proceedings” for additional information.

The metals and mining industry is generally subject to risks and hazards, including fire, explosion, toxic gas leaks, releases of other hazardous materials, rockfalls, and incidents involving mobile equipment, vehicles or machinery. These could occur by accident or by breach of operating and maintenance standards, and could result in personal injury, illness or death of employees or contractors, or in environmental damage, delays in production, monetary losses and possible legal liability.

Under certain environmental laws, we could be required to remediate or be held responsible for the costs relating to contamination at our or our predecessors’ past or present facilities and at third party waste disposal sites. We could also be held liable under these environmental laws for sending or arranging for hazardous substances to be sent to third party disposal or treatment facilities if such facilities are found to be contaminated. Under these laws we could be held liable

even if we did not know of, or did not cause, such contamination, or even if we never owned or operated the contaminated disposal or treatment facility.

There are a variety of laws and regulations in place or being considered at the international, federal, regional, state and local levels of government that restrict or propose to restrict and impose costs on emissions of carbon dioxide and other greenhouse gases. These legislative and regulatory developments may cause us to incur material costs if we are required to reduce or offset greenhouse gas emissions, or to purchase emission credits or allowances, and may result in a material increase in our energy costs due to additional regulation of power generators. Environmental laws are complex, change frequently and are likely to become more stringent in the future. Because environmental laws and regulations are becoming more stringent and new environmental laws and regulations are continuously being enacted or proposed, such as those relating to greenhouse gas emissions and climate change, the level of expenditures required for environmental matters could increase in the future. Future legislative action and regulatory initiatives could result in changes to operating permits, additional remedial actions, material changes in operations, increased capital expenditures and operating costs, increased costs of the goods we sell, and decreased demand for our products that cannot be assessed with certainty at this time.

Therefore, our costs of complying with current and future environmental laws, and our liabilities arising from past or future releases of, or exposure to, hazardous substances may adversely affect our business, results of operations and financial condition.

Compliance with existing and proposed climate change laws and regulations could adversely affect our performance.

Under current European Union legislation, all industrial sites are subject to cap-and-trade programs, by which every facility with carbon emissions is required to purchase in the market emission rights for volumes of emission that exceed a certain allocated level. So far, and until 2020, the allocated level of emissions is sufficient for our business such that any of emissions rights purchases will have a limited impact on our business. After 2020, however, new regulations reducing the allocation of free allowances may require us to make significant purchases of emissions rights in the market. Also, certain Canadian provinces have implemented cap-and-trade programs. As a result, our facilities in Canada and in the European Union may be required to purchase emission credits in the future. The requirement to purchase emissions rights in the market could result in material increased compliance costs, additional operating restrictions for our business, and an increase in the cost of the products we produce, which could have a material adverse effect on our financial position, results of operations, and liquidity.

In other jurisdictions, including the United States and South Africa, some pending proposals for climate change legislation would require businesses that emit greenhouse gases to buy emission credits from the government, other businesses or through an auction process. While no such requirements applicable to our business have yet been enacted, if any such program were enacted in the future, we may be required to purchase emission credits for greenhouse gas emissions resulting from our operations. Although it is not possible at this time to predict what, if any, climate change laws or regulations will be enacted, any new restrictions on greenhouse gas emissions, including a cap-and-trade program or an emissions tax, could result in material increased compliance costs, additional operating restrictions for our business, and an increase in the cost of the products we produce, which could have a material adverse effect on our financial position, results of operations and liquidity.

We make a significant portion of our sales to a limited number of customers, and the loss of a portion of the sales to these customers could have a material adverse effect on our revenues and profits.

In the year ended December 31, 2018, our ten largest customers accounted for approximately 33% of Ferroglobe's consolidated revenue. We expect that we will continue to derive a significant portion of our business from sales to these customers.

Some contracts with our customers do not entail commitments from the customer to purchase specified or minimum volumes of products over time. Accordingly, we face a risk of unexpected reduced demand for our products from such customers as a result of, for instance, downturns in the industries in which they operate or any other factor affecting their business, which could have a material adverse effect on our revenues and profits.

If we were to experience a significant reduction in the amount of sales we make to some or all of such customers and could not replace these sales with sales to other customers, this could have a material adverse effect on our revenues and profits.

Our business benefits from antidumping and countervailing duty orders and laws that protect our products by imposing special duties on unfairly traded imports from certain countries. If these duties or laws change, certain foreign competitors might be able to compete more effectively.

Antidumping and countervailing duty orders are designed to provide relief from imports sold at unfairly low or subsidized prices by imposing special duties on such imports. Such orders normally benefit domestic suppliers and foreign suppliers not covered by the orders. In the United States, antidumping duties are in effect covering silicon metal imports from China and Russia. In the European Union, antidumping duties are in place covering silicon metal imports from China and ferrosilicon imports from China and Russia. In Canada, antidumping and countervailing duties are in place covering silicon metal imports from China.

The current antidumping and countervailing duty orders may not remain in effect and continue to be enforced from year to year, the products and countries now covered by orders may no longer be covered, and duties may not continue to be assessed at the same rates. In the United States, rates of duty can change as a result of “administrative reviews” of antidumping and countervailing duty orders. These orders can also be revoked as a result of periodic “sunset reviews,” which determine whether the orders will continue to apply to imports from particular countries. Antidumping and countervailing duties in the European Union and Canada are also subject to periodic reviews. In the European Union and in Canada, such reviews can include interim reviews, expiry reviews and other types of proceedings that may result in changes in rates of duty or termination of the duties.

Similarly, export duties imposed by foreign governments that are currently in place may change. For example, duties on Chinese exports of types of ferroalloys produced by Ferroglobe could be reduced.

Changes in any of these factors could adversely affect our business and profitability. Finally, at times, in filing trade actions, we arguably act against the interests of our customers. Certain of our customers may not continue to do business with us as a result.

In December 2016, Ferroglobe subsidiaries in Canada filed a complaint with the Canada Border Services Agency alleging that silicon metal from Brazil, Kazakhstan, Laos, Malaysia, Norway, Russia and Thailand is dumped, and that silicon metal from Brazil, Kazakhstan, Malaysia, Norway and Thailand is subsidized. In March 2017, Ferroglobe subsidiary Globe Specialty Metals petitioned the U.S. Department of Commerce and the U.S. International Trade Commission to provide relief from dumped and subsidized silicon metal imports from Australia, Brazil, Kazakhstan and Norway. In both cases, the agencies found that imports covered by the cases were unfairly traded, but determined that the domestic industry was not injured by the unfair imports. In Canada, an appeal was filed but ultimately was discontinued in May 2018.

An administrative review of the antidumping duty order on silicon metal from China involving a single exporter/producer combination is currently in progress. The review may result in the elimination or reduction of the duties currently payable on imports from that exporter/producer combination. If the duties are eliminated or reduced significantly, our sales in the United States may be adversely affected.

A sunset (expiry) review of the Canadian antidumping/countervailing duty order covering silicon metal imports from China is currently being conducted, which may result in the removal of the duties on such imports. If the duties are removed, our sales in Canada may be adversely affected.

In June 2017, Euroalliages (representing European Union producers including Ferroglobe) filed a complaint with the Directorate-General for Trade of the European Commission (“DG Trade”) alleging that ferro-silicon originating in Egypt and Ukraine is dumped. In April 2018, the Commission notified interested parties that the complaint had been withdrawn and that it considered that the investigation should be terminated without measures. The fact that the case was not successful could adversely affect our sales or our relationships with customers in the European Union.

In addition, Euroalliages filed a request with the European Commission on behalf of Ferroglobe subsidiaries FerroAtlàntica, S.A. and FerroPem for an expiry review of the antidumping measures on ferrosilicon from China and Russia. Based on this request, the European Commission initiated in April 2019 a review to determine whether to maintain the antidumping measures in place and the rates of duty to be imposed.

In November 2017, Ferroglobe subsidiaries in the European Union filed a complaint with DG Trade of the European Commission alleging that silicon metal originating in Brazil and Bosnia is dumped. In 2018, that complaint was withdrawn.

Products we manufacture may be subject to unfair import competition that may affect our profitability.

A number of the products we manufacture, including silicon metal and ferrosilicon, are globally-traded commodities that are sold primarily on the basis of price. As a result, our sales volumes and prices may be adversely affected by influxes of imports of these products that are dumped or are subsidized by foreign governments. Our silicon metal and ferrosilicon operations have been injured by such unfair import competition in the past. The antidumping and countervailing duty laws provide a remedy for unfairly traded imports in the form of special duties imposed to offset the unfairly low pricing or subsidization. However, the process for obtaining such relief is complex and uncertain. As a result, while we have sought and obtained such relief in the past, in some cases we have not been successful. Thus, there is no assurance that such relief will be obtained, and if it is not, unfair import competition could have a material adverse effect on our business, results of operations and financial condition.

Competitive pressure from Chinese steel, aluminum, polysilicon and silicone producers may adversely affect the business of our customers, reducing demand for our products. Our customers may relocate to China, where they may not continue purchasing from us.

China’s aluminum, polysilicon and steel producing capacity exceeds local demand and has made China an increasingly large net exporter of aluminum and steel, and the Chinese silicone manufacturing industry is growing. Chinese aluminum, polysilicon, steel and silicone producers — who are unlikely to purchase silicon metal, manganese- and silicon-based alloys and other specialty metals from our plants outside of China due to the ample availability of domestic Chinese production — may gain global market share at the expense of our customers. An increase in Chinese aluminum, steel, polysilicon and silicone industry market share could adversely affect the production volumes, revenue and profits of our customers, resulting in reduced purchases of our products.

Moreover, our customers might seek to relocate or refocus their operations to China or other countries with lower labor costs and higher growth rates. Any that do so might thereafter choose to purchase from other suppliers of silicon metal, manganese- and silicon-based alloys and other specialty metals which in turn could have a material adverse effect on our business, results of operations and financial condition.

We are subject to the risk of union disputes and work stoppages at our facilities, which could have a material adverse effect on our business.

A majority of our employees are members of labor unions. In the future, we may experience protracted negotiations with labor unions, strikes, work stoppages or other industrial actions from time to time. Strikes called by employees or unions could materially disrupt our operations, including productions schedules and delivery times. We have experienced strikes by our employees at several of our facilities from time to time. Any such work stoppage could have a material adverse effect on our business, results of operations and financial condition.

New labor contracts will have to be negotiated to replace expiring contracts from time to time. It is possible that future collective bargaining agreements will contain terms less favorable than the current agreements. Any failure to negotiate renewals of labor contracts on terms acceptable to us, with or without work stoppages, could have a materially adverse effect on our business, results of operations and financial condition.

Many of our key customers or suppliers are similarly subject to union disputes and work stoppages, which may reduce their demand for our products or interrupt the supply of critical raw materials and impede their ability to fulfil their commitments under existing contracts. In 2016, we temporarily reduced production at one of our plants as a result of a strike affecting one of our customers which resulted in delays in contract shipment dates and led to a decrease in prices for certain of our products.

We are dependent on key personnel.

Our success depends in part upon the retention of key employees. Competition for qualified personnel can be intense. Current and prospective employees may experience uncertainty about our business or industry, which may impair our ability to attract, retain and motivate key management, sales, technical and other personnel.

If key employees depart our overall business may be harmed. We also may have to incur significant costs in identifying, hiring and retaining replacements for departing employees, may lose significant expertise and talent relating to our business and our ability to further realize the anticipated benefits of the Business Combination may be adversely affected. In addition, the departure of key employees could cause disruption or distractions for management and other personnel. Furthermore, we cannot be certain that we will be able to attract and retain replacements of a similar caliber as departing key employees.

The long term success of our operations depends to a significant degree on the continued employment of our core senior management team. In particular, we are dependent on the skills, knowledge and experience of Javier López Madrid, our Executive Chairman, Pedro Larrea Paguaga, our Chief Executive Officer, and Phillip Murnane, our Chief Financial Officer. If these employees are unable to continue in their respective roles, or if we are unable to attract and retain other skilled employees, our business, results of operations and financial condition could be adversely affected. We currently have employment agreements with Messrs. López Madrid, Larrea Paguaga and Murnane. These agreements contain certain non-compete provisions, which may not be fully enforceable by us. Additionally, we are substantially dependent upon key personnel among our financial and information technology staff, who enable us to meet our regulatory, contractual and financial reporting obligations, including reporting requirements under our credit facilities.

In certain circumstances, the members of our Board may have interests that may conflict with yours as a holder of ordinary shares.

Our directors have no duty to us with respect to any information such directors may obtain (i) otherwise than as our directors and (ii) in respect of which directors owe a duty of confidentiality to another person, provided that where a director's relationship with such other person gives rise to a conflict, such conflict has been authorized by our Board in accordance with our articles of association ("Articles"). Our Articles provide that a director shall not be in breach of the general duties directors owe to us pursuant to the UK Companies Act 2006 because such director:

- fails to disclose any such information to our Board, directors or officers; or
- fails to use or apply any such information in performing such director's duties as a director.

In such circumstances, certain interests of the members of our Board may not be aligned with your interests as a holder of ordinary shares and the members of our Board may engage in certain business and other transactions without any accountability or obligation to us.

Shortages of skilled labor could adversely affect our operations.

We depend on skilled labor for the operation of our submerged arc furnaces and other facilities. Some of our facilities are located in areas where demand for skilled personnel often exceeds supply. Shortages of skilled furnace technicians and other skilled workers could restrict our ability to maintain or increase production rates, lead to production inefficiencies and increase our labor costs.

We may not realize the cost savings, synergies and other benefits that we expect to achieve from the Business Combination or from further operational improvements.

The integration of formerly independent companies is a complex, costly and time-consuming process. We thus are required to devote significant management attention and resources to integrating our business practices and operations. The ongoing integration process may disrupt our business and, if implemented ineffectively, could preclude full realization of the anticipated benefits of the Business Combination.

Further, we are constantly looking for opportunities to improve our operations through changes in technology, processes, information systems, and management best practices. These continuous improvement initiatives are complex and require skilled management and labor to implement them.

In our efforts to integrate and improve our operations fully and successfully, we may encounter material unanticipated problems, expenses, liabilities, competitive responses, loss of client relationships, and a resulting diversion of management's attention. The challenges include, among others:

- managing a significantly larger company;
- coordinating geographically separate organizations;
- potential diversion of management focus and resources from ordinary operational matters and future strategic opportunities;
- retaining existing customers and attracting new customers;
- maintaining employee morale and retaining key management and other employees;
- integrating two unique business cultures that are not necessarily compatible;
- the possibility of faulty assumptions underlying expectations of the Business Combination;
- issues in achieving anticipated operating efficiencies, business opportunities and growth prospects;
- consolidating corporate and administrative infrastructures and eliminating duplicative operations;
- issues in integrating information technology, communications and other systems;
- changes in applicable laws and regulations;
- changes in tax laws (including under applicable tax treaties) and regulations or to the interpretation of such tax laws or regulations by the governmental authorities; and
- managing tax costs or inefficiencies associated with integrating our operations.

Many of these factors are outside of our control and any one of them could result in increased costs, decreased revenues and diversion of management's time and energy, which could materially impact our business, results of operations and financial condition. Moreover, even if the operations of FerroAtlántica and Globe are integrated successfully, we may not fully realize the benefits of the Business Combination, including the synergies, cost savings or sales or growth opportunities that we expect, within the anticipated time frame or at all. As a result, we cannot assure our shareholders that the Business Combination will result in the full realization of the benefits anticipated.

Because the proceeds of the R&W Policy will not be sufficient to fully compensate for losses attributable to breaches of representations and warranties made by Grupo VM and FerroAtlántica in the Business Combination Agreement, and the proceeds under the R&W Policy are required to be distributed to the holders of the Trust Units, we may be required to use our existing cash on hand or draw under our credit facility to fund any actual loss incurred.

We purchased a Representations and Warranties insurance policy (the “R&W Policy”) in connection with the Business Combination to insure us against breaches of certain representations and warranties made by Grupo Villar Mir S.A.U. (“Grupo VM”) and FerroAtlántica in the Business Combination Agreement (as defined below). The R&W Policy has a face amount equal to $50,000,000 and is subject to an initial retention amount of $10,000,000, as well as other limitations and conditions. As a result of Grupo VM’s ownership of the Company following completion of the Business Combination, the R&W Policy only provides insurance to the extent of approximately 43% of insurable losses incurred by us. Accordingly, the proceeds of the R&W Policy will not be sufficient to fully compensate for losses attributable to breaches of representations and warranties made by Grupo VM and FerroAtlántica. In addition, we will not be able to recover losses attributable to breaches of certain representations and warranties that are excluded from the R&W Policy or for which coverage under the R&W Policy expired in December 2018 or for losses that would result in payments under the R&W Policy in excess of the $50,000,000 face amount of the R&W Policy.

On November 18, 2016, Ferroglobe completed the distribution to the holders of our ordinary shares at the time of beneficial interest units (the “Trust Units”) in a newly formed Delaware Statutory Trust, Ferroglobe Representation and Warranty Insurance Trust (“Ferroglobe R&W Trust”), to which Ferroglobe had assigned its interest in the R&W Policy. Having assigned the R&W Policy, if we suffer a loss attributable to breaches of representations and warranties by Grupo VM or FerroAtlántica, we will be required to use our existing cash on hand or draws under our credit facility to fund the actual loss incurred to the extent that it is not met by Grupo VM, in the case of a breach by Grupo VM. Losses attributable to breaches of representations and warranties by Grupo VM or FerroAtlántica could have a material adverse effect on our business, financial condition and results of operations.

Any failure to integrate recently acquired businesses successfully or to complete future acquisitions successfully could be disruptive of our business and limit our future growth.

From time to time, we expect to pursue acquisitions in support of our strategic goals. In connection with any such acquisition, we could face significant challenges in managing and integrating our expanded or combined operations, including acquired assets, operations and personnel. There can be no assurance that acquisition opportunities will be available on acceptable terms or at all or that we will be able to obtain necessary financing or regulatory approvals to complete potential acquisitions. Our ability to succeed in implementing our strategy will depend to some degree upon the ability of our management to identify, complete and successfully integrate commercially viable acquisitions. Acquisition transactions may disrupt our ongoing business and distract management from other responsibilities.

For example, in February 2018, we completed the acquisition from a wholly-owned subsidiary of Glencore International AG (“Glencore”) of a 100% interest in Glencore’s manganese alloys plants in Mo i Rana (Norway) and Dunkirk (France). Although the purchase was made under what we believe to be favorable financial terms and we expect it to result in a 10-20% increase in Company-wide revenue, the acquisition increases the management complexity of our operations, adds a new currency (Norwegian Krone) to our foreign exchange exposure, and will require additional attention from management in order for us to successfully integrate and capture synergies. There can be no assurance that the acquisition will result in the realization of the benefits anticipated. Specifically, during 2018 the manganese alloys and the manganese ore markets have evolved in such way that margins in these specific operations have significantly eroded and results and profitability from these operations were below historical averages.

Grupo VM, our principal shareholder, has significant voting power with respect to corporate matters considered by our shareholders.

Our principal shareholder, Grupo VM, owns shares representing approximately 54% of the aggregate voting power of our capital stock. By virtue of Grupo VM’s voting power, as well as Grupo VM’s representation on the Board, Grupo VM will have significant influence over the outcome of any corporate transaction or other matters submitted to our shareholders

for approval. Grupo VM will be able to block any such matter, including ordinary resolutions, which, under English law, require approval by a majority of outstanding shares cast in the vote. Grupo VM will also be able to block special resolutions, which, under English law, require approval by the holders of at least 75% of the outstanding shares entitled to vote and voting on the resolution, such as an amendment of the Articles or the exclusion of preemptive rights. Our principal shareholder has, and will continue to have, directly or indirectly, the power, among other things, to affect our legal and capital structure and our day-to-day operations, as well as the ability to elect and change our management and to approve other changes to our operations.

Grupo VM, has pledged most of its shares in our company to secure a syndicate loan led by Crédit Suisse; if Grupo VM defaults on the underlying loan, we could experience a change in control.

Grupo VM guaranteed its obligations pursuant to a credit agreement (the “GVM Credit Agreement”), which allows them to borrow up to €115 million (“GVM Loan”). In June 2018, Grupo VM entered into a security and pledge agreement (the “GVM Pledge Agreement”), with a syndicate of banks and funds led by Crédit Suisse (the “Lenders”), pursuant to which Grupo VM agreed to pledge most of its shares to the Lenders to secure the outstanding GVM Loan.

In the event Grupo VM defaults under the GVM Credit Agreement, the Lenders may foreclose on the shares subject to the pledge. In such case, we could experience a change of control. Upon a change in control, we may be required, among other things, immediately to repay outstanding principal as well as, accrued interest and any other amounts owed by us under one or more of our bank facilities or our other debt. If upon a change of control, we do not have sufficient funds available to make such payments out of our available cash, third party financing would be needed, yet may be impermissible under our other debt agreements. In addition, certain other contracts we are party to from time to time may contain change of control provisions. Upon a change in control, such provisions may be triggered, which could cause our contracts to be terminated or give rise to other obligations, each of which could have a material adverse effect on our business, results of operations and financial condition.

We may engage in related party transactions with affiliates of Grupo VM, our principal shareholder.

Conflicts of interest may arise between our principal shareholder and your interests as a shareholder. Our principal shareholder has, and will continue to have, directly or indirectly, the power, among other things, to affect our day-to-day operations, including the pursuit of related party transactions. We have entered, and may in the future enter, into agreements with companies who are affiliates of Grupo VM, our principal shareholder. Such agreements have been approved by, or would be subject to the approval of, the Board or the Audit Committee, as its delegate. The terms of such agreements may present material risks to our business and results of operations. For example, we recently entered into a series of projects and an agreement in respect of a joint venture with Aurinka Photovoltaic Group S.L. (“Aurinka”) and Blue Power Corporation S.L. (“Blue Power”), a company partly owned by Mr. Javier López Madrid, our Executive Chairman. We have also entered into a number of other agreements with affiliates of Grupo VM with respect to, among other things, the provision of information technology and data processing services and the management of certain aspects of our hydroelectric plants. See “Item 7.B.—Major Shareholders and Related Party Transactions—Related Party Transactions.”

We are exposed to significant risks in relation to compliance with anti-bribery and corruption laws, anti-money laundering laws and regulations, and economic sanctions programs.

Doing business on a worldwide basis requires us to comply with the laws and regulations of various jurisdictions. In particular, our international operations are subject to anti-corruption laws, most notably the U.S. Foreign Corrupt Practices Act of 1977 (“FCPA”) and the UK Bribery Act of 2010 (the “Bribery Act”), international trade sanctions programs, most notably those administered by the U.N., U.S. and European Union, anti-money laundering laws and regulations, and laws against human trafficking and slavery, most notably the UK Modern Slavery Act 2015 (“Modern Slavery Act”).

The FCPA and Bribery Act prohibit offering or providing anything of value to foreign officials for the purposes of obtaining or retaining business or securing any improper business advantage. We may deal from time to time with both governments and state-owned business enterprises, the employees of which are considered foreign officials for purposes

of these laws. International trade sanctions programs restrict our business dealings with or relating to certain sanctioned countries and certain sanctioned entities and persons no matter where located.

As a result of doing business internationally, we are exposed to a risk of violating applicable anti-bribery and corruption ("ABC") laws, international trade sanctions, and anti-money laundering ("AML") laws and regulations. Some of our operations are located in developing countries that lack well-functioning legal systems and have high levels of corruption. Our continued expansion and worldwide operations, including in developing countries, our development of joint venture relationships worldwide, and the engagement of local agents in the countries in which we operate tend to increase the risk of violations of such laws and regulations. Violations of ABC laws, AML laws and regulations, and trade sanctions are punishable by civil penalties, including fines, denial of export privileges, injunctions, asset seizures, debarment from government contracts (and termination of existing contracts) and revocations or restrictions of licenses, as well as criminal penalties including possible imprisonment. Moreover, any major violations could have a significant impact on our reputation and consequently on our ability to win future business.

For its part, the Modern Slavery Act requires any commercial organization that carries on a business or part of a business in the United Kingdom which (i) supplies goods or services and (ii) has an annual global turnover of £36 million to prepare a slavery and human trafficking statement for each financial year ending on or after March 31, 2016. In this statement, the commercial organization must set out the steps it has taken to ensure there is no modern slavery in its own business and its supply chain, or provide an appropriate negative statement. The UK Secretary of State may enforce this duty by means of civil proceedings. Ferroglobe is currently in compliance with the Act, and we believe it will remain so, but the nature of our operations and the regions in which we operate may make it difficult or impossible for us to detect all incidents of modern slavery in certain of our supply chains. Any failure in this regard would not violate the Modern Slavery Act *per se*, but could have a significant impact on our reputation and consequently on our ability to win future business.

We seek to build and continuously improve our systems of internal controls and to remedy any weaknesses identified. As part of our efforts to comply with all applicable law and regulation, we have introduced a global ethics and compliance program. We believe we are devoting appropriate time and resources to its implementation, related training, and to monitoring compliance. Despite these efforts, we cannot be certain that our policies and procedures will be followed at all times or that we will prevent or timely detect violations of applicable laws, regulations or policies by our personnel, partners or suppliers. Any actual or alleged failure to comply with applicable laws or regulations could lead to material liabilities not covered by insurance or other significant losses, which in turn could have a material adverse effect on our business, results of operations, and financial condition.

We operate in a highly competitive industry.

The silicon metal market and the silicon-based and manganese-based alloys markets are global, capital intensive and highly competitive. Our competitors may have greater financial resources, as well as other strategic advantages, to maintain, improve and possibly expand their facilities, and, as a result, they may be better positioned than we are to adapt to changes in the industry or the global economy. Advantages that our competitors have over us from time to time, new entrants that increase competition in our industry, and increases in the use of substitutes for certain of our products could have a material adverse effect on our business, results of operations and financial condition.

Though we are not currently operating at full capacity, we have historically operated at near the maximum capacity of our operating facilities. Because the cost of increasing capacity may be prohibitively expensive, we may have difficulty increasing our production and profits.

Our facilities are able to manufacture, collectively, approximately 416,750 tons of silicon metal (including Dow's portion of the capacity of our Alloy, West Virginia and Bécancour, Québec plants), 534,000 tons of silicon-based alloys and 689,000 tons of manganese-based alloys on an annual basis. Our ability to increase production and revenues will depend on expanding existing facilities, acquiring facilities or building new ones. Increasing capacity is difficult because:

- adding 30,000 tons of new production capacity to an existing silicon manufacturing plant would cost approximately $120,000 thousand and take at least 12 to 18 months to complete once permits are obtained;

- a greenfield development project would take at least three to five years to complete and would require significant capital expenditure and, regulatory compliance costs; and

- obtaining sufficient and dependable electric power at competitive rates in areas near the required natural resources is extremely difficult.

We may not have sufficient funds to expand existing facilities, acquire new facilities, or open new ones and may be required to incur significant debt to do so, which could have a material adverse effect on our business and financial condition.

We are subject to restrictive covenants under our credit facilities and other financing agreements. These covenants could significantly affect the way in which we conduct our business. Our failure to comply with these covenants could lead to an acceleration of our debt.

We have entered into credit facilities that contain covenants that in certain circumstances, among other things, restrict our ability to sell assets; incur, repay or refinance indebtedness; create liens; make investments; engage in mergers or acquisitions; pay dividends, including dividends by subsidiaries to Ferroglobe PLC; repurchase stock; or make capital expenditures. These credit facilities also require compliance with specified financial covenants, including minimum interest coverage, maximum leverage ratio, maximum secured leverage ratio and minimum cash liquidity level. We cannot borrow under the credit facilities if the additional borrowings would cause a breach of such financial covenants. Further, a significant portion of our assets are pledged to secure the indebtedness. For example, certain equity interests and assets are pledged to secure our Revolving Credit Facility.

We have in the past breached certain financial covenants under our credit facilities, including financial maintenance covenants for the three months ended September 30 and December 31, 2016 under our then existing revolving credit facility. Our ability to comply with applicable debt covenants may be affected by events beyond our control, potentially leading to future breaches. The breach of any of the covenants contained in our credit facilities, unless waived, would constitute an event of default, in turn permitting the lenders to terminate their commitments to extend credit under, and accelerate the maturity of, the credit facilities in question. If in such circumstances we were unable to repay lenders and holders, or obtain waivers from them on acceptable terms or at all, the lenders and holders could foreclose upon the collateral securing the credit facilities and exercise other rights. Such events, should they occur, could have a material adverse effect on our business, results of operations and financial condition. See "—Risks Related to Our Capital Structure—We are subject to restrictive covenants under our financing agreements, which could impair our ability to run our business" below.

Our insurance costs may increase materially, and insurance coverages may not be adequate to protect us against all risks and potential losses to which we may be subject.

We maintain various forms of insurance covering a number of specified and consequential risks and losses arising from insured events under the policies, including securities claims, certain business interruptions and claims for damage and loss caused by certain natural disasters, such as earthquakes, floods and windstorms. Our existing property and liability insurance coverage contains various exclusions and limitations on coverage. In some previous insurance policy renewals, we have acceded to larger premiums, self-insured retentions and deductibles. For example, as a result of the explosion at our facility in Chateau Feuillet, France, the applicable property insurance premium increased. We may also be subject to additional exclusions and limitations on coverage in future insurance policy renewals. There can be no assurance that the insurance policies we have in place are or will be sufficient to cover all potential losses we may incur. In addition, due to changes in our circumstances and in the global insurance market, insurance coverage may not continue to be available to us on terms we consider commercially reasonable or be sufficient to cover multiple large claims.

We have operations and assets in the United States, Spain, France, Canada, China, South Africa, Norway, Venezuela, Poland, Argentina, Mauritania and may have operations and assets in other countries in the future. Our international operations and assets may be subject to various economic, social and governmental risks.

Our international operations and sales may expose us to risks that are more significant in developing markets than in developed markets and which could negatively impact future revenue and profitability. Operations in developing countries may not operate or develop in the same way or at the same rate as might be expected in a country with an economy, government and legal system similar to western countries. The additional risks that we may be exposed to in such cases include, but are not limited to:

- tariffs and trade barriers;
- sanctions and other restrictions in our ability to conduct business with certain countries, companies or individuals;
- recessionary trends, inflation or instability of financial markets;
- regulations related to customs and import/export matters;
- tax issues, such as tax law changes, changes in tax treaties and variations in tax laws;
- changes in regulations that affect our business, such as new or more stringent environmental requirements or sudden and unexpected raises in power rates;
- limited access to qualified staff;
- inadequate infrastructure;
- cultural and language differences;
- inadequate banking systems;
- restrictions on the repatriation of profits or payment of dividends;
- crime, strikes, riots, civil disturbances, terrorist attacks or wars;
- nationalization or expropriation of property;
- law enforcement authorities and courts that are weak or inexperienced in commercial matters; and
- deterioration of political relations among countries.

In addition to the foregoing, exchange controls and restrictions on transfers abroad and capital inflow restrictions have limited, and can be expected to continue to limit, the availability of international credit.

The critical social, political and economic conditions in Venezuela have adversely affected, and may continue to adversely affect, our results of operations.

Among other policies in recent years, the Venezuelan government has continuously devalued the Bolívar. The resulting inflation has devastated the country, which is experiencing all manner of shortages of basic materials and other goods and difficulties in importing raw materials. In 2016, we idled our Venezuelan operations and sought to determine the recoverable value of the long lived assets there. We concluded that the costs to dispose of the facility exceeded the fair value of the assets, primarily due to political and financial instability in Venezuela. Accordingly, we wrote down the full value of our Venezuelan operations. Our Venezuelan subsidiary has been able to meet its obligations (tax, labor, power costs and others) in the past through the sales of existing stock to customers. However, our inability to generate cash in

that market may cause us to default on some of our obligations there in the future, which may result in administrative intervention or other consequences. If the social, political and economic conditions in Venezuela continue as they are, or worsen, our business, results of operations and financial condition could be adversely affected.

We are exposed to foreign currency exchange risk and our business and results of operations may be negatively affected by the fluctuation of different currencies.

We transact business in numerous countries around the world and a significant portion of our business entails cross border purchasing and sales. Our sales made in a particular currency do not exactly match the amount of our purchases in such currency. We prepare our consolidated financial statements in U.S. Dollars, while the financial statements of each of our subsidiaries are prepared in the entities functional currency. Accordingly, our revenues and earnings are continuously affected by fluctuations in foreign currency exchange rates. For example, our sales made in U.S. Dollars exceed the amount of our purchases made in U.S. Dollars, such that the appreciation of certain currencies (like the Euro or the South African Rand) against the U.S. Dollar would tend to have an adverse effect on our costs. Such adverse movements in relevant exchange rates could have a material adverse effect on our business, results of operations and financial condition.

We depend on a limited number of suppliers for certain key raw materials. The loss of one of these suppliers or the failure of one of any of them to meet contractual obligations to us could have a material adverse effect on our business.

Colombia and the United States are among the preferred sources for the metallurgical coal consumed in the production of silicon metal and silicon-based alloys, and the vast majority of producers source coal from these two countries. In the year ended December 31, 2018, approximately 70% of our coal was purchased from third parties. Of our third party purchases, approximately 70% came from Colombia. Additionally, nearly all of the manganese ore we purchase comes from suppliers located in South Africa and Gabon. We do not control these third party suppliers and must rely on them to perform in accordance with the terms of their contracts. If these suppliers fail to provide us with the required raw materials in a timely manner, or at all, or if the quantity or quality of the materials they provide is lower than that contractually agreed, we may not be able to procure adequate supplies of raw materials from alternative sources on comparable terms, or at all, which could have a material adverse effect on our business, results of operations and financial condition.

Planned investments in the expansion and improvement of existing facilities and in the construction of new facilities may not be successful.

We are engaged in significant capital improvements to our existing facilities to upgrade and add capacity to those facilities. We also may engage in the development and construction of new facilities. Should any such efforts not be completed in a timely manner and within budget, or be unsuccessful otherwise, we may incur additional costs or impairments which could have a material adverse effect on our business, results of operations and financial condition.

If hydrology conditions at our hydropower facilities are unfavorable or below our estimates, our electricity production, and therefore our revenue, may be substantially below our expectations.

The revenues generated by our hydroelectric operations are determined by the amount of electricity generated, which in turn is entirely dependent upon available water flows that may vary significantly over time. Rainfall and resulting hydrology conditions naturally vary from season to season and from year to year and may also change permanently because of climate change or other factors. A material reduction in seasonal rainfall will cause affected hydropower plants to run at a reduced capacity and therefore produce less electricity, adversely impacting revenue and profitability.

Moreover, if too much rainfall occurs at any one time, water may flow too quickly and at volumes in excess of a particular hydropower plant’s designated operational levels, requiring the discharge of water through sluice gates rather than the plant’s turbines. Such conditions, as well as flooding, lightning strikes, earthquakes, severe storms, wildfires, and other unfavorable weather conditions (including those due to climate change), may require us to bypass turbines or shut down facilities, decreasing electricity production levels and revenues.

Any delay or failure to procure, renew or maintain necessary governmental permits, including environmental permits and concessions to operate our hydropower plants would adversely affect our results of operations.

The operation of our hydropower plants is highly regulated, requires various governmental permits, including environmental permits and concessions, and may be subject to the imposition of conditions by government authorities. We cannot predict whether the conditions prescribed in such permits and concessions will be achievable. The denial of a permit essential to a hydropower plant or the imposition of impractical conditions would impair our ability to operate the plant. If we fail to satisfy the conditions or comply with the restrictions imposed by governmental permits or concessions, or restrictions imposed by other applicable statutory or regulatory requirements, we may face enforcement action and be subject to fines, penalties or additional costs or revocation of such permits or concessions. Any failure to procure, renew or abide by necessary permits and concessions would adversely affect the operation of our hydropower plants.

In Spain, the use and exploitation of the hydropower plants located in Galicia are not only subject to the limitations imposed on their concession certificates, but also to the limitations imposed by environmental regulation related to water distribution and flows. Power generation and the use of water at all hydropower plants must meet the requirements set out in the Spanish National Hydrological Plan and the various provisions and acts of the Spanish Water Administration. Any further restrictions on our ability to use water at these plants would negatively impact our hydropower production and further expose us to increases in power prices in Spain.

Equipment failures may lead to production curtailments or shutdowns and repairing any failure could require us to incur capital expenditures and other costs.

Many of our business activities are characterized by substantial investments in complex production facilities and manufacturing equipment. Because of the complex nature of our production facilities, any interruption in manufacturing resulting from fire, explosion, industrial accidents, natural disaster, equipment failures or otherwise could cause significant losses in operational capacity and could materially and adversely affect our business, results of operations and financial condition.

Our hydropower generation assets and other equipment may not continue to perform as they have in the past or as they are expected. A major equipment failure due to wear and tear, latent defect, design error or operator error, early obsolescence, natural disaster or other force majeure event could cause significant losses in operational capacity. Repairs following such failures could require us to incur capital expenditures and other costs. Such major failures also could result in damage to the environment or damages and harm to third parties or the public, which could expose us to significant liability. Such costs and liabilities could adversely affect our business, results of operations and financial condition.

We depend on proprietary manufacturing processes and software. These processes may not yield the cost savings that we anticipate and our proprietary technology may be challenged.

We rely on proprietary technologies and technical capabilities in order to compete effectively and produce high quality silicon metal and silicon-based alloys, including:

- computerized technology that monitors and controls production furnaces;
- electrode technology and operational know-how;
- metallurgical processes for the production of solar-grade silicon metal;
- production software that monitors the introduction of additives to alloys, allowing the precise formulation of the chemical composition of products; and
- flowcaster equipment, which maintains certain characteristics of silicon-based alloys as they are cast.

We are subject to a risk that:

- we may not have sufficient funds to develop new technology and to implement effectively our technologies as competitors improve their processes;
- if implemented, our technologies may not work as planned; and
- our proprietary technologies may be challenged and we may not be able to protect our rights to these technologies.

Patent or other intellectual property infringement claims may be asserted against us by a competitor or others. Our intellectual property rights may not be enforceable and may not enable us to prevent others from developing and marketing competitive products or methods. An infringement action against us may require the diversion of substantial funds from our operations and may require management to expend efforts that might otherwise be devoted to operations. A successful challenge to the validity of any of our patents may subject us to a significant award of damages, and may oblige us to secure licenses of others’ intellectual property, which could have a material adverse effect on our business, results of operations and financial condition.

We also rely on trade secrets, know-how and continuing technological advancement to maintain our competitive position. We may not be able to effectively protect our rights to unpatented trade secrets and know-how.

Ferroglobe PLC is a holding company whose principal source of revenue is the income received from its subsidiaries.

Ferroglobe PLC is dependent on the income generated by its subsidiaries in order to earn distributable profits and pay dividends to shareholders. The amounts of distributions and dividends, if any, to be paid to us by any operating subsidiary will depend on many factors, including such subsidiary’s results of operations and financial condition, limits on dividends under applicable law, its constitutional documents, documents governing any indebtedness, applicability of tax treaties and other factors which may be outside our control. If our operating subsidiaries do not generate sufficient cash flow, we may be unable to earn distributable profits and pay dividends on our shares.

Our business operations may be impacted by various types of claims, lawsuits, and other contingent obligations.

We are involved in various legal and regulatory proceedings including those that arise in the ordinary course of our business. We estimate such potential claims and contingent liabilities and, where appropriate, record provisions to address these contingent liabilities. The ultimate outcome of the legal matters currently pending against our Company is uncertain, and although such claims, lawsuits and other legal matters are not expected individually to have a material adverse effect, such matters in the aggregate could have a material adverse effect on our business, results of operations and financial condition. Furthermore, we could, in the future, be subject to judgments or enter into settlements of lawsuits and claims that could have a material adverse effect on our results of operations in any particular period. While we maintain insurance coverage in respect of certain risks and liabilities, we may not be able to obtain such insurance on acceptable terms in the future, if at all, and any such insurance may not provide adequate coverage against such claims. See “Item 8.A.—Financial Information—Consolidated Statements and Other Financial Information—Legal proceedings” for additional information regarding legal proceedings to which we are party.

We are exposed to changes in economic and political conditions where we operate and globally that are beyond our control.

Our industry is affected by changing economic conditions, including changes in national, regional and local unemployment levels, changes in national, regional and local economic development plans and budgets, shifts in business investment and consumer spending patterns, credit availability, and business and consumer confidence. Disruptions in national economies and volatility in the financial markets may and often will reduce consumer confidence, negatively affecting business investment and consumer spending. The outlook for the global economy in the near to medium term is uncertain due to several factors, including geopolitical risks and concerns about global growth and stability. Concerns also remain regarding the sustainability of the European Monetary Union and its common currency, the Euro, in their current form, particularly

following the referendum vote in favor of the United Kingdom's exit from the European Union in June 2016, the UK Prime Minister's formal delivery of a notice of withdrawal from the European Union in March 2017 ("Brexit"), and the UK House of Commons' repeated rejection of the proposed Agreement on the Withdrawal of the United Kingdom from the European Union in January and March 2019.

In addition, we may face risks associated with the current uncertainty as to whether and on what terms the United Kingdom will exit the European Union and the consequences that may result from such exit, in particular with respect to tax, customs and duty laws and regulations, volatility in exchange rates and interest rates, the ability of certain of our personnel to work at our headquarters in London, and our ability to sell and transport products from manufacturing facilities on the continent to our customers in the United Kingdom.

We are not able to predict the timing or duration of periods economic growth in the countries where we operate or sell products, nor are we able to predict the timing or duration of any economic downturn or recession that may occur in the future.

Cybersecurity breaches and threats could disrupt our business operations and result in the loss of critical and confidential information.

We rely on the effective functioning and availability of our information technology and communication systems and the security of such systems for the secure processing, storage and transmission of confidential information. The sophistication and magnitude of cybersecurity incidents are increasing and include, among other things, unauthorized access, computer viruses, deceptive communications and malware. Information technology security processes may not effectively detect or prevent cybersecurity breaches or threats and the measures we have taken to protect against such incidents may not be sufficient to anticipate or prevent rapidly evolving types of cyber-attacks. Breaches of the security of our information technology and communication systems could result in destruction or corruption of data, the misappropriation, corruption or loss of critical or confidential information, business disruption, reputational damage, litigation and remediation costs.

Possible new tariffs and duties that might be imposed by certain governments, including the United States, the European Union and others, could have a material adverse effect on our results of operations.

In March 2018, the President of the United States announced import tariffs of 25 percent on steel and 10 percent on aluminum, with exemptions for Canada and Mexico only. Beginning in July 2018, the U.S. government imposed 25 or 10 percent tariffs on a wide array of Chinese products, including products produced and consumed by Ferroglobe. In response, China imposed retaliatory tariffs on a wide range of U.S. products. The United States and China are engaged in negotiations in an effort to resolve the trade dispute between the two countries. Nevertheless, the tariffs imposed to date and other such actions by the United States and China could result in the imposition of new tariffs by other countries. Any "trade war" resulting from the imposition of tariffs could have a significant adverse effect on world trade and the world economy. To date, tariffs have not affected our business to a material degree.

Our suppliers, customers, agents or business partners may be subject to or affected by export controls or trade sanctions imposed by government authorities from time to time, which may restrict our ability to conduct business with them and potentially disrupt our production or our sales.

The United States, European Union, United Nations and other authorities have variously imposed export controls and trade sanctions on certain countries, companies, individuals and products, restricting our ability to trade normally with or in them. At present, compliance with such trade regulation is not affecting our business to a material degree. However, new trade regulations may be imposed at any time that target or otherwise affect our customers, suppliers, agents or business partners or their products. In particular, trade sanctions could be imposed that restrict our ability to do business with one or more critical suppliers and require special licenses to do so. Such events could potentially disrupt our production or sales and have a material adverse effect on our business, results of operations and financial condition.

We make significant investments in the development of new technologies and new products. The success of such technologies or products is inherently uncertain and the investments made may fail to render the desired increased in profitability.

In order to improve our processes and increase the margins in our products we have constantly invested significant amounts in the development of new technologies and in the development of new value added products. However, these developments are inherently uncertain, since they may fail to render the desired results when implemented at an industrial scale.

Specifically, we have invested in the construction of a factory to produce solar-grade silicon metal through a technology developed by the Company. We believe the technology presents several advantages when compared to current solar-grade silicon production processes since the technology has proven to render the desired technological and cost results at a laboratory scale. However, the implementation of the technology at an industrial scale is challenging especially in light of current market conditions. The current market for solar-grade silicon (or polysilicon) is very volatile and has suffered from declining prices in the past few years. Further investment in this project has been temporarily suspended and the future profitability of this project is uncertain.

Risks Related to Our Capital Structure

We have recorded a significant amount of goodwill and we may not realize the full value thereof.

We have recorded a significant amount of goodwill. Total goodwill, which represents the excess of the cost of acquisitions over our interest in the net fair value of the assets acquired and liabilities and contingent liabilities assumed, was $202,848 thousand as of December 31, 2018, or approximately 10% of our total assets. Goodwill is recorded on the date of acquisition and, in accordance with IFRS, is tested for impairment annually and whenever there is any indication of impairment. Impairment may result from, among other things, deterioration in our performance, a decline in expected future cash flows, adverse market conditions, adverse changes in applicable laws and regulations (including changes that restrict or otherwise affect our mining and other operating activities) and a variety of other factors. The amount of any impairment must be expensed immediately as a charge to our consolidated income statement. For example, in 2017, in connection with our annual goodwill impairment test, the Company recognized an impairment charge of $30,618 thousand related to the partial impairment of goodwill related to our business unit in Canada, which was recorded as a result of a sustained decline in future estimated sales prices and a decrease in our estimated long-term growth rate that led the Company to revise its expected future cash flows from its Canadian operations. See “Item 5.A.—Operating and Financial Review and Prospects—Operating Results—Critical Accounting Policies—Goodwill.” Our forecasts present inevitable elements of uncertainty due to the unpredictability of future events and the characteristics of the relevant market; therefore, our ability to meet forecasts may affect future evaluations, including goodwill impairment assessments. Any future impairment of goodwill may result in material reductions of our income and equity under IFRS.

Our leverage may make it difficult for us to service our debt and operate our business.

We have significant outstanding indebtedness and debt service requirements. Our leverage could have important consequences, including:

- making it more difficult for us to satisfy our obligations to all creditors and holders;
- requiring us to dedicate a substantial portion of our cash flow from operations to payments on our indebtedness, thus reducing the availability of our cash flow to fund internal growth through working capital and capital expenditures and for other general corporate purposes;
- increasing our vulnerability to a downturn in our business or economic or industry conditions;
- placing us at a competitive disadvantage compared to our competitors that have less indebtedness in relation to cash flow;

- limiting our flexibility in planning for or reacting to changes in our business and our industry;
- restricting us from investing in growing our business, pursuing strategic acquisitions and exploiting certain business opportunities; and
- limiting, among other things, our and our subsidiaries' ability to incur additional indebtedness, including refinancing, or raise equity capital in the future and increasing the costs of such additional financings.

Our ability to service our indebtedness will depend on our future performance and liquidity, which will be affected by prevailing economic conditions and financial, business, regulatory and other factors. Many of these factors are beyond our control. We may not be able to generate enough cash flow from operations or obtain enough capital to service our indebtedness or fund our planned capital expenditures. If we cannot service our indebtedness and meet our other obligations and commitments, we might be required to refinance our indebtedness, obtain additional financing, delay planned capital expenditures or to dispose of assets to obtain funds for such purpose. We cannot assure you that any refinancing or asset dispositions could be effected on a timely basis or on satisfactory terms, if at all, or would be permitted by the terms of our outstanding debt instruments.

We are subject to restrictive covenants under our financing agreements, which could impair our ability to run our business.

Restrictive covenants under our financing agreements, including the Indenture and the Revolving Credit Facility, may restrict our ability to operate our business. Our failure to comply with these covenants, including as a result of events beyond our control, could result in an event of default that could materially and adversely affect our business, results of operations and financial condition.

In particular, the Indenture and the Revolving Credit Facility contain negative covenants restricting, among other things, our ability to:

- make certain advances, loans or investments;
- incur indebtedness or issue guarantees;
- create security;
- sell, lease, transfer or dispose of assets;
- merge or consolidate with other companies;
- transfer all or substantially all of our assets;
- make a substantial change to the general nature of our business;
- pay dividends and make other restricted payments;
- create or incur liens;
- agree to limitations on the ability of our subsidiaries to pay dividends or make other distributions;
- engage in sales of assets and subsidiary stock;
- enter into transactions with affiliates;

- amend organizational documents;
- enter into sale-leaseback transactions; and
- enter into agreements that contain a negative pledge.

All of these limitations are subject to significant exceptions and qualifications.

The restrictions contained in our financing agreements could affect our ability to operate our business and may limit our ability to react to market conditions or take advantage of potential business opportunities as they arise. For example, such restrictions could adversely affect our ability to finance our operations, make strategic acquisitions, investments or alliances, restructure our organization or finance our capital needs. Additionally, our ability to comply with these covenants and restrictions may be affected by events beyond our control. These include prevailing economic, financial and industry conditions. If we breach any of these covenants or restrictions, we could be in default under our financing agreements.

If there were an event of default under any of our debt instruments that is not cured or waived, the holders of the defaulted debt could terminate their commitments thereunder and declare all amounts outstanding with respect to such indebtedness due and payable immediately, which, in turn, could result in cross-defaults under our other outstanding debt instruments. Any such actions could force us into bankruptcy or liquidation.

We may not be able to generate sufficient cash to pay our accounts payable, meet our debt service obligations or meet our obligations under other financing agreements, in which case our creditors could declare all amounts owed to them due and payable, leading to liquidity constraints.

Our ability to make interest payments and to meet our other debt service obligations, or to refinance our debt, depends on our future operating and financial performance, which, in turn, depends on our ability to successfully implement our business strategies and plans as well as general economic, financial, competitive, regulatory and other factors beyond our control. If we cannot generate sufficient cash to meet our debt service requirements, we may, among other things, need to refinance all or a portion of our debt to obtain additional financing, delay planned capital expenditures or investments or sell material assets.

If we are not able to refinance any of our debt, obtain additional financing or sell assets on commercially reasonable terms or at all, we may not be able to satisfy our debt obligations. If we are also unable to satisfy our obligations on other financing arrangements, we could be in default under our existing financing agreements or other relevant financing agreements that we may enter into in the future. In the event of certain defaults under existing agreements, the lenders under the respective facilities or financing instruments could take certain actions, including terminating their commitments and declaring all principal amounts outstanding under our credit facilities and other indebtedness due and payable, together with accrued and unpaid interest. Such a default, or a failure to make interest payments, could cause borrowings under other debt instruments that contain cross-acceleration or cross-default provisions to become due and payable on an accelerated basis. If the debt under any of the material financing arrangements that we have entered into or will subsequently enter into were to be accelerated, our assets may be insufficient to repay the outstanding debt in full. Any such actions could force us into bankruptcy or liquidation, and we might not be able to repay our obligations under our financing agreements in such an event.

Risks Related to Our Ordinary Shares

Our share price may be volatile, and purchasers of our ordinary shares could incur substantial losses.

Our share price has been volatile in the recent past and may be so in the future. Moreover, stock markets in general experience periods of extreme volatility that are often unrelated to the operating performance of particular companies. As

a result of this volatility, you may not be able to sell our ordinary shares at or above the price at which you purchase them. The market price for our shares may be influenced by many factors, including:

- the success of competitive products or technologies;
- regulatory developments in the United States and other countries;
- developments or disputes concerning patents or other proprietary rights;
- the recruitment or departure of key personnel;
- quarterly or annual variations in our financial results or those of companies that are perceived to be similar to us;
- market conditions in the industries in which we compete and issuance of new or changed securities analysts' reports or recommendations;
- the failure of securities analysts to cover our ordinary shares or changes in financial estimates by analysts;
- the inability to meet the financial estimates of analysts who follow our ordinary shares;
- investor perception of our Company and of the industries in which we compete; and
- general economic, political and market conditions.

If securities or industry analysts do not publish or cease publishing research reports about us, if they adversely change their recommendations regarding our ordinary shares, or if our operating results do not meet their expectations, the price of our ordinary shares could decline.

The trading market for our ordinary shares will be influenced by the research and reports that industry or securities analysts may publish about us, our business, our market or our competitors. Securities and industry analysts currently publish limited research on us. If there is limited or no securities or industry analyst coverage of us, the market price and trading volume of our ordinary shares would likely be negatively impacted. Moreover, if any of the analysts who may cover us downgrade our ordinary shares or provide relatively more favorable recommendations concerning our competitors, or as we experienced in 2018, if our operating results or prospects do not meet their expectations, the market price of our ordinary shares could decline. If any of the analysts who may cover us were to cease coverage or fail regularly to publish reports about our Company, we could lose visibility in the financial markets, which, in turn, could cause our share price or trading volume to decline.

As a foreign private issuer and "controlled company" within the meaning of the rules of NASDAQ, we are subject to different U.S. securities laws and NASDAQ governance standards than domestic U.S. issuers of securities. These may afford relatively less protection to holders of our ordinary shares, and you may not receive all corporate and company information and disclosures that you are accustomed to receiving or in a manner in which you are accustomed to receiving it.

As a foreign private issuer, the rules governing the information that we disclose differ from those governing U.S. corporations pursuant to the U.S. Securities Exchange Act of 1934, as amended ("U.S. Exchange Act"). Although we intend to report periodic financial results and certain material events, we are not required to file quarterly reports on Form 10-Q or provide current reports on Form 8 K disclosing significant events within four days of their occurrence. In addition, we are exempt from the SEC's proxy rules, and proxy statements that we distribute will not be subject to review by the SEC. Our exemption from Section 16 rules requiring the reporting of beneficial ownership and sales of shares by insiders means that you will have less data in this regard than shareholders of U.S. companies that are subject to this part of the U.S. Exchange Act. As a result, in deciding whether to purchase our shares, you may not have all the data that you are accustomed to having when making investment decisions with respect to domestic U.S. public companies.

As a “controlled company” within the meaning of the corporate governance standards of NASDAQ, we may elect not to comply with certain corporate governance requirements, including:

- the requirement that a majority of our Board consist of independent directors;
- the requirement that our Board have a compensation committee that is composed entirely of independent directors with a written charter addressing the committee’s purpose and responsibilities; and
- the requirements that director nominees are selected, or recommended for selection by our Board, either by (1) independent directors constituting a majority of our Board’s independent directors in a vote in which only independent directors participate, or (2) a nominations committee composed solely of independent directors, and that a formal written charter or board resolution, as applicable, addressing the nominations process is adopted.

We may utilize these exemptions for as long as we continue to qualify as a “controlled company.” While exempt, we will not be required to have a majority of independent directors, our nominations and compensation committees will not be required to consist entirely of independent directors and such committees will not be subject to annual performance evaluations.

Furthermore, NASDAQ Rule 5615(a)(3) provides that a foreign private issuer, such as our Company, may rely on home country corporate governance practices in lieu of certain of the rules in the NASDAQ Rule 5600 Series and Rule 5250(d), provided that we nevertheless comply with NASDAQ’s Notification of Noncompliance requirement (Rule 5625), the Voting Rights requirement (Rule 5640) and that we have an audit committee that satisfies Rule 5605(c)(3), consisting of committee members that meet the independence requirements of Rule 5605(c)(2)(A)(ii). Although we are permitted to follow certain corporate governance rules that conform to U.K. requirements in lieu of many of the NASDAQ corporate governance rules, we intend to comply with the NASDAQ corporate governance rules applicable to foreign private issuers. Accordingly, our shareholders will not have the same protections afforded to stockholders of U.S. companies that are subject to all of the corporate governance requirements of NASDAQ.

We may lose our foreign private issuer status in the future, which could result in significant additional costs and expenses.

We could cease to be a foreign private issuer if a majority of our outstanding voting securities are directly or indirectly held of record by U.S. residents and we fail to meet additional requirements necessary to avoid loss of foreign private issuer status. In that event, the regulatory and compliance costs we would incur as a domestic registrant may be significantly higher than we incur as a foreign private issuer, which could have a material adverse effect on our business, operating results and financial condition.

If Grupo VM’s share ownership falls below 50%, we may no longer be considered a “controlled company” within the meaning of the rules of NASDAQ.

In the event Grupo VM sells shares in our Company to such an extent that it thereafter owns less than 50% of the total voting rights in our shares, we would no longer be considered a “controlled company” within the meaning of the corporate governance standards of NASDAQ. Under NASDAQ rules, a company that ceases to be a controlled company must comply with the independent board committee requirements as they relate to the nominating and corporate governance and compensation committees on the following phase-in schedule: (1) one independent committee member at the time it ceases to be a controlled company, (2) a majority of independent committee members within 90 days of the date it ceases to be a controlled company, and (3) all independent committee members within one year of the date it ceases to be a controlled company. Additionally, NASDAQ rules provide a 12 month phase-in period from the date a company ceases to be a controlled company to comply with the majority independent board requirement. If, within the phase-in periods, we are not able to recruit additional directors who would qualify as independent, or otherwise fail to comply with applicable NASDAQ rules, we may be subject to delisting by NASDAQ. Furthermore, a change in our board of directors and committee membership may result in a change in corporate strategy and operation philosophies, which could have a material adverse effect on our business, results of operations and financial condition.

As an English public limited company, certain capital structure decisions require shareholder approval, which may limit our flexibility to manage our capital structure.

English law provides that a board of directors may only allot shares (or rights or convertible into shares) with the prior authorization of shareholders, such authorization being up to the aggregate nominal amount of shares and for a maximum period of five years, each as specified in the articles of association or relevant shareholder resolution. The Articles authorize the allotment of additional shares for a period of five years from October 26, 2017 (being the date of the adoption of the Articles), which authorization will need to be renewed upon expiration (*i.e.*, at least every five years) but may be sought more frequently for additional five-year terms (or any shorter period).

English law also generally provides shareholders with preemptive rights when new shares are issued for cash. However, it is possible for the articles of association, or for shareholders acting in a general meeting, to exclude preemptive rights. Such an exclusion of preemptive rights may be for a maximum period of up to five years from the date of adoption of the articles of association, if the exclusion is contained in the articles of association, or from the date of the shareholder resolution, if the exclusion is by shareholder resolution. In either case, this exclusion would need to be renewed by our shareholders upon its expiration (*i.e.*, at least every five years). The Articles exclude preemptive rights for a period of five years from October 26, 2017, which exclusion will need to be renewed upon expiration (*i.e.*, at least every five years) to remain effective, but may be sought more frequently for additional five-year terms (or any shorter period).

English law also generally prohibits a public company from repurchasing its own shares without the prior approval of shareholders by ordinary resolution, such being a resolution passed by a simple majority of votes cast, and other formalities. As an English company listed on NASDAQ, we may not make on-market purchases of our shares and may make off-market purchases only for the purposes of or pursuant to an employees' share scheme where our shareholders have approved our doing so by ordinary resolution (and with a maximum duration of such approval of five years) or with the prior consent of our shareholders by ordinary resolution to the proposed contract for the purchase of our shares.

English law requires that we meet certain financial requirements before we declare dividends or repurchases.

Under English law, we may only declare dividends, make distributions or repurchase shares out of distributable reserves of the Company or distributable profits. "Distributable profits" are a company's accumulated, realized profits, so far as not previously utilized by distribution or capitalization, less its accumulated, realized losses, so far as not previously written off in a reduction or reorganization of capital duly made, as reported to the Companies House. In addition, as a public company, we may only make a distribution if the amount of our net assets is not less than the aggregate amount of our called-up share capital and undistributable reserves and if, and to the extent that, the distribution does not reduce the amount of those assets to less than that aggregate amount. The Articles permit declaration of dividends by ordinary resolution of the shareholders, provided that the directors have made a recommendation as to its amount. The dividend shall not exceed the amount recommended by the directors. The directors may also decide to pay interim dividends if it appears to them that the profits available for distribution justify the payment. When recommending or declaring the payment of a dividend, the directors will be required under English law to comply with their duties, including considering our future financial requirements.

The enforcement of shareholder judgments against us or certain of our directors may be more difficult.

Because we are a public limited company incorporated under English law, and because most of our directors and executive officers are non-residents of the United States and substantially all of the assets of such directors and executive officers are located outside of the United States, our shareholders could experience more difficulty enforcing judgments obtained against our Company or our directors in U.S. courts than would currently be the case for U.S. judgments obtained against a U.S. public company or U.S. resident directors. In addition, it may be more difficult (or impossible) to assert some types of claims against our Company or its directors in courts in England, or against certain of our directors in courts in Spain, than it would be to bring similar claims against a U.S. company or its directors in a U.S. court.

The United States is not currently bound by a treaty with Spain or the United Kingdom providing for reciprocal recognition and enforcement of judgments rendered in civil and commercial matters with Spain or the United Kingdom, other than

arbitral awards. There is, therefore, doubt as to the enforceability of civil liabilities based upon U.S. federal securities laws in an action to enforce a U.S. judgment in Spain or the United Kingdom. In addition, the enforcement in Spain or the United Kingdom of any judgment obtained in a U.S. court based on civil liabilities, whether or not predicated solely upon U.S. federal securities laws, will be subject to certain conditions. There is also doubt that a court in Spain or the United Kingdom would have the requisite power or authority to grant remedies in an original action brought in Spain or the United Kingdom on the basis of U.S. federal securities laws violations.

Risks Related to Tax Matters

The application of Section 7874 of the Code, including under recent IRS guidance, and changes in law could affect our status as a foreign corporation for U.S. federal income tax purposes.

We believe that, under current law, we should be treated as a foreign corporation for U.S. federal income tax purposes. However, the U.S. Internal Revenue Service (the “IRS”) may assert that we should be treated as a U.S. corporation for U.S. federal income tax purposes pursuant to Section 7874 of the Internal Revenue Code of 1986, as amended (the “Code”). Under Section 7874 of the Code, we would be treated as a U.S. corporation for U.S. federal income tax purposes if, after the Business Combination, (i) at least 80% of our ordinary shares (by vote or value) were considered to be held by former holders of common stock of Globe by reason of holding such common stock, as calculated for Section 7874 purposes, and (ii) our expanded affiliated group did not have substantial business activities in the United Kingdom (the “80% Test”). (The percentage (by vote and value) of our ordinary shares considered to be held by former holders of common stock of Globe immediately after the Business Combination by reason of their holding common stock of Globe is referred to in this disclosure as the “Section 7874 Percentage.”)

Determining the Section 7874 Percentage is complex and, with respect to the Business Combination, subject to legal uncertainties. In that regard, the IRS and U.S. Department of the Treasury (“U.S. Treasury”) issued rules (the “Temporary Regulations”), which include a rule that applies to certain transactions in which the Section 7874 Percentage is at least 60% and the parent company is organized in a jurisdiction different from that of the foreign target corporation (the “Third Country Rule”). This rule applies to transactions occurring on or after November 19, 2015, which date is prior to the closing of the Business Combination. If the Third Country Rule were to apply to the Business Combination, the 80% Test would be deemed met and we would be treated as a U.S. corporation for U.S. federal income tax purposes. While we believe the Section 7874 Percentage is less than 60% such that the Third Country Rule does not apply to us, we cannot assure you that the IRS will agree with this position and would not successfully challenge our status as a foreign corporation. If the IRS successfully challenged our status as a foreign corporation, significant adverse tax consequences would result for us and could apply to our shareholders.

In addition to the final rules to be promulgated with respect to the Temporary Regulations, changes to Section 7874 of the Code, the U.S. Treasury Regulations promulgated thereunder, or to other relevant tax laws (including under applicable tax treaties) could adversely affect our status or treatment as a foreign corporation, and the tax consequences to our affiliates, for U.S. federal income tax purposes, and any such changes could have prospective or retroactive application. Recent legislative proposals have aimed to expand the scope of U.S. corporate tax residence, including by potentially causing us to be treated as a U.S. corporation if the management and control of us and our affiliates were determined to be located primarily in the United States, or by reducing the Section 7874 Percentage at or above which we would be treated as a U.S. corporation such that it would be lower than the threshold imposed under the 80% Test.

Recent IRS guidance and changes in law could affect our ability to engage in certain acquisition strategies and certain internal restructurings.

Even if we are treated as a foreign corporation for U.S. federal income tax purposes, the Temporary Regulations materially changed the manner in which the Section 7874 Percentage will be calculated in certain future acquisitions of U.S. businesses in exchange for our equity, which may affect the tax efficiencies that otherwise might be achieved in transactions with third parties. For example, the Temporary Regulations would impact certain acquisitions of U.S. companies for our Ordinary Shares (or other stock) in the 36 month period beginning December 23, 2015, by excluding from the Section 7874 Percentage the portion of Ordinary Shares that are allocable to former holders of common stock of

Globe. This new rule would generally have the effect of increasing the otherwise applicable Section 7874 Percentage with respect to our future acquisition of a U.S. business. The Temporary Regulations also may more generally limit the ability to restructure the non-U.S. members of our Company to achieve tax efficiencies.

Recent IRS proposed regulations and changes in laws or treaties could affect the expected financial synergies of the Business Combination.

The IRS and the U.S. Treasury also issued rules that provide that certain intercompany debt instruments issued on or after April 5, 2016, will be treated as equity for U.S. federal income tax purposes, therefore limiting U.S. tax benefits and resulting in possible U.S. withholding taxes. As a result of these rules, we may not be able to realize a portion of the financial synergies that were anticipated in connection with the Business Combination, and such rules may materially affect our future effective tax rate. While these new rules are not retroactive, they could impact our ability to engage in future restructurings if such transactions cause an existing debt instrument to be treated as reissued. Furthermore, under certain circumstances, recent treaty proposals by the U.S. Treasury, if ultimately adopted by the United States and relevant foreign jurisdictions, could reduce the potential tax benefits for us and our affiliates by imposing U.S. withholding taxes on certain payments from our U.S. affiliates to related and unrelated foreign persons.

We are subject to tax laws of numerous jurisdictions and our interpretation of those laws is subject to challenge by the relevant governmental authorities.

We and our subsidiaries are subject to tax laws and regulations in the United Kingdom, the United States, France, Spain and the other jurisdictions in which we operate. These laws and regulations are inherently complex and we and our subsidiaries are (and have been) obligated to make judgments and interpretations about the application of these laws and regulations to us and our subsidiaries and their operations and businesses. The interpretation and application of these laws and regulations could be challenged by the relevant governmental authority, which could result in administrative or judicial procedures, actions or sanctions, which could be material.

We intend to operate so as to be treated exclusively as a resident of the United Kingdom for tax purposes, but the relevant tax authorities may treat us as also being a resident of another jurisdiction for tax purposes.

We are a company incorporated in the United Kingdom. Current U.K. tax law provides that we will be regarded as being a U.K. resident for tax purposes from incorporation and shall remain so unless (i) we were concurrently resident of another jurisdiction (applying the tax residence rules of that jurisdiction) that has a double tax treaty with the United Kingdom and (ii) there is a tiebreaker provision in that tax treaty which allocates exclusive residence to that other jurisdiction.

Based upon our management and organizational structure, we believe that we should be regarded solely as resident in the United Kingdom from our incorporation for tax purposes. However, because this analysis is highly factual and may depend on future changes in our management and organizational structure, there can be no assurance regarding the final determination of our tax residence. Should we be treated as resident in a country or jurisdiction other than the United Kingdom, we could be subject to taxation in that country or jurisdiction on our worldwide income and may be required to comply with a number of material and formal tax obligations, including withholding tax and reporting obligations provided under the relevant tax law, which could result in additional costs and expenses.

We may not qualify for benefits under the tax treaties entered into between the United Kingdom and other countries.

We intend to operate in a manner such that, when relevant, we are eligible for benefits under the tax treaties entered into between the United Kingdom and other countries. However, our ability to qualify and continue to qualify for such benefits will depend upon the requirements contained within each treaty and the applicable domestic laws, as the case may be, on the facts and circumstances surrounding our operations and management, and on the relevant interpretation of the tax authorities and courts.

Our or our subsidiaries' failure to qualify for benefits under the tax treaties entered into between the United Kingdom and other countries could result in adverse tax consequences to us and our subsidiaries and could result in certain tax consequences of owning or disposing of our ordinary shares differing from those discussed below.

Future changes to domestic or international tax laws or to the interpretation of these laws by the governmental authorities could adversely affect us and our subsidiaries.

The U.S. Congress, the U.K. Government, the Organization for Economic Co-operation and Development and other government agencies in jurisdictions where we and our affiliates do business have had an extended focus on issues related to the taxation of multinational corporations. One example is in the area of "base erosion and profit shifting" (or "BEPS"), in which payments are made between affiliates from a jurisdiction with high tax rates to a jurisdiction with lower tax rates. Thus, the tax laws in the United States, the United Kingdom or other countries in which we and our affiliates do business could change on a prospective or retroactive basis, and any such changes could adversely affect us. Furthermore, the interpretation and application of domestic or international tax laws made by us and our subsidiaries could differ from that of the relevant governmental authority, which could result in administrative or judicial procedures, actions or sanctions, which could be material. On July 1, 2018, OECD's so-called "Multi-Lateral Instrument" entered into force covering 87 jurisdictions and impacting over 1,200 double tax treaties. The adoption of the Anti Tax Avoidance Directives (known as "ATAD 1 & 2") by the European Union is another key development.

Further developments are to be seen in areas such as the "making tax digital - initiatives" allowing authorities to monitor multinationals' tax position on a more real time basis and the contemplated introduction of new taxes, such as revenue-based digital services taxes aimed at technology companies, but which may impact traditional businesses as well.

We may become subject to income or other taxes in jurisdictions which would adversely affect our financial results.

We and our subsidiaries are subject to the income tax laws of the United Kingdom, the United States, France, Spain and the other jurisdictions in which we operate. Our effective tax rate in any period is impacted by the source and the amount of earnings among our different tax jurisdictions. A change in the division of our earnings among our tax jurisdictions could have a material impact on our effective tax rate and our financial results. In addition, we or our subsidiaries may be subject to additional income or other taxes in these and other jurisdictions by reason of the management and control of our subsidiaries, our activities and operations, where our production facilities are located or changes in tax laws, regulations or accounting principles. Although we have adopted guidelines and operating procedures to ensure our subsidiaries are appropriately managed and controlled, we may be subject to such taxes in the future and such taxes may be substantial. The imposition of such taxes could have a material adverse effect on our financial results.

We may incur current tax liabilities in our primary operating jurisdictions in the future.

We expect to make current tax payments in some of the jurisdictions where we do business in the normal course of our operations. Our ability to defer the payment of some level of income taxes to future periods is dependent upon the continued benefit of accelerated tax depreciation on our plant and equipment in some jurisdictions, the continued deductibility of external and intercompany financing arrangements and the application of tax losses prior to their expiration in certain tax jurisdictions, among other factors. The level of current tax payments we make in any of our primary operating jurisdictions could adversely affect our cash flows and have a material adverse effect on our financial results.

Changes in tax laws may result in additional taxes for us.

We cannot assure you that tax laws in the jurisdictions in which we reside or in which we conduct activities or operations will not be changed in the future. Such changes in tax law could result in additional taxes for us.

U.S. federal income tax reform could adversely affect us.

Legislation commonly known as the Tax Cuts and Jobs Act (the "TCJA") was enacted on December 22, 2017 in the United States. The TCJA made significant changes to the U.S. federal tax code, including a reduction in the U.S. federal corporate

statutory tax rate from 35% to 21%. The TCJA also made changes to the U.S. federal taxation of foreign earnings and to the timing of recognition of certain revenue and expenses and the deductibility of certain business expenses. We examined the impact the TCJA may have on our business in detail during 2018. Although further guidance continued to be released by the IRS until recently, we have concluded that tax reform should not have a material adverse impact on the taxation of our US business. Our work has also led to the conclusion that there should not be an impact from the one-off “transition tax” on certain historic non-U.S. earnings, and consequently the related one-off tax charge of $1.7 million that was recorded in 2017 has been reversed in 2018. This annual report does not discuss in detail the TCJA or the manner in which it might affect us or our stockholders. We urge you to consult with your own legal and tax advisors with respect to the Tax Reform Act and the potential tax consequences of investing in our shares.

Our transfer pricing policies are open to challenge from taxation authorities internationally.

Tax authorities have become increasingly focused on transfer pricing in recent years. Due to our international operations and an increasing number of inter-company cross-border transactions, we are open to challenge from tax authorities with regard to the pricing of such transactions. A successful challenge by tax authorities may lead to a reallocation of taxable income to a different tax jurisdiction and may potentially lead to a higher tax bill overall for the Company.

ITEM 4.   INFORMATION ON THE COMPANY

A.   History and Development of the Company

Ferroglobe PLC

Ferroglobe PLC, initially named VeloNewco Limited, was incorporated under the U.K. Companies Act 2006 as a private limited liability company in the United Kingdom on February 5, 2015, as a wholly-owned subsidiary of Grupo VM. On October 16, 2015 VeloNewco Limited re-registered as a public limited company. As a result of the Business Combination, which was completed on December 23, 2015, FerroAtlántica and Globe merged through corporate transactions to create Ferroglobe PLC, one of the largest producers worldwide of silicon metal and silicon- and manganese-based alloys. To effect the Business Combination, Ferroglobe acquired from Grupo VM all of the issued and outstanding ordinary shares, par value €1,000 per share, of Grupo FerroAtlántica, SAU in exchange for 98,078,161 newly issued Class A Ordinary Shares, nominal value $7.50 per share, of Ferroglobe, after which FerroAtlántica became a wholly-owned subsidiary of Ferroglobe. Immediately thereafter, Gordon Merger Sub, Inc., a wholly-owned subsidiary of Ferroglobe, merged with and into Globe Specialty Metals, Inc., and each outstanding share of common stock, par value $0.0001 per share, was converted into the right to receive one newly-issued ordinary share, nominal value $7.50 per share, of Ferroglobe. After these steps, Ferroglobe issued, in total, 171,838,153 shares, out of which 98,078,161 shares were issued to Grupo VM and 73,759,992 were issued to the former Globe shareholders. Our ordinary shares are currently traded on the NASDAQ under the symbol “GSM.”

On June 22, 2016, we completed a reduction of our share capital, as a result of which the nominal value of each share was reduced from $7.50 to $0.01, with the amount of the capital reduction being credited to distributable reserves.

On November 18, 2016, our Class A Ordinary Shares were converted into ordinary shares of Ferroglobe as a result of the distribution of beneficial interest units in the Ferroglobe R&W Trust to certain Ferroglobe shareholders. Because the proceeds of the R&W Policy will not be sufficient to fully compensate for losses attributable to breaches of representations and warranties made by Grupo VM and FerroAtlántica in the Business Combination Agreement, and the proceeds under the R&W Policy are required to be distributed to the holders of the Trust Units, we may be required to use our existing cash on hand or draw under our credit facility to fund any actual loss incurred.

On August 21, 2018, we announced a share repurchase program, which provided authorization to purchase up to $20 million of our ordinary shares in the period ending December 31, 2018. On November 7, 2018, we completed the repurchase program, resulting in the acquisition of a total of 2,894,049 ordinary shares for total consideration of $20,100

thousand, including applicable stamp duty. The average price paid per share was $6.89. The share repurchase program resulted in 1,152,958 ordinary shares purchased and cancelled and 1,741,091 ordinary shares purchased into treasury, all of which remained held in treasury at December 31, 2018. See “Item 16.E.— Purchases of Equity Securities by the Issuer and Affiliated Purchasers”.

Significant milestones in our history are as follows:

- **1996:** acquisition of the Spanish company Hidro Nitro Española, S.A. (“Hidro Nitro Española”), operating in the ferroalloys and hydroelectric power businesses, and start of the quartz mining operations through the acquisition of Cuarzos Industriales S.A. from Portuguese cement manufacturer Cimpor;

- **1998:** expansion of our manganese- and silicon-based alloy operations through the acquisition of 80% of the share capital of FerroAtlántica de Venezuela (currently FerroVen, S.A.) from the Government of Venezuela in a public auction;

- **2000:** acquisition of 67% of the share capital of quartz mining company Rocas, Arcillas y Minerales, S.A. from Elkem, a Norwegian silicon metal and manganese- and silicon-based alloy producer;

- **2005:** acquisition of Pechiney Electrométallurgie, S.A., now renamed FerroPem, S.A.S., a silicon metal and silicon-based alloys producer with operations in France, along with its affiliate Silicon Smelters (Pty) Ltd. in South Africa;

- **2005:** acquisition of the metallurgical manufacturing plant in Alloy, West Virginia, and Alabama Sand and Gravel, Inc. in Billingsly, Alabama, both in the U.S.;

- **2006:** acquisition of Globe Metallurgical Inc., the largest merchant manufacturer of silicon metal in North America and largest specialty ferroalloy manufacturer in the United States;

- **2006:** acquisition of Stein Ferroaleaciones S.A., an Argentine producer of silicon-based specialty alloys, and its Polish affiliate, Ultracore Polska;

- **2007:** creation of Grupo FerroAtlántica, S.A.U., the holding company of our FerroAtlántica Group;

- **2007:** acquisition of Camargo Correa Metais S.A., a major Brazilian silicon metal manufacturer;

- **2008:** acquisition of Rand Carbide PLC, a ferrosilicon plant in South Africa, from South African mining and steel company Evraz Highveld Steel and Vanadium Limited, and creation of Silicio FerroSolar, S.L., which conducts research and development activities in the solar grade silicon sector;

- **2008:** acquisition of 81% of Solsil, Inc., a producer of high-purity silicon for use in photovoltaic solar cells

- **2008:** acquisition of a majority stake in Ningxia Yonvey Coal Industry Co., Ltd., a producer of carbon electrodes (the remaining stake subsequently purchased in 2012);

- **2009:** creation of French company Photosil Industries, S.A.S., which conducts research and development activities in the solar grade silicon sector;

- **2009:** sale of interest in Camargo Correa Metais S.A. in Brazil to Dow Corning Corporation and formation of a joint venture with Dow Corning at the Alloy, West Virginia facility;

- **2010:** acquisition of Core Metals Group LLC, one of North America’s largest and most efficient producers and marketers of high-purity ferrosilicon and other specialty metals;

- **2010:** acquisition of Chinese silicon metal producer Mangshi Sinice Silicon Industry Company Limited;
- **2011:** acquisition of Alden Resources LLC, North America's leading miner, processor and supplier of specialty metallurgical coal to the silicon and silicon-based alloy industries;
- **2012:** acquisition of SamQuarz (Pty) Ltd, a South African producer of silica, with quartz mining operations;
- **2012:** acquisition of a majority stake (51%) in Bécancour Silicon, Inc., a silicon metal producer in Canada, operated as a joint venture with Dow Corning as the holder of the minority stake of 49%;
- **2014:** acquisition of Silicon Technology (Pty) Ltd. ("Siltech"), a ferrosilicon producer in South Africa;
- **2018:** acquisition from a subsidiary of Glencore PLC of a 100% interest in manganese alloys plants in Mo i Rana, Norway and Dunkirk, France, through newly-formed subsidiaries Ferroglobe Mangan Norge AS and Ferroglobe Manganèse France, SAS; and
- **2018:** sale of the majority interest in Hidro Nitro Española to an entity sponsored by a Spanish renewable energies fund.

Corporate and Other Information

Our operating headquarters and registered office are located at 2nd Floor West Wing, Lansdowne House, 57 Berkeley Square, London W1J 6ER, United Kingdom and 5 Fleet Place, London EC4M 7RD, United Kingdom, respectively. Our telephone number is +44 (0)203 129 2420. Our Internet address is http://www.ferroglobe.com. The information on our website is not a part of this document. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at http://www.sec.gov.

B. Business Overview

We are a global leader in the growing silicon and specialty metals industry with an expansive geographical reach, established through Globe's predominantly North American-centered footprint and FerroAtlántica's predominantly European-centered footprint.

Ferroglobe is one of the world's largest producers of silicon metal, silicon-based alloys and manganese-based alloys. Additionally, Ferroglobe currently has quartz mining activities in Spain, the United States, Canada, South Africa and Mauritania, low-ash metallurgical quality coal mining activities in the United States, and interests in hydroelectric power in Spain and France. Ferroglobe controls a meaningful portion of most of its raw materials and captures, recycles and sells most of the by-products generated in its production processes.

We sell our products to a diverse base of customers worldwide, in a varied range of industries. These industries include aluminum, silicone compounds used in the chemical industry, ductile iron, automotive parts, photovoltaic (solar) cells, electronic semiconductors and steel, all of which are key elements in the manufacturing of a wide range of industrial and consumer products.

We are able to supply our customers with the broadest range of specialty metals and alloys in the industry from our production centers in North America, Europe, South America, Africa and Asia. Our broad manufacturing platform and flexible capabilities allow us to optimize production and focus on products that enhance profitability, including the production of customized solutions and high purity metals to meet specific customer requirements. We also benefit from low operating costs, resulting from our ownership of sources of critical raw materials and the flexibility derived from our ability to alternate production at certain of our furnaces between silicon metal and silicon base alloy products.

Industry and Market Data

The statements and other information contained below regarding Ferroglobe's competitive position and market share are based on the reports periodically published by leading metals industry consultants and leading metals industry publications and information centers, as well as on the estimates of Ferroglobe's management.

Competitive Strengths and Strategy of Ferroglobe

Competitive Strengths

Leading market positions in silicon metal, silicon-based alloys and manganese-based alloys

We are a leading global producer in our core products based on merchant production capacity and hold the leading market share in a majority of our products. Specifically, in the case of silicon metal, with maximum global production capacity of 416,750 metric tons (which includes 51% of our attributable joint venture capacity and considers the most favorable production mix), we have approximately 78% of the merchant production capacity market share in North America and approximately 30% of the global market share (all of the world excluding China), according to management estimates for our industry. In the case of manganese-based alloy, following the acquisition of the Dunkirk and Mo i Rana plants in 2018, our market share is approximately 30% in Europe, and we are among the three largest global producers of manganese alloys excluding China.

Our scale and global presence across five continents allows us to offer a wide range of products to serve a variety of end-markets, including those which we consider to be dynamic, such as the solar, automotive, consumer electronic products, semiconductors, construction and energy industries. As a result of our market leadership and breadth of products, we possess critical insight into market demand allowing for more efficient use of our resources and operating capacity. Our ability to supply critical sources of high-quality raw materials from within our Company provides us with operational and financial stability and reduces the need for us to compete with our competitors for supply. We believe this also provides a competitive advantage, allowing us to deliver an enhanced product offering with consistent quality on a cost-efficient basis to our customers.

Global production footprint and reach

Our diversified production base consists of production facilities across North America, Europe, South America, South Africa and Asia. We have the capability to produce our core products at multiple facilities, providing a competitive advantage when reacting to changing global demand trends and customer requirements. Furthermore, this broad base ensures reliability to our customers that value timely delivery and consistent product quality. Our diverse production base also enables us to optimize our production plans and shift production to the lowest cost facilities. Most of our production facilities are located close to sources of principal raw materials, key customers or major transport hubs to facilitate delivery of raw materials and distribution of finished products. This enables us to service our customers globally, while optimizing our working capital, as well as enabling our customers to optimize their inventory levels.

Diverse base of high-quality customers across growing industries

We sell our products to customers in over 30 countries, with our largest customer concentration in North America and in Europe. Our products are used in end products spanning a broad range of industries, including solar, personal care and healthcare products, automobile parts, carbon and stainless steel, water pipe, solar, semiconductor, oil and gas, infrastructure and construction. Although some of these end-markets have growth drivers similar to our own, others are less correlated and offer the benefits of diversification. This wide range of products, customers and end-markets provides significant diversity and stability to our business.

Many of our customers, we believe, are leaders in their end-markets and fields. We have built long-lasting relationships with customers based on the breadth and quality of our product offerings and our ability to produce products that meet specific customer requirements. The average length of our relationships with our top 30 customers exceeds ten years and,

in some cases, such relationships go back as far as 30 years. For the year ended December 31, 2018 and December 31, 2017, Ferroglobe's ten largest customers accounted for approximately 33% and 47%, respectively, of Ferroglobe's consolidated revenue. Our customer relationships provide us with stability and visibility into our future volumes and earnings, though we are not reliant on any individual customer or end-market. Our customer relationships, together with our diversified product portfolio, provide us with opportunities to cross sell new products; for example, by offering silicon-based or manganese-based alloys to existing steelmaking customers.

Flexible and low-cost structure

We believe we have an efficient cost structure, enhanced over time by vertical integration through strategic acquisitions and as a result of the Business Combination in December 2015. The largest components of our cost base are raw materials and power. Our relatively low operating costs are primarily a result of our ownership of, and proximity to, sources of raw materials, our access to attractively priced power supplies and skilled labor and our efficient production processes.

We believe our vertically integrated business model and ownership of sources of raw materials provides us with a cost advantage over our competitors. Moreover, such ownership and the fact that we are not reliant on any single supplier for the remainder of our raw materials needs generally ensures stable, long term supply of raw materials for our production processes, thereby enhancing operational and financial stability. Transportation costs can be significant in our business; our proximity to sources of raw materials and customers improves logistics and represents another cost advantage. The proximity of our facilities to our customers also allows us to provide just in time delivery of finished goods and reduces the need to store excess inventory, resulting in more efficient use of working capital. Additionally, we believe we have competitive power supply contracts in place that provide us with reliable, long term access to power at reasonable rates. We capture, recycle and sell most of the by-products generated in our production processes, which further reduces our costs.

We operate with a largely variable cost of production and our diversified production base allows us to shift our production and distribution between facilities and products in response to changes in market conditions over time. Additionally, the diversity of our currency and commodity exposures provides, to a degree, a natural hedge against foreign exchange and raw materials pricing volatility. Our production costs are mostly dependent on local factors while our product prices are influenced more by global factors. Depreciation of local, functional currencies relative to the U.S. Dollar, when it occurs, reduces the costs of our operations, offering an increased competitive edge in the international market.

We believe our scale and global presence enables us to sustain our operations throughout periods of economic downturn, volatile commodity prices and demand fluctuations.

Stable supply of critical, high quality raw materials

In order to ensure reliable supplies of high-quality raw materials for the production of our metallurgical products, we have invested in strategic acquisitions of sources that supply a meaningful portion of the inputs our manufacturing operations consume. Specifically, we own and operate specialty, low ash, metallurgical quality coal mines in the United States, high purity quartz quarries in the United States, Canada, Spain, South Africa and Mauritania, charcoal production units in South Africa, and our Yonvey production facility for carbon electrodes in Ningxia, China. For raw materials needs our subsidiaries cannot meet, we have qualified multiple suppliers in each operating region for each raw material, helping to ensure reliable access to high quality raw materials.

Efficient and environmentally friendly by-product usage

We utilize or sell most of the by-products of our manufacturing process, which reduces cost and the environmental impact of our operations. We have developed markets for the by-products generated by our production processes and have transformed our manufacturing operations so that little solid waste disposal is required. By-products not recycled in the manufacturing process are generally sold to companies, which process them for use in a variety of other applications. These materials include: silica fume (also known as microsilica), used as a concrete additive, refractory material and oil

well conditioner; fines - the fine material resulting from crushing lumps; and dross, which results from the purification process during smelting.

Pioneer in innovation with focus on technological advances and development of next generation products

Our talented workforce has historically developed proprietary technological capabilities and next generation products in-house, which we believe give us a competitive advantage. In addition to a dedicated R&D division, we have cooperation agreements in place with various universities and research institutes in Spain, France and other countries around the world. Our R&D achievements include:

- ELSA electrode — We have internally developed a patented technology for electrodes used in silicon metal furnaces, which we have sold to several major silicon producers globally. This technology, known as the ELSA electrode technology, improves energy efficiency in the production process of silicon metal and significantly reduces iron contamination. It enables us to run our furnaces with fewer stoppages, minimizing the consumption of power, which is one of the largest cost components in the smelting process. The ELSA electrode technology and related know how is unique and has no proven alternative worldwide. The ELSA electrode is a key technology in running high capacity silicon furnaces (the size and capacity of silicon furnaces is limited by the size of its electrodes, and the ELSA technology allows us to reduce this bottleneck), improving our productivity and lowering our unit cost.

- Solar Grade Silicon — Ferroglobe's solar grade silicon involves the production of upgraded metallurgical grade (UMG) type solar grade silicon metal with a purity above 99.9999% through a new, potentially cost effective, electrometallurgical purification process in place of the traditional chemical process for the production of solar grade polycrystalline silicon, which tends to be costly and involves high energy consumption and potential environmental hazards. The new technology, developed by Ferroglobe at its research and development facilities, aims to reduce the costs and energy consumption associated with the production of solar grade silicon. We have commenced production of such UMG solar grade silicon through this new process at a prototype factory. The construction of a larger greenfield facility is currently on stand-by until better conditions in the solar grade silicon market can be valued. In 2016, we entered into an agreement with Aurinka providing for the formation and operation of a joint venture for the purpose of producing upgraded metallurgical grade (UMG) solar silicon. See "—Research and Development (R&D)—Solar grade silicon" below.

Experienced management team in the metals and mining industry

We have a seasoned and experienced management team with extensive knowledge of the global metals and mining industry, operational and financial expertise and a track record of developing and managing large-scale operations. Our management team is committed to responding quickly and effectively to macroeconomic and industry developments, to identifying and delivering growth opportunities and to improving our performance by way of a continuous focus on operational cost control and a disciplined, value-based approach to capital allocation. Our management team is complemented by a skilled operating team with solid technical knowledge of production processes and strong relationships with key customers.

Business Strategy

Maintain and leverage industry leading position in core businesses and pursue long-term growth

We intend to maintain and leverage our position as a leading global producer of silicon metal and one of the leading global producers of ferroalloys based on production capacity. We believe we will achieve our goals through developing our existing strengths and pursuing long-term growth. We plan to achieve organic growth by continually expanding and enhancing our production capabilities as well as by developing new products to further diversify our portfolio of products and expand our customer base. We intend to focus our production and sales efforts on high-margin products and end-markets that we consider to have the highest potential for profitability and growth, such as the solar industry. We will continue to capitalize on our global reach and the diversity of our production base to adapt to changes in market demands,

shifting our production and distribution across facilities and between different products as necessary in order to remain competitive and maximize profitability. We aim to obtain further direct control of key raw materials to secure our long-term access to scarce reserves, which we believe will allow us to continue delivering enhanced products while maintaining our low-cost position. Additionally, we will continue regularly to review our customer contracts in an effort to improve their terms and to optimize the balance between selling under long-term agreements and retaining some exposure to spot markets. We intend to maintain pricing that appropriately reflects the value of our products and our level of customer service and, in light of commodity prices and demand fluctuations, may decide to move away from contracts with index-based prices in favor of contracts with fixed prices, particularly at prices which ensure a profit throughout the cycle.

Maintain low cost position while controlling inputs

We believe we have an efficient cost structure and, going forward, we will seek to further reduce costs and improve operational efficiency through a number of initiatives. We plan to focus on controlling the cost of our raw materials through our captive sources and long-term supply contracts and on lowering our fixed costs in order to reduce the unit costs of our silicon metal and ferroalloy production. We aim to improve our internal processes and further integrate our FerroAtlántica and Globe divisions in order to realize additional operating synergies from the Business Combination, such as benefits from value chain optimization, including enhancements in raw materials procurement and materials management; adoption of best practices and technical and operational know how across our platform; reduced freight costs from improved logistics as well as savings through the standardization of monitoring and reporting procedures, technology, systems and controls. We intend to enhance our production process through R&D and targeted capital expenditure and leverage our geographic footprint to shift production to the most cost effective and appropriate facilities and regions for such products. We will continue to regularly review our power supply contracts with a view to improving their terms, such as the inclusion of interruptibility capacity, which provides us with additional profitability, and more competitive tariff structures. In addition, we will seek to maximize the value derived from the utilization and sale of by-products generated in our production processes.

Continue to focus on innovation to develop next generation products

We believe we differentiate ourselves from our competitors on the basis of our technical expertise and innovation, which allow us to deliver new high-quality products to meet our customers’ needs. We intend to keep using these capabilities in the future to retain existing customers and cultivate new business. We plan to leverage the expertise of our dedicated team of specialists to advance and to develop next generation products and technologies that fuel organic growth. In particular, we intend develop high value powders for high end applications, including silicon-based anodic materials for Li-ion batteries. We also aim to further develop our specialized foundry products, such as value-added inoculants and customized nodularizers, which are used in the production of iron to improve its tensile strength, ductility and impact properties, and to refine the homogeneity of the cast iron structure.

Maintain financial discipline to facilitate ongoing operations and support growth

We believe maintaining financial discipline will provide us with the ability to manage the volatility in our business resulting from changes in commodity prices and demand fluctuations. We intend to preserve a strong and conservative balance sheet, with sufficient liquidity and financial flexibility to facilitate all of our ongoing operations, to support organic and strategic growth and to finance prudent capital expenditure programs aimed at placing us in a better position to generate increased revenues and cash flows by delivering a more comprehensive product mix and optimized production in response to market circumstances. We plan to become even more efficient in our working capital management through various initiatives aimed at optimizing inventory levels and accounts receivables. We will also seek to repay indebtedness from free cash flow and retain low leverage for maximum free cash flow generation.

Pursue strategic opportunities

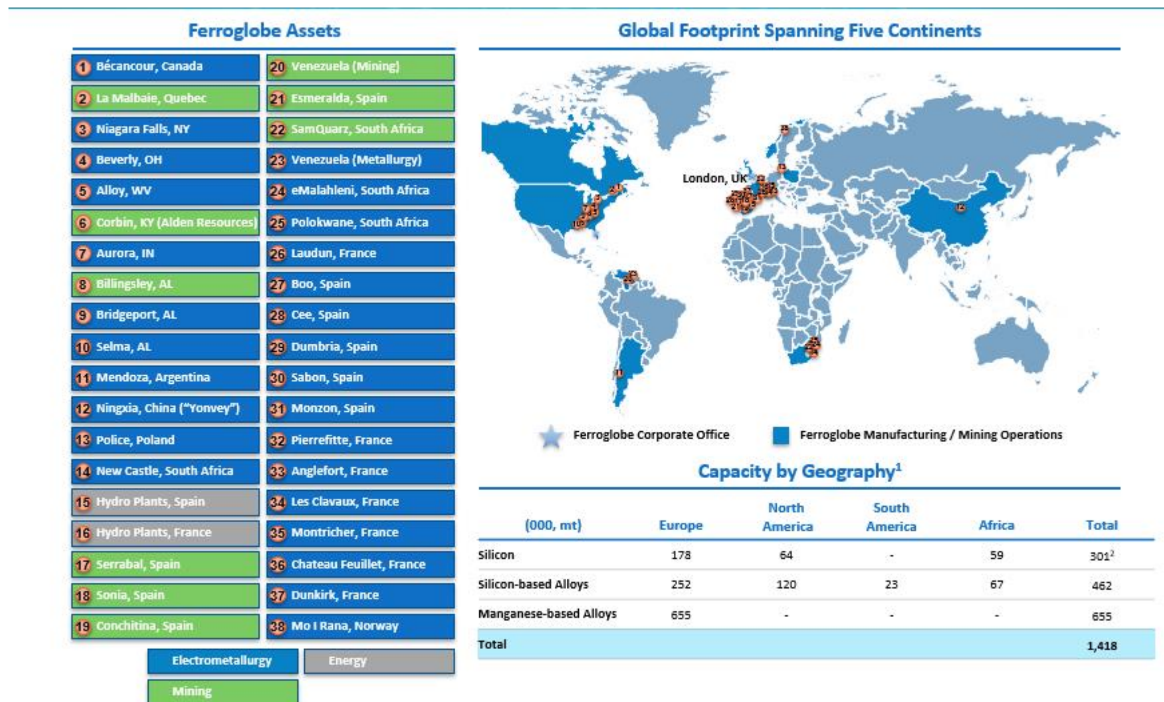
We have a proven track record of disciplined acquisitions of complementary businesses and successfully integrating them into existing operations while retaining a targeted approach through appropriate asset divestitures. Our past acquisitions have increased the vertical integration of our activities, allowing us to deliver an enhanced product offering on a

cost-efficient basis. We regularly consider and evaluate strategic opportunities for our business and will continue to do so in the future with the objective of expanding our capabilities and leveraging our products and operations. In particular, we intend to pursue complementary acquisitions and other investments at appropriate valuations for the purpose of increasing our capacity, increasing our access to raw materials and other inputs, further refining existing products, broadening our product portfolio and entering new markets. We will consider such strategic opportunities in a disciplined fashion while maintaining a conservative leverage position and strong balance sheet.

We will also seek to evaluate our core business strategy on an ongoing basis and may divest certain non-core and lower margin businesses to improve our financial and operational results.

Facilities and Production Capacity

The following chart shows, as of December 31, 2018, the location of our assets and our production capacity, including 51% of the capacity of our joint ventures, by geography, of silicon, silicon-based alloys and manganese-based alloys. It is important to note that production capacity is calculated for the production mix as of December 31, 2018, but certain facilities may from time to time switch among different families of products (for instance, from silicon metal to silicon-based alloys and vice-versa) or among different products within the same family (for instance from ferromanganese to silicomanganese). Such switches change the production capacity at each plant.



(000, mt)	Europe	North America	South America	Africa	Total
Silicon	178	64	-	59	301[2]
Silicon-based Alloys	252	120	23	67	462
Manganese-based Alloys	655	-	-	-	655
Total					1,418

[1] Based on company estimates. Capacity as of December 31, 2018, excluding plant locations that are fully idled.
[2] Includes pro rata share (51%) of attributable joint-venture capacity.

Our production facilities are strategically spread worldwide. We operate quartz mines located in Spain, South Africa, Canada, the United States and Mauritania and charcoal production in South Africa. Additionally, we operate low-ash, metallurgical quality coal mines in the United States.

From time to time, in response to market conditions and to manage operating expenses, facilities are fully or partially idled. As of December 31, 2018, facilities in the United States, Spain, Venezuela, South Africa and China are partially or fully idled, as a result of current market conditions.

Ferroglobe's total installed power capacity in Spain is 167 megawatts. In 2018, total power production was approximately 491,000 megawatt hours due to very high precipitation levels. These figures are excluding the 18.9 megawatts of hydro production capacity that were divested for net cash proceeds of $20,533 thousand in December 2018. Also, Ferroglobe owns a total of 19.2 megawatts of hydro production capacity in France.

Products

For the years ended December 31, 2018, 2017 and 2016, Ferroglobe's consolidated sales by product were as follows:

	Year ended December 31,		
($ thousands)	**2018**	**2017**	**2016**
Silicon metal	933,366	739,618	751,508
Manganese-based alloys	527,757	363,644	223,451
Ferrosilicon	359,374	266,862	242,788
Other silicon-based alloys	215,697	188,183	173,901
Silica fume	37,061	36,338	37,480
Energy	44,185	16,661	20,380
Byproducts and other	156,598	130,387	126,529
Total Sales	**2,274,038**	**1,741,693**	**1,576,037**
Shipments in metric tons:			
Silicon metal	352,578	325,884	341,388
Manganese-based alloys	424,358	274,119	270,430
Ferrosilicon	205,246	185,952	207,173
Other silicon-based alloys	106,457	97,069	90,496
Average Selling price ($/MT):			
Silicon metal	2,647	2,270	2,201
Manganese-based alloys	1,244	1,327	826
Ferrosilicon	1,751	1,435	1,172
Other silicon-based alloys	2,026	1,939	1,922

Silicon metal

Ferroglobe is a leading global silicon metal producer with a total production capacity of approximately 300,750 tons (including 51% of the joint venture capacity attributable to us) per annum in several facilities in the United States, France, South Africa, Canada and Spain. This production capacity reflects the production mix that was current as of December 31, 2018, but different production configurations can result in silicon metal production capacity of up to 416,750 tons per annum. For the years ended December 31, 2018, 2017 and 2016, Ferroglobe's revenues generated by silicon metal sales accounted for 41.0%, 42.5% and 47.7%, respectively, of Ferroglobe's total consolidated revenues.

Silicon metal is used by primary and secondary aluminum producers, who require silicon metal with certain requirements to produce aluminum alloys. For the year ended December 31, 2018, sales to aluminum producers represented approximately 47% of silicon metal revenues. The addition of silicon metal reduces shrinkage and the hot cracking tendencies of cast aluminum and improves the castability, hardness, corrosion resistance, tensile strength, wear resistance and weldability of the aluminum end products. Aluminum is used to manufacture a variety of automotive components, including engine pistons, housings, and cast aluminum wheels and trim, as well as high tension electrical wire, aircraft parts, beverage containers and other products which require aluminum properties.

Silicon metal is also used by several major silicone chemical producers. For the year ended December 31, 2018 sales to chemical producers represented approximately 43% of silicon metal revenues. Silicone chemicals are used in a broad range of applications, including personal care items, construction-related products, health care products and electronics. In construction and equipment applications, silicone chemicals promote adhesion, act as a sealer and have insulating properties. In personal care and health care products, silicone chemicals add a smooth texture, protect against ultraviolet rays and provide moisturizing and cleansing properties. Silicon metal is an essential component of the manufacture of silicone chemicals, accounting for approximately 20% of the cost of production.

In addition, silicon metal is the core material needed for the production of polysilicon, which is most widely used to manufacture solar cells and semiconductors. For the year ended December 31, 2018 sales to polysilicon producers represented approximately 10% of silicon metal revenues. Producers of polysilicon employ processes to further purify the silicon metal and grow ingots from which wafers are cut. These wafers are the base material to produce solar cells, to convert sunlight to electricity. Individual solar cells are soldered together to make solar modules.

Manganese-based alloys

Ferroglobe is among the leading global manganese-based alloys producers based on production capacity. As of December 31, 2018, Ferroglobe maintained approximately 309,000 tons of annual silicomanganese production capacity and approximately 346,000 tons of annual ferromanganese production capacity in our factories in Spain, Norway, and France. The acquisition of Glencore assets completed on February 1, 2018 added approximately 125,000 tons of silicomanganese and 144,000 tons of ferromanganese annually. During the year ended December 31, 2018, Ferroglobe sold 424,358 tons of manganese-based alloys, which includes only approximately nine months of sales activity for the newly acquired facilities in Norway and France since finished goods were not purchased as part of the acquisition. For the years ended December 31, 2018, 2017, and 2016, Ferroglobe's revenues generated by manganese-based alloys sales accounted for 23.2%, 20.9% and 14.2%, respectively, of Ferroglobe's total consolidated revenues.

Over 90% of the global manganese-based alloys produced are used in steel production, and all steelmakers use manganese and manganese alloys in their production processes.

Silicomanganese is used as deoxidizing agent in the steel manufacturing process. Silicomanganese is also produced in the form of refined silicomanganese, or silicomanganese AF, and super-refined silicomanganese, or silicomanganese LC.

Ferromanganese is used as a deoxidizing, desulphurizing and degassing agent in steel to remove nitrogen and other harmful elements that are present in steel in the initial smelting process, and to improve the mechanical properties, hardenability and resistance to abrasion of steel. The three types of ferromanganese that Ferroglobe produces are:

- high-carbon ferromanganese used to improve the hardenability of steel;
- medium-carbon ferromanganese, used to manufacture flat and other steel products; and
- low-carbon ferromanganese used in the production of stainless steel, steel with very low carbon levels, rolled steel plates and pipes for the oil industry.

Silicon-based alloys

Ferrosilicon

Ferroglobe is among the leading global ferrosilicon producers based on production output in recent years. During the year ended December 31, 2018, Ferroglobe sold 205,246 tons of ferrosilicon. For the years ended December 31, 2018, 2017 and 2016, Ferroglobe's revenues generated by ferrosilicon sales accounted for 15.8%, 15.3% and 15.4%, respectively, of Ferroglobe's total consolidated revenues.

Ferrosilicon is an alloy of iron and silicon (normally approximately 75% silicon). Ferrosilicon products are used to produce stainless steel, carbon steel, and various other steel alloys and to manufacture electrodes and, to a lesser extent, in the production of aluminum. Approximately 88% of ferrosilicon produced is used in steel production.

Ferrosilicon is generally used to remove oxygen from the steel and as alloying element to improve the quality and strength of iron and steel products. Silicon increases steel's strength and wear resistance, elasticity and scale resistance, and lowers the electrical conductivity and magnetostriction of steel.

Other silicon-based alloys

In addition to ferrosilicon, Ferroglobe produces various different silicon-based alloys, including calcium silicon and foundry products, which comprise inoculants and nodularizers. Ferroglobe produces more than 20 specialized varieties of foundry products, several of which are custom made for its customers. Demand for these specialty metals is increasing and, as such, they are becoming more important components of Ferroglobe's product offering. During the year ended December 31, 2018, Ferroglobe sold 106,457 tons of silicon-based alloys (excluding ferrosilicon). For the years ended December 31, 2018, 2017 and 2016, Ferroglobe's revenues generated by silicon-based alloys (excluding ferrosilicon) accounted for 9.5%, 10.8% and 11.0%, respectively, of Ferroglobe's total consolidated revenues.

The primary use for calcium silicon is the deoxidation and desulfurization of liquid steel. In addition, calcium silicon is used to control the shape, size and distribution of oxide and sulfide inclusions, improving fluidity, ductility, and the transverse mechanical and impact properties of the final product. Calcium silicon is also used in the production of coatings for cast iron pipes, in the welding process of powder metal and in pyrotechnics.

The foundry products that Ferroglobe manufactures include nodularizers and inoculants, which are used in the production of iron to improve its tensile strength, ductility and impact properties, and to refine the homogeneity of the cast iron structure.

Silica fume

For the years ended December 31, 2018, 2017 and 2016, Ferroglobe's revenues generated by silica fume sales accounted for 1.6%, 2.1% and 2.4%, respectively, of Ferroglobe's total consolidated sales.

Silica fume is a by-product of the electrometallurgical process of silicon metal and ferrosilicon. This dust-like material, collected through Ferroglobe factories' air filtration systems, is mainly used in the production of high-performance concrete and mortar. The controlled addition of silica fumes to these products results in increased durability, improving their impermeability from external agents, such as water. These types of concrete and mortar are used in large-scale projects such as bridges, viaducts, ports, skyscrapers and offshore platforms.

Services

Energy

Ferroglobe's total installed power capacity in Spain is 167 megawatts. In 2018, total power production was approximately 491,000 megawatt hours due to very high precipitation levels. For the years ended December 31, 2018, 2017 and 2016, Ferroglobe recognized a profit/(loss) as a result of the Spanish hydroelectric operations, in the amounts of $14,608 thousand, ($1,229) thousand and ($3,065) thousand, respectively.

Hydroelectric power stations produce energy from the flow of water through channels or pipes to a turbine, causing the shaft of the turbine to rotate. An alternator or generator, which is connected to the rotating shaft of the turbine, converts the motion of the shaft into electrical energy.

In Spain, Ferroglobe sells all of the power it produces in the wholesale energy market that has been in place in Spain since 1998. Prior to 2013, Ferroglobe benefitted from a feed-in tariff support scheme, pursuant to which Ferroglobe was legally

entitled to feed its electric production into the Spanish grid in exchange for a fixed applicable feed-in-tariff over a fixed period, and therefore received a higher price than the market price. However, the new regulatory regime introduced in Spain in 2013 eliminated the availability of the feed-in tariff support scheme for most of Ferroglobe's facilities. Ferroglobe has been able to partly mitigate this reduction in prices through the optimization of its power generation such that it operates in peak-price hours, as well as through participation in the "ancillary services" markets whereby Ferroglobe agrees to generate power as needed to balance the supply and demand of energy in the markets in which it operates. See "—Regulatory Matters—Energy and electricity generation" below.

Villar Mir Energía, S.L. ("VM Energía"), a Spanish company controlled by Grupo VM, advises in the day-to-day operations of Ferroglobe's hydroelectric facilities in the Spanish wholesale market under a strategic advisory services contract. Operating in the Spanish wholesale market requires specialized trading skills that VM Energía can provide because of the broad base of both generating facilities and customers that it manages. For more information on the contractual arrangements between Ferroglobe and VM Energía, see "Item 7.B.—Major Shareholders and Related Party Transactions—Related Party Transactions" below.

Ferroglobe also owns and operates 19.2 megawatts of hydroelectric power capacity in two plants in France. Given the small size of these operations and the specifics of the regulatory regime under which they operate, the results of operations and financial position with respect to these plants are included within our French operations.

Raw Materials, Logistics and Power Supply

The largest components of Ferroglobe's cost base are raw materials and power used for smelting at our facilities. In the year ended December 31, 2018, Ferroglobe's power consumption, represented approximately 28% of Ferroglobe's total consolidated cost of sales.

The primary raw materials Ferroglobe uses to produce its electrometallurgy products are carbon reductants (primarily coal, but also charcoal, metallurgical and petroleum coke, anthracite and wood) and minerals (manganese ore and quartz). Other raw materials used to produce Ferroglobe's electrometallurgy products include electrodes (consisting of graphite and carbon electrodes and electrode paste), slags and limestone, as well as certain specialty additive metals. Ferroglobe procures coal, manganese ore, quartz, petroleum and metallurgical coke, electrodes and most additive metals centrally under the responsibility of the corporate purchasing department. Some locally sourced raw materials are purchased at a decentralized level (country specific purchasers) under close cooperation with the corporate purchasing department.

Manganese ore

The global supply of manganese ore comprises standard- to high-grade manganese ore, with 35% to 56% manganese content, and low-grade manganese ore, with lower manganese content. Manganese ore production comes mainly from eight countries: South Africa, Australia, China, Gabon, Brazil, Ukraine, India and Ghana. However, the production of high-grade manganese ore is concentrated in Australia, Gabon, South Africa and Brazil.

The vast majority of the manganese ore Ferroglobe purchased in 2018 came from suppliers located in South Africa (52% of total purchases) and Gabon (45% of total purchases). In 2018, the plants of Dunkirk and Mo i Rana were integrated, resulting in the purchase of different grades of ore (mainly medium and high-grade fines). In 2018, Ferroglobe started its marketing cooperation with Glencore International A.G. for sourcing manganese ore in the international markets. In 2018, Ferroglobe has contractual arrangements with two main suppliers (located in South Africa and Gabon), expressed in U.S. Dollars, which depend primarily on spot prices.

Global manganese ore prices are mainly driven by manganese demand from China and to a lower extent from India. Potential disruption of supply from South Africa, Australia, Brazil or Gabon due to logistical, labor or other reasons may have an impact on the availability and the pricing of manganese ore.

Coal

Coal is the major carbon reductant in silicon and silicon alloys production. Only washed and screened coal with ash content below 10% and with specific physical properties may be used for production of silicon alloys. Colombia and the United States are the best source for the required type of coal and the vast majority of the silicon alloys industry, including Ferroglobe, is dependent on supply from these two countries.

Approximately 61% of the coal Ferroglobe purchased externally in 2018 for its facilities was sourced from one mining supplier in Colombia while the remaining 39% came from the United States, other Colombian mines, as well as from Poland and South Africa. Ferroglobe has a long-standing relationship with the coal washing plants that process Colombian coal in Europe, which price coal using spot, quarterly, semi-annual or annual contracts, based on market outlook. European coal prices, which are denominated in U.S. Dollars, are mainly based on API 2, the benchmark price reference for coal imported into northwest Europe. Prices reflect also currency fluctuation, labor issues and transportation situation in Colombia and South Africa, as well as sea-freights.

Ferroglobe also owns Alden Resources LLC (“Alden”) in the United States. Alden provides a stable and long-term supply of low ash metallurgical grade coal by fulfilling a substantial portion of our requirements to our North American operations.

See “—Mining Operations” below for further information.

Quartz

Quartz is required to manufacture silicon-based alloys and silicon metal.

Ferroglobe has secured access to quartz from its quartz mines in Spain, South Africa, the United States, Mauritania and Canada (see “—Mining Operations”). For the year ended December 31, 2018 approximately 70% of Ferroglobe’s total consumption of quartz was self-supplied. Ferroglobe purchases quartz from third-party suppliers on the basis of contractual arrangements with terms of up to four years. Ferroglobe’s quartz suppliers typically have operations in the same countries where Ferroglobe factories are located, or in close proximity, which minimizes logistical costs.

Ferroglobe controls quartzite mining operations located in Alabama, United States and a concession to mine quartzite in Saint-Urbain, Québec, Canada (operated by a third-party miner). These mines supply our North American operations with a substantial portion of their requirements for quartz.

Other raw materials

Wood is needed for the production of silicon metal and silicon-based alloys. It is used directly in furnaces as woodchips or cut to produce charcoal, which is the major source of carbon reductant for Ferroglobe’s plants in South Africa. In South Africa, charcoal is a less expensive substitute for imported coal and provides desirable qualities to the silicon-based alloys it is used to produce.

In the other countries where Ferroglobe operates, Ferroglobe purchases wood chips locally or logs for on-site wood chipping operations from a variety of suppliers.

In 2018, the sourcing of metallurgical coke doubled, due to the consumption needs of the Dunkirk and Mo i Rana plants. The sourcing of the metallurgical coke was predominantly from Russia and Spain, with smaller quantities being sourced from Poland, Colombia and China.

Petroleum coke, electrode related products, slag, limestone and additive metals are other relevant raw materials Ferroglobe utilizes to manufacture its electrometallurgy products. Procurement of these raw materials is either managed centrally or with each country’s raw materials procurement manager or plant manager and the materials purchased at spot prices or under contracts of a year or less.

In 2018, graphite electrodes decreased as a result of lower production volumes and the conversion of furnaces to carbon electrodes in France. The sourcing of graphite electrodes is diversified with supply from Europe, India, Russia and China. Agreements with suppliers range from six months to several years, ensuring the reliability of supply at adequate market prices.

Logistics

Logistical operations are managed centrally and at the local level. Sea-freight operations are centralized at the corporate level, while rail logistics is centralized at the country level. Vehicle transport is managed at the plant level with centralized coordination in multi-site countries. Contractual commitments in respect of transportation and logistics match, to the extent possible, Ferroglobe's contracts for raw materials and customer contracts.

Power

In Spain, Ferroglobe mainly acquires energy at the spot price through daily auction processes and is, therefore, exposed to market price volatility. Ferroglobe seeks to reduce its energy costs by stopping production at its factories during times of peak power prices and operating its factories in the hours of the day with lower energy prices. Additionally, Ferroglobe receives a rebate on a portion of its energy costs in Spain and France in exchange for an agreement to interrupt production, and thus power usage, upon request by the grid operator.

In France, FerroPem, S.A.S. has traditionally had access to relatively low power prices, as it benefited from Electricité de France's green tariff ("Tarif Vert"), and a discount thereon. The green tariffs expired at the end of 2015 and Ferroglobe has negotiated supply contracts based on market prices with two suppliers for years 2016 to 2019 and is currently negotiating long-term supply contracts with suppliers in the market place. Regulation enacted in 2016 enables FerroPem SAS to benefit from reduced tariffs resulting from its agreeing interrupt production and respond to surges in demand, as well as paying compensation for indirect CO_2 costs under the EU Emission Trading System (ETS) regulation. Furthermore, the new arrangements allow FerroPem, S.A.S. to operate competitively on a 12-month basis, avoiding the need to stop for two months in each year as required under the Tarif Vert.

Ferroglobe's production of energy in Spain and France through its hydroelectric power plants partially mitigates its exposure to increases in power prices in these two countries, as an increase in energy prices has a positive impact on Ferroglobe revenues from electricity generation.

In the United States, we attempt to enter into long-term electric supply contracts that value our ability to interrupt load to achieve reasonable rates. Our power supply contracts have, in the past, resulted in stable price structures. In West Virginia, we have a contract with Brookfield Renewable Power to provide, on average, 45% of our power needs, from a dedicated hydroelectric facility, through December 2021 at a fixed rate. Our power needs for the non-hydroelectric component of West Virginia, Ohio, and Alabama are primarily sourced through special contracts that provide competitive rates whereas a portion of the power is also priced at market rates. At our Niagara Falls, New York plant, we have been granted a public sector package including 18.4 megawatts of hydro power through December 2021.

In South Africa, energy prices are regulated by the NERSA and price increases are publicly announced in advance.

The level of power consumption of our submerged electric arc furnaces is highly dependent on which products are being produced and typically fall in the following ranges: (i) manganese-based alloys require between 2.0 and 3.8 megawatt hours to produce one ton of product, (ii) silicon-based alloys require between 3.5 and 8 megawatt hours to produce one ton of product and (iii) silicon metal requires approximately 12 megawatt hours to produce one ton of product. Accordingly, consistent access to low cost, reliable sources of electricity is essential to our business.

Mining Operations

Reserves

Reserves are defined by SEC Industry Guide 7 as the part of a mineral deposit that could be economically and legally extracted or produced at the time of the reserve determination. Proven, or measured, reserves are reserves for which (a) quantity is computed from dimensions revealed in outcrops, trenches, workings or drill holes, and grade and/or quality are computed from the results of detailed sampling and (b) the sites for inspection, sampling and measurement are spaced so closely and the geologic character is so well defined that size, shape, depth and mineral content of reserves are well-established. Probable, or indicated, reserves are reserves for which quantity and grade and/or quality are computed from information similar to that used for proven reserves, but the sites for inspection, sampling, and measurement are farther apart or are otherwise less adequately spaced. The degree of assurance for probable reserves, although lower than that for proven reserves, is high enough to assume continuity between points of observation. Reserve estimates were made by independent third-party consultants, based primarily on dimensions revealed in outcrops, trenches, detailed sampling and drilling studies performed. These estimates are reviewed and reassessed from time to time. Reserve estimates are based on various assumptions, and any material changes in these assumptions could have a material impact on the accuracy of Ferroglobe's reserve estimates.

The following table sets forth summary information on Ferroglobe's mines which were in production as of December 31, 2018.

Mine	Location	Mineral	Annual capacity kt	Production in 2018 kt	Mining Recovery	Proven reserves Mt[1]	Probable reserves Mt[1]	Mining Method	Reserve grade	Btus per lb.	Life[2]	Expiry date[3]
Sonia	Spain (Mañón)	Quartz	150	159	0.4	1.87	0.8	Open-pit	Metallurgical	N/A	19	2069
Esmeralda	Spain (Val do Dubra)	Quartz	50	25	0.4	0.08	0.13	Open-pit	Metallurgical	N/A	10	2029
Serrabal.	Spain (Vedra & Boqueixón)	Quartz	330	279	0.2	3.35	1.9	Open-pit	Metallurgical	N/A	19	2038
SamQuarz	South Africa (Delmas)	Quartzite	1,000	870	0.7	6.30	18.6	Open-pit	Metallurgical & Glass	N/A	38	2039
Mahale	South Africa (Limpopo)	Quartz	90	86	0.5	—	2.3	Open-pit	Metallurgical	N/A	15	2035
Roodepoort	South Africa (Limpopo)	Quartz	50	7	0.5	—	0.02	Open-pit	Metallurgical	N/A	1	2028
Fort Klipdam	South Africa (Limpopo)	Quartz	100	32	0.6	—	0.2	Open-pit	Metallurgical	N/A	2	2019 (4)
AS&G Meadows Pit	United States (Alabama)	Quartzite	300	242	0.4	3.45	—	Surface	Metallurgical	N/A	12	2027
			2,070	**1,700**		**15**	**24**					
Maple Creek Springtown	United States (Kentucky)	Coal	400	238	0.7	—	—	Surface	Metallurgical	14,000	0	2020
Imperial Hollow	United States (Kentucky)	Coal	200	162	0.7	0.2	—	Surface	Metallurgical	14,000	1	2020
Log Cabin No. 5	United States (Kentucky)	Coal	120	115	0.6	0.4	—	Underground	Metallurgical	14,000	4	2023
			720	**515**		**0.60**	**—**					

(1) The estimated recoverable proven and probable reserves represent the tons of product that can be used internally or sold to metallurgical or glass grade customers. The mining recovery is based on historical yields at each particular site. We estimate our permitted mining life based on the number of years we can sustain average production rates under current circumstances.

(2) Current estimated mine life in years.

(3) Expiry date of Ferroglobe's mining concession.

(4) The expiry date relates to three mining permits relating to an area within Fort Klipdam, outside the area covered by the mining right. The mining right is currently subject to an administrative proceeding with the relevant mining authority. See "—South African mining rights—Fort Klipdam" below for further information on Fort Klipdam.

Ferroglobe considers its Conchitina and Conchitina Segunda mines as a single mining project legally supported by the formation of Coto Minero, formally approved by the Mining Authority in March 2018. In addition, Ferroglobe currently holds all necessary permits to start production at its Conchitina mines. Although Ferroglobe has not received formal approval from the Spanish Mining Authority over its 2018 Annual Mining Plan, we are not legally prevented from commencing mining operations in the area based on the fully-authorized 2017 Annual Mining Plan.

Reserves for the Conchitina mine are, accordingly, considered to be probable reserves, and the following table sets forth summary information on the Conchitina and Conchitina Segunda mines:

Mine	Location	Mineralization	Mining Recovery	Recoverable Reserves Proven MT[(1)]	Recoverable Reserves Probable MT[(1)]	Reserve Grade	Mining Method
Conchitina and Conchitina Segunda	Spain (O Vicedo)	Quartz	0.35	—	1.15	Metallurgical	Open-pit

(1) Estimates of recoverable probable reserves represent the tons of product that can be used internally or which are of metallurgical grade and can be delivered to Ferroglobe's customers.

Ferroglobe has additional mining rights in Spain (Cristina, Trasmonte and Merlán), but none of these mines are currently producing or undergoing mine development activities as the Spanish Mining Authority started cancelling mining rights for Merlán and Trasmonte in September 2015 and February 2017, respectively. The Spanish Mining Authority started the cancellation process for our mining rights for Cristina in December 2017. Ferroglobe does not consider certain Venezuelan mines to be mining assets (La Candelaria, El Manteco and El Merey) as the minerals are fully-depleted and because it will be difficult to obtain new mining rights at these locations given the current economic and political environment in Venezuela.

Spanish mining concessions

Sonia

The Sonia mining concession previously belonged to Cuarzos Industriales S.A.U., which acquired the mining concession in 1979. Ferroglobe acquired Cuarzos Industriales S.A.U., which is the owner of the properties currently mined at Sonia, along with the Sonia mining concession, in 1996 from the Portuguese cement manufacturer Cimpor. The surface area covered by the Sonia mining concession is 387 hectares. The concession is due to expire in 2069.

Esmeralda

The original Esmerelda mining concession was granted in 1999 to Cuarzos Industriales, S.A.U., the owner of the properties currently mined at Esmeralda, after proper mining research had been conducted and the mining potential of the area had been demonstrated to the relevant public authority. The surface area covered by the Esmeralda mining concession is 84 hectares. The concession is due to expire in 2029.

Serrabal

The Serrabal mining concession was originally granted in 1978 to Rocas, Arcillas y Minerales S.A. Ferroglobe acquired control of this company, which is the owner of the properties currently mined at Serrabal, along with the Serrabal mining concession, in 2000. Rocas, Arcillas y Minerales, S.A. has applied for the renewal of the concession. Pursuant to an interim measure approved by the applicable mining authority, Rocas Arcillas y Minerales S.A. is permitted to continue mining operations in Serrabal indefinitely until a final decision on the renewal of the concession has been made. If the renewal is granted, the concession will expire in 2038. The surface area covered by Serrabal mining concession is 861 hectares.

Conchitina

The Conchitina mining concession previously belonged to Cuarzos Industriales S.A.U., which acquired the mining concession in 1979. Ferroglobe acquired this company, along with Conchitina mining concession, in 1996 from the Portuguese cement manufacturer Cimpor. The Conchitina Segunda mining concession was granted to Cuarzos Industriales S.A.U. in 1997 for a 30-year term after proper mining research had been conducted and the mining potential of the area had been demonstrated. The Conchitina concession expired in 2009 and Cuarzos Industriales S.A.U. applied for its renewal, also requesting the competent authority to consolidate the concession with that of Conchitina Segunda. The legal support for the consolidation request was that both mining rights apply over a unique quartz deposit. Approval

was formally granted by the authority in March 2018. Cuarzos Industriales S.A.U. is the owner of the properties currently mined at Conchitina. The surface area covered by Conchitina concessions is 497 hectares.

Cabanetas

The mining right granting process and tax regulations applicable to the Cabanetas limestone quarry slightly differ from those applicable to other Ferroglobe mines in Spain because Cabanetas is classified as a quarry, rather than a mine. Ferroglobe is currently operating the Cabanetas quarry pursuant to a permit resolution, which authorized the extension of the original mining concession, issued in 2013 by the competent mining authority. The extension is for a period of 30 years and, consequently, the concession will expire in 2043. Limestone extracted from the Cabanetas quarry was intended to be used by the Hidro Nitro Española S.A. electrometallurgy plant. However, because new metallurgical techniques require low consumption of this product, most of the Cabanetas limestone is generally sold to the civil engineering and construction industries. The production level of the Cabanetas quarry has fallen considerably in recent years, mainly due to difficulties in the local construction industry.

The land on which the mining property is located is owned by Mancomunidad de Propietarios de Fincas Las Sierras and the plot containing the mining property is leased to Hidro Nitro Española S.A. pursuant to a lease agreement entered into in 1950, which was subsequently restated in 2000 and due to expire in 2020. The lease agreement may be extended until 2050. To retain the lease, Hidro Nitro Española S.A. pays the landlord an annual fee currently equal to €0.15 per ton of limestone quarried out of the mine. The quarry covers a surface area of approximately 180 hectares. The area affected by the planned exploitation during the current extension of the concession area is 6.9 hectares.

For further information regarding Spanish regulations applicable to mining concessions, as well as environmental and other regulations, see "—Laws and regulations applicable to Ferroglobe's mining operations—Spain."

South African mining rights

SamQuartz

The SamQuarz mining rights were transferred from the original owners, Glass South Africa Holdings (Pty) Ltd and Samancor Limited, to SamQuarz (Pty) Ltd. ("SamQuarz") in 1997. In 2009, the Minister of Mineral Resources converted the then-existing SamQuarz mining rights into new order mining rights due to expire after 30 years in 2039. In 2012, FerroAtlántica acquired control of SamQuarz along with the mining rights. At the end of 2014, SamQuarz mining rights were transferred from SamQuarz to its sole shareholder, Thaba Chueu Mining (Pty) Ltd ("TCM"). During 2017, ownership of the properties currently mined in Delmas were transferred from SamQuarz to TCM. The total surface area covered by SamQuarz mine is 118.1 hectares.

Mahale

Mahale is state-owned land, lawfully occupied by the Mahale community. TCM currently leases the land pursuant to an agreement with the Majeje Traditional Authority and runs mining operations on the area pursuant to mining rights owned by the state and licensed to it. The latest mining right license was granted by the Department of Mineral Resources in December 2014 and registered at the mining titles deeds office in early 2016. The license is for a 20-year period and will expire in 2035. The total surface area covered by Mahale mine is 329.7 hectares. The lease agreement between TCM and the Majeje Traditional Authority will be in force for the entire duration of the mining right or as long as it is economically viable for the lessee to mine. Under the lease agreement, a monthly rent of ZAR 1,500 is paid to the lessor, which is reviewed annually to reflect increases in the consumer price index. A general authorization has been granted to TCM by the Water Affairs Department to allow the company to use the water at the site, provided usage does not exceed 10,000 cubic meters per month.

Roodepoort

The Roodepoort mining right is held by Ferroglobe's subsidiary, Silicon Smelters (Pty.), Ltd. ("Silicon Smelters"), and will expire in 2028. In 2009, Silicon Smelters applied for a conversion of the mining right into a new mining right under the South African Mineral and Petroleum Resources Development Act (the "MPRDA"), which came into force in 2004. The new mining right has been granted and is valid for the continuation of our mining activities at the Roodeport mine until. Silicon Smelters is currently in the process of transferring this mining right to its mining subsidiary, TCM, in order that all licenses and permits in South Africa are held under this entity.

The total surface area covered by Roodepoort mine is 17.6 hectares. The mining area covers the cobble and block areas. The land in which Roodepoort mine is located is owned by Alpha Sand, which also conducts all mining operations as a contractor for Silicon Smelters. An agreement is in place whereby Alpha Sand operates the mine and Silicon Smelters purchases the quartz mined from Alpha Sand based on the quartz requirements of Silicon Smelters and at prices that are reviewed annually on the basis of increases in production costs and diesel fuel. The agreement with Alpha Sand will terminate at the expiry of the mining right or when it is no longer economically viable to mine quartz in the area.

Fort Klipdam

The land on which Fort Klipdam is located is owned by Silicon Smelters. The mining rights application filed by Silicon Smelters was rejected on the basis of the alleged inadequacy of the mine social and labor plan. An appeal has been filed by Silicon Smelters. As the appeal process has been unsuccessful to date, mining operations can only be conducted in areas specified under valid permits that have been obtained on the land. Additional permits were also obtained by the mining contractor on the adjacent property and their materials are brought to Fort Klipdam for processing and stockpiling. The total surface area covered by the Fort Klipdam farm portion is 640.9 hectares. The mining permits and mining rights only relates to an area of 136.1 hectares.

For further information regarding South African regulations applicable to mining concessions, as well as environmental and other regulations, see "—Laws and regulations applicable to Ferroglobe's mining operations—South Africa."

French mining rights

Soleyron

FerroPem, S.A.S., a subsidiary of Ferroglobe, owns 7.5 hectares of the overall Soleyron mine area. The Saint-Hippolyte de Montaigu Municipality owns the remaining 12.9 hectares. In February 2015, FerroPem, S.A.S. entered into a lease and royalty agreement with the municipality, which is valid for five years. The effective date of the agreement and the relevant term coincide with the effective date and term of the prefectural authorization renewal, which was granted to FerroPem, S.A.S. in March 2015 and is due to expire in 2020. Pursuant to this agreement, FerroPem, S.A.S. pays to the municipality on an annual basis: (i) a fixed allowance for the lease of the land, and (ii) variable royalties on the basis of tons of quartz produced. In addition, FerroPem, S.A.S. provided financial guarantees through an insurance company for an amount of €146 thousand. Such amount has been defined in the prefectural authorization as the amount needed for the land remediation.

United States and Canadian mining rights

Coal

As of December 31, 2018, we had three active coal mines (two surface mines and one underground mine) located in Kentucky. We also had eight inactive permitted coal mines available for extraction located in Kentucky and Alabama. All of our coal mines are leased and the remaining term of the leases range from 2 to 40 years. The majority of the coal production is consumed internally in the production of silicon metal and silicon-based alloys. As of December 31, 2018, we estimate our proven and probable reserves to be approximately 17,400,000 tons with an average permitted life of approximately 35 years at present operating levels. Present operating levels are determined based on a three-year annual

average production rate. Reserve estimates were made by our geologists, engineers and third parties based primarily on drilling studies performed. These estimates are reviewed and reassessed from time to time. Reserve estimates are based on various assumptions, and any material changes in these assumptions could have a material impact on the accuracy of our reserve estimates.

We currently have two coal processing facilities, one of which is inactive. The active facility processes approximately 720,000 tons of coal annually, with a capacity of 2,500,000 tons. The average coal processing recovery rate is approximately 65%.

Quartzite

We have an open-pit quartz mining operation in Lowndesboro, Alabama It has wash-plant facilities. We also have a concession to mine quartzite in Saint-Urbain, Québec (operated by a third party miner). These mines supply our North American operations with a substantial portion of their requirements for quartzite.

Mauritania mining rights

In 2013, the Company signed an option to purchase two exploration permits for Quartz over a 2,000 square kilometer area located in northern Mauritania, approximately 250 kilometers from Nouadhibou harbor. After a successful exploration program and the granting of the right to acquire mining rights pursuant to both exploration permits at the Vadel 1 and Vadel 2 Mines respectively, Ferroglobe exercised the purchase option on June 30, 2016. The mining at the Vadel 1 and Vadel 2 Mines are held by Ferroquartz Mauritania SARL, a subsidiary of Ferroglobe, and will expire in 2031. The total surface area covered by Vadel 1 Mine is 195 square kilometers and by Vadel 2 Mine is 240 square kilometers. The construction of the mining facilities was completed during 2017 and the Company has started to test the production in Vadel 2. The Company shipped 12,417 tons from Vadel 2 during 2018 and plan to start production in Vadel 1 in 2020.

Laws and regulations applicable to Ferroglobe's mining operations

Spain

In Spain, mining concessions have an average term of 30 years and are extendable for additional 30-year terms, up to a maximum of 90 years. In order to extend the concession term, the concessionaire must file an application with the competent public authority. The application, which must be filed three years prior to the expiration of the concession term, must be accompanied by a detailed report demonstrating the continuity of mineral deposits and the technical ability to extract such deposits, as well as reserve estimates, an overall mining plan for the term of the concession and a detailed description of extraction and treatment techniques. The renewal process is straightforward for a mining company that has been mining the concession regularly. The main impediments to renewal are a lack of mining activity and legal conflicts. Every year in January, in order to maintain the validity of the mining concession, an annual mining plan must be submitted to the competent public authority. This document must detail the work to be developed during the year.

Regarding the environmental requirements applicable to Ferroglobe's mining operations in Spain, each of Serrabal, Esmeralda, Conchitina and Conchitina Segunda is subject to an "environmental impact statement" (or "EIS"), issued by the relevant environmental authority and specifically tailored to the environmental features of the relevant mine. The EIS requires compliance with high environmental standards and is based on the environmental impact study performed by the mining concession applicant in connection with each mining project. It is the result of a consultation process involving several public administrations, including cultural, archaeology, landscape, urbanistic, health, agriculture, water and industrial administrations. The EIS sets forth all conditions to be fulfilled by the applicant, including in connection with the protection of air, water, soil, flora and fauna, landscape, cultural heritage, restoration and the interaction of such elements. The EIS covers mining activities, auxiliary facilities and heaps carried out in a determined perimeter of each mine and includes a program of surveillance and environmental monitoring. The relevant authority regularly verifies compliance with it.

Sonia is subject to a "restoration plan" which provides for less stringent environmental requirements than an EIS and is mainly aimed at ensuring that the new areas generated as a result of the mining activity are properly restored in an environmentally friendly manner. The restoration plan is submitted by the mining concession applicant for the approval of the relevant authority together with the mining project for the area. Information about the exploitation project, including area of operation, annual production, method and operating system, and designed top and bottom level of the pit is included in the restoration plan.

All mines, with the exception of Cabanetas, also need to obtain from the relevant public administration an authorization for the discharge of the water used at the mine. This authorization is subject to certain conditions, including analyzing the water before any such discharge is made. In addition, when presenting to the competent mining authorities its annual mining plans, Ferroglobe must include an environmental report describing all environmental actions carried out during the year. Authorities are able to oversee such actions upon their annual inspections. Because Cabanetas is classified as a quarry and not as a mine, environmental requirements are generally less stringent and an environmental report is not required. The environmental license for Cabanetas is included in the mining permit and is formalized in the annual work plan and the annual restoration plan approved by the mining authority.

The main recurring payment obligation in connection with Ferroglobe's mines in Spain relates to a tax payable annually, calculated on the basis of the budget included in the relevant annual mining plan provided to the authority. In addition, with the exception of Cabanetas, a small surface tax is paid annually to the administration on the basis of the mine property extension. A levy also applies to water consumption at each mine property, which is paid at irregular intervals whenever the relevant public administration requires it.

South Africa

In South Africa, mining rights are valid for a maximum of 30 years and may be renewed for further periods of up to 30 years per renewal. Prior to granting and renewing a mining right, the competent authority must be satisfied with the technical and financial capacity of the intended mining operator and the mining work program according to which the operator intends to mine. In addition, a species rescue, relocation and re-introduction plan must be developed and implemented by a qualified person prior to the commencement of excavation, a detailed vegetation and habitat and rehabilitation plan must be developed by a qualified person and a permit must be obtained from the South African Heritage Resource Agency prior to the commencement of excavations. The mining right holder must also compile a labor and social plan for its mining operations and comply with certain additional regulatory requirements relating to, among other things, human resource development, employment equity, housing and living conditions and health and safety of employees, and the usage of water, which must be licensed.

It is a condition of the mining right that the holder disposes of all minerals and products derived from exploitation of the mineral at competitive market prices, which means, in all cases, non-discriminatory prices or non-export parity prices. If the minerals are sold to any entity which is an affiliate or non-affiliate agent or subsidy of the mining right holder, or is directly or indirectly controlled by the holder, such purchaser must unconditionally undertake in writing to dispose of the minerals and any products from the minerals and any products produced from the minerals, at competitive market prices. The mining right, a shareholding, an equity, an interest or participation in the right or joint venture, or a controlling interest in a company, close corporation or joint venture, may not be encumbered, ceded, transferred, mortgaged, let, sublet, assigned, alienated or otherwise disposed of without the written consent of the Minister of Mineral Resources, except in the case of a change of controlling interest in listed companies.

Environmental requirements applicable to mining operations in South Africa are mostly set out in the MPRDA. Pursuant to the MPRDA, in order to obtain reconnaissance permissions as well as actual mining rights, applicants must have in place an approved environmental management plan, pursuant to which, among other things, all boreholes, excavations and openings sunk or made during the duration of the mining right must be sealed, closed, fenced and made safe by the mining operator. Further environmental requirements apply in connection with health and safety matters, waste management and water usage. The MPRDA further requires mining right applicants to conduct an environmental impact assessment on the area of interest and submit an environmental management program setting forth, among other things, baseline information concerning the affected environment to determine protection, remedial measures and environmental management objectives, and describing the manner in which the applicant intends to modify, remedy, control or stop any action, activity

or process which causes pollution or environmental degradation, contain or remedy the cause of pollution or degradation and migration of pollutants and comply with any prescribed waste standard or management standards or practices. In addition, applicants must provide sufficient insurance, bank guarantees, trust funds or cash to ensure the availability of sufficient funds to undertake the agreed work programs and for the rehabilitation, management and remediation of any negative environmental impact on the interested areas. Holders of a mining right must conduct continuous monitoring of the environmental management plan, conduct performance assessments of the plan and compile and submit a performance assessment report to the competent authority, the frequency of which must be as approved in the environmental management program, or every two years or as otherwise agreed by the authority in writing. Mine closure costs are evaluated and reported on an annual basis, but are typically only incurred at mine closure.

The mining right holder must also be in compliance with an important governmental regulation called Black Economic Empowerment ("BEE"), a program launched by the South African government to redress certain racial inequalities. In order for a mining right to be granted, a mining company must agree on certain BEE-related conditions with the Department of Mineral and Petroleum Resources. Such conditions relate to, among other things, the company's ownership and employment equity and require the submission of a social and labor plan. Failure to comply with any of these BEE conditions may have an impact on, among other things, the ability of the mining company to retain the mining right or obtain its renewal upon expiry. In addition, companies subject to BEE must conduct, on an annual basis, a BEE rating audit on several aspects of the business, including black ownership, management control, employment equity, skills development, preferential procurement, enterprise development and socio-economic development. Poor performance on the BEE rating audit may have a negative impact on the company's ability to do business with other companies, to the extent that a company's low rating is likely to reduce the rating of its business partners.

Mining rights are subject to payments of royalties to the tax authority, the South African Revenue Services. Such payments are generally made by June 30 and December 31 each year and upon the approval of the concessionaire's annual financial statements.

France

In France, mining rights are subject to a prefectural authorization. The authorization provides details of all requirements, including environmental requirements, which the mining operator and its subcontractors must comply with to operate the mine. Such requirements mainly concern archaeology, water protection, air pollution, control of noise, visual impact and safety matters. The authorization also contains the requirements relating to the remediation of the land after the end of the mining operations, including the provision of adequate financial guarantees by the mining operator. Mines are regularly inspected by the administration and local environmental commissions, comprising representatives of the relevant municipality, administration, several associations and the mining operator, which must meet at least once a year.

United States

The Coal Mine Health and Safety Act of 1969 and the Federal Mine Safety and Health Act of 1977 impose stringent safety and health standards on all aspects of mining operations. Also, the state of Kentucky, in which we operate underground and surface coal mines, has state mine safety and health regulations. The Mine Safety and Health Administration (the "MSHA") inspects mine sites and enforces safety regulations and the Company must comply with ongoing regulatory reporting to the MSHA. Numerous governmental permits, licenses or approvals are required for mining operations. In order to obtain mining permits and approvals from state regulatory authorities, we must submit a reclamation plan for restoring, upon the completion of mining operations, the mined property to its prior or better condition, productive use or other permitted condition. We are also required to establish performance bonds, consistent with state requirements, to secure our financial obligations for reclamation, including removal of mining structures and ponds, backfilling and regrading and revegetation.

Customers and Markets

The following table details the breakdown of Ferroglobe's revenues by geographic end market for the years ended December 31, 2018, 2017 and 2016.

($ thousands)	Year ended December 31, 2018	2017	2016
United States of America	674,243	547,309	563,619
Europe			
Spain	274,769	253,991	201,403
Germany	359,737	245,152	241,046
Italy	138,796	94,590	90,267
Rest of Europe	487,340	340,877	236,746
Total revenues in Europe	1,260,642	934,610	769,462
Rest of the World	339,153	259,774	242,956
Total	**2,274,038**	**1,741,693**	**1,576,037**

Customer base

We have a diversified customer base across our key product categories. We have built long-lasting relationships with our customers based on the breadth and quality of our product offerings and our ability to frequently offer lower-cost and more reliable supply options than our competitors who do not have production facilities located near the customers' facilities or production capabilities to meet specific customer requirements. We sell our products to customers in over 30 countries across six continents, though our largest customer concentration is in the United States and Europe. The average length of our relationships with our top 30 customers exceeds ten years and, in some cases, such relationships go back as far as 30 years.

For the year ended December 31, 2018, Ferroglobe's ten largest customers accounted for approximately 33% of Ferroglobe's consolidated sales. The Company had no customer, that accounted for more than 10% of consolidated sales during the year ended December 31, 2018. During the year ended December 31, 2017, the Company had one customer, Dow Chemical, that accounted for more than 10% of consolidated sales, with sales representing 12.2%.

For the year ended December 31, 2018, approximately 55.4% of our metallurgical segment sales were to customers in Europe, approximately 29.6% were to customers in the United States and approximately 15.0% were to the rest of the world.

Customer contracts

Our contracting strategy seeks to lock in significant revenue while remaining flexible to benefit from any price increases. Our silicon metal, manganese-based ferroalloys and silicon-based ferroalloys are typically sold under annual and quarterly contracts. Historically, we have targeted to contract approximately 50 – 65% of our silicon metal, manganese-based ferroalloys production and silicon-based ferroalloy production in the fourth quarter for the following calendar year. Typically, approximately 50% of contracted production has fixed prices whereas the other 50% are indexed to benchmarks.

The remaining balance of our silicon metal, manganese-based ferroalloys and our silicon-based ferroalloy production are sold under quarterly contracts or on a spot basis. By selling on a spot basis, we are able to take advantage of premiums for prompt delivery. We believe that our diversified contract portfolio allows us to lock in a significant amount of revenues while also allowing us to remain flexible and benefit from unexpected price and demand upticks. Given spot price and current market dynamics, we are looking to enter into contracts for 2019 with short terms in order to benefit from expected price increases.

Sales and Marketing Activities

Ferroglobe generally sells the majority of its silicon products under annual or longer contracts for silicone producers, and between three months to one year for aluminum producing customers. All contracts generally include a volume framework and price formula based on the spot market price and other elements, including production costs and premiums. Ferroglobe also makes spot sales to customers with whom it does not have a contract as well as through quarterly agreements at prices that generally reflect market spot prices. In addition, Ferroglobe sells certain high quality products at prices that are not directly correlated with the market prices for the metals or alloys from which they are composed.

With the exception of the manganese-based business (as further detailed below), the vast majority of Ferroglobe's products are sold directly by its own sales force located in Spain, France, the United States and Germany, as well as in all of the countries in which Ferroglobe operates.

Ferroglobe's Spanish hydroelectric operations deliver all the electricity produced to the Spanish national grid for sale in the Spanish wholesale market.

On February 1, 2018, Ferroglobe completed the acquisition from a wholly-owned subsidiary of Glencore International AG ("Glencore") of a 100% interest in Glencore's manganese alloys plants in Mo i Rana (Norway) and Dunkirk (France). Simultaneously with the acquisition, Glencore and Ferroglobe entered into an exclusive agency arrangement for the marketing of Ferroglobe's manganese alloys products worldwide, and for the procurement of manganese ores to supply Ferroglobe's plants, in both cases for a period of ten years. For Ferroglobe, the partnership facilitates access to Glencore's global clients in the steel industry, and provides a broader sales and procurement network that will enhance our own capabilities. For our customers and suppliers, it provides access to an extended volume and range of products that will add value to our commercial relationships.

Competition

The most significant factor on which players in the silicon metal, manganese- and silicon-based alloys and specialty metals markets compete is price. Other factors include consistency of the chemical and physical specifications over time and reliability of supply.

The silicon metal, manganese- and silicon-based alloys and specialty metals markets are highly competitive, global markets, in which suppliers are able to reach customers across different geographies, and in which local presence is generally a minor advantage. In the silicon metal market, Ferroglobe's primary competitors include Chinese producers, which have production capacity that exceeds total global demand. Aside from Chinese producers, Ferroglobe's competitors include Elkem, a Norwegian manufacturer of silicon metal, ferrosilicon, foundry products, silica fumes, carbon products and energy, Dow, an American company specializing in silicone and silicon-based technology, Rusal, a Russian company that is a leading global aluminum and silicon metal producer, Rima, a Brazilian silicon metal and ferrosilicon producer, Liasa, a Brazilian producer of silicon, Wacker, a German chemical business which manufactures silicon and Simcoa Operations, an Australian company specializing in the production of silicon as well as several other smaller companies.

In the manganese and silicon alloys market, Ferroglobe's competitors include Privat Group, a Ukrainian company with operations in Australia, Ghana and Ukraine, Eramet, a French mining and metallurgical group, CHEMK Industrial Group, a Russian conglomerate which is one of the largest silicon-based alloy producers in the world, South 32 (formerly BHP Billiton), a global mining company with operations in Australia and South Africa and Vale, a mining and metals group based in Brazil, Asia Minerals and OM Holdings in Malaysia and Elkem in Norway.

In the silica fumes market, Ferroglobe's competitors include Elkem and Dow.

Ferroglobe strives to be a highly efficient, low-cost producer, offering competitive pricing and engaging in manufacturing processes that capture most of its production by-products for reuse or resale. Additionally, through the vertical integration of its quartz mines in Spain, the United States, Canada and South Africa and its metallurgical coal mines in the United States, Ferroglobe has ensured access to some of the high quality raw materials that are essential in the silicon metal,

manganese- and silicon-based alloy and specialty metals production process and has been able to gain a competitive advantage over some of its competitors because it has reduced the contribution of these raw materials to its cost base.

Research and Development (R&D)

Ferroglobe focuses on continually developing its technology in an effort to improve its products and production processes. Ferroglobe also has cooperation agreements in place with various universities and research institutes in Spain, France and other countries around the world. Set forth below is a description of Ferroglobe's significant ongoing research and development projects.

ELSA electrode

Ferroglobe has internally developed a patented technology for electrodes used in silicon metal furnaces, which it has been able to sell to several major silicon producers globally. This technology, known as the ELSA electrode, improves the energy efficiency in the production process of silicon metal and eliminates contamination with iron. Ferroglobe has granted these producers the right to use the ELSA electrode against payment to Ferroglobe of royalties.

Solar grade silicon

Ferroglobe's solar grade silicon involves the production of solar grade silicon metal with a purity above 99.9999% through a new, potentially cost-effective, electrometallurgical process. The traditional chemical process tends to be costly and involves high energy consumption and potentially environmentally hazardous processes. The new technology, entirely developed by Ferroglobe at an earlier stage at its research and development facilities aims to reduce the costs and energy consumption associated with the production of solar grade silicon.

In 2016, FerroAtlántica entered into a project with Aurinka Photovoltaic Group, S.L. ("Aurinka") for a feasibility study and basic engineering for an upgraded metallurgical grade ("UMG") solar silicon manufacturing plant. On December 20, 2016, Grupo FerroAtlántica, S.A.U. along with wholly-owned subsidiaries FerroAtlántica, S.A. and Silicio Ferrosolar, S.L.U., entered into a joint venture agreement (the "Solar JV Agreement") with Blue Power Corporation, S.L. ("Blue Power") and Aurinka providing for the formation and operation of a joint venture with the purpose of producing UMG solar silicon. Under the Solar JV Agreement, FerroAtlántica indirectly owns 75% of the operating companies formed as part of the joint venture and 51% of the company formed as part of the joint venture to hold the intellectual property rights and know how contributed by Aurinka and Ferroglobe to the joint venture. See "Item 7.B.—Major Shareholders and Related Party Transactions—Related Party Transactions".

Pursuant to the Solar JV Agreement, FerroAtlántica had committed to incur capital expenditures in connection with the joint venture of approximately €59 million over 2018 and 2019, which, together with €21 million of capital expenditures invested in prior years, constitute the first phase of the project contemplated by the Solar JV Agreement to build a factory with production capacity of 1,500 tons per year.

Due to the market environment for solar grade silicon (or polysilicon) worldwide, at the end of 2018 the Company has decided to suspend the investment in the project, while preserving the technology and know-how in order to be able to finalize the construction of the factory as soon as market circumstances change. Plans for and financing of further phases are subject to agreement and approval by the parties to the Solar JV Agreement pursuant to specified procedures. FerroAtlántica has obtained a loan, with a principal amount of approximately €45 million, from the Spanish Ministry of Industry and Energy for the purpose of building the UMG solar silicon plant.

High value powders – Li-ion batteries

Ferroglobe has launched the High Value Powder project, which aims at producing silicon-based, tailor made products for high end applications. Among the various targeted applications, is a particularly attractive market in anodes for Li-ion batteries. In this specific field, Ferroglobe has developed many partnerships and technical collaborations to develop

successful research and development solutions to enhance the energy capacity of the anode in Li-ion batteries by adding silicon.

Proprietary Rights and Licensing

The majority of Ferroglobe's intellectual property consists of proprietary know-how and trade secrets. Ferroglobe's intellectual property strategy is focused on developing and protecting proprietary know-how and trade secrets, which are maintained through employee and third-party confidentiality agreements and physical security measures. Although Ferroglobe has some patented technology, Ferroglobe believes that its businesses and profitability do not rely fundamentally upon patented technology and that the publication implicit in the patenting process may in certain instances be detrimental to Ferroglobe's ability to protect its proprietary information.

Regulatory Matters

Environmental and health and safety

Ferroglobe operates facilities worldwide, which are subject to foreign, national, regional, provincial and local environmental, health and safety laws and regulations, including, among others, those requirements governing the discharge of materials into the environment, the generation, use, storage and disposal of hazardous substances, the extraction and use of water, land use, reclamation and remediation and the health and safety of Ferroglobe's employees. These laws and regulations require Ferroglobe to obtain from governmental authorities permits to conduct its regulated activities, which permits may be subject to modification or revocation by such authorities.

Ferroglobe may not be at all times in full compliance with such laws, regulations and permits, although Ferroglobe is not aware of any material past or current noncompliance. Failure to comply with these laws, regulations and permits may result in the assessment of administrative, civil and criminal penalties or other sanctions by regulators, the imposition of obligations to conduct remediation or upgrade or install pollution or dust control equipment, the issuance of injunctions limiting or preventing Ferroglobe's activities, legal claims for personal injury or property damages, and other liabilities.

Under these laws, regulations and permits, Ferroglobe could also be held liable for any consequences arising out of human exposure to hazardous substances or environmental damage that relates to Ferroglobe's current or former operations or properties. Environmental, health and safety laws are likely to become more stringent in the future. Ferroglobe purchases insurance to cover these potential liabilities, but the costs of complying with current and future environmental, health and safety laws, and its liabilities arising from past or future releases of, or exposure to, hazardous substances, may exceed insured, budgeted or reserved amounts and adversely affect Ferroglobe's business, results of operations and financial condition.

Some environmental laws assess liability on current or previous owners or operators of real property for the cost of removal or remediation of hazardous substances. In addition to cleanup, cost recovery or compensatory actions brought by foreign, national, provincial and local agencies, neighbors, employees or other third parties could make personal injury, property damage or other private claims relating to the presence or release of hazardous substances. Environmental laws often impose liability even if the owner or operator did not know of, or did not cause, the release of hazardous substances. Persons who arrange for the disposal or treatment of hazardous substances also may be responsible for the cost of removal or remediation of these substances. Such persons can be responsible for removal and remediation costs even if they never owned or operated the disposal or treatment facility. In addition, such owners or operators of real property and persons who arrange for the disposal or treatment of hazardous substances can be held responsible for damages to natural resources.

There are a variety of laws and regulations in place or being considered at the international, national, regional, provincial and local levels of government that restrict or are reasonably likely to result in limitations on, or additional costs related to, emissions of carbon dioxide and other greenhouse gases. These legislative and regulatory developments may cause Ferroglobe to incur material costs to reduce the greenhouse gas emissions from its operations (through additional environmental control equipment or retiring and replacing existing equipment) or to obtain emission allowance or credits, or result in the incurrence of material taxes, fees or other governmental impositions on account of such emissions. In

addition, such developments may have indirect impacts on Ferroglobe's operations, which could be material. For example, they may impose significant additional costs or limitations on electricity generators, which could result in a material increase in energy costs.

For a summary of regulatory matters applicable to Ferroglobe's mining operations, see "—Laws and regulations applicable to Ferroglobe's mining operations."

Energy and electricity generation

Ferroglobe operates hydroelectric plants in Spain and France, which are subject to energy, environmental, health and safety laws and regulations, including those governing the generation of electricity and the use of water and river basins. These laws and regulations require Ferroglobe to obtain permits from governmental authorities, which may be subject to modification or revocation by these authorities.

In Spain, the regulatory framework applicable to electricity producers underwent significant changes in 2013. As a result, since July 2013, Ferroglobe has sold the electricity it generates in Spain at market prices rather than at guaranteed prices that provided a premium above market prices, with the exception of energy generated by the Novo Pindo plant in Galicia, which continues to receive a premium that is considerably lower than the premium it received under the prior regulatory framework.

Trade

Ferroglobe benefits from antidumping and countervailing duty orders and laws that protect its products by imposing special duties on unfairly traded imports from certain countries. In the United States, antidumping duties are in effect covering silicon metal imports from China and Russia. In the European Union, antidumping duties are in place covering silicon metal imports from China and ferrosilicon imports from China and Russia. In Canada, there are antidumping and countervailing duties in effect covering silicon metal imports from China. These orders are subject to revision, revocation or rescission as a result of periodic reviews.

In the United States, the U.S. International Trade Commission reached a final affirmative determination in the sunset review of the antidumping duty order on silicon metal from China in May 2018. The Commission determined that revocation of the order would be likely to lead to continuation or recurrence of material injury to the domestic silicon metal industry. As a result, the U.S. Department of Commerce issued a notice in June 2018 continuing the order for another five years. A sunset review of the antidumping duty order on silicon metal from Russia will be initiated in June 2019.

In addition, an administrative review of the antidumping duty order on silicon metal from China involving a single exporter/producer combination is currently in progress. The review may result in the elimination or reduction of the duties currently payable on imports from that exporter/producer combination. If the duties are eliminated or reduced significantly, our sales in the United States may be adversely affected.

In the European Union, the industry association Euroalliages filed a request with the European Commission on behalf of Ferroglobe's subsidiaries FerroAtlántica and FerroPem for an expiry review of the antidumping measures on ferrosilicon from China and Russia. Based on this request, the European Commission initiated in April 2019 a review to determine whether to maintain the antidumping measures in place and the rates of duty to be imposed.

In December 2016, Ferroglobe's subsidiaries in Canada filed a complaint with the Canada Border Services Agency alleging that silicon metal from Brazil, Kazakhstan, Laos, Malaysia, Norway, Russia and Thailand is dumped, and that silicon metal from Brazil, Kazakhstan, Malaysia, Norway and Thailand is subsidized. In March 2017, Ferroglobe's subsidiary Globe Specialty Metals petitioned the U.S. Department of Commerce and the U.S. International Trade Commission to provide relief from dumped and subsidized silicon metal imports from Australia, Brazil, Kazakhstan and Norway. In both cases, the agencies found that imports covered by the cases were unfairly traded, but determined that the relevant domestic industry was not injured by the unfair imports. An appeal of the Canadian decision filed by Ferroglobe's subsidiaries in Canada was discontinued in May 2018.

A sunset (expiry) review of the Canadian antidumping/countervailing duty order covering silicon metal imports from China is currently being conducted, which may result in the removal of the duties on such imports. If the duties are removed, our sales in Canada may be adversely affected.

Seasonality

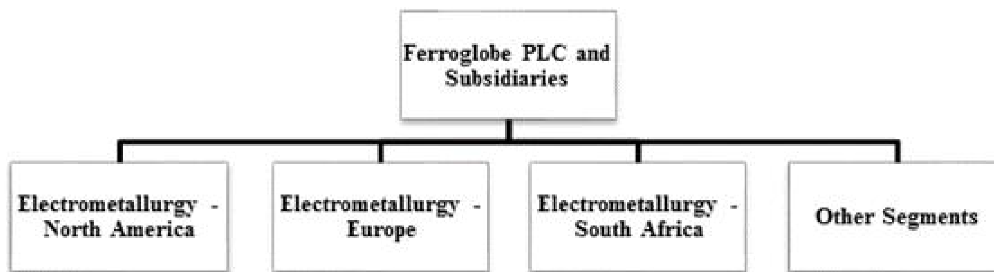
Electrometallurgy

Due to the cyclicality of energy prices and the energy-intensive nature of the production processes for silicon metal, manganese- and silicon-based alloys and specialty metals, Ferroglobe does not operate its electrometallurgy plants during certain periods or times of day when energy prices are at their peak. Demand for Ferroglobe's manganese- and silicon-based alloy and specialty metals products is lower during these periods as its customers also suspend their energy-intensive production processes involving Ferroglobe's products. As a result, sales within particular geographic regions are subject to seasonality.

Energy

Ferroglobe's hydroelectric power generation is dependent on the amount of rainfall in the regions in which its hydropower projects are located, which varies considerably from season to season.

C. Organizational structure.



For a list of subsidiaries and ownership structure see Note 2 in the Consolidated Financial Statements.

D. Property, Plant and Equipment.

See "Item 4.B.—Information on the Company—Business Overview."

ITEM 4A. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

A. Operating Results

Introduction

The following "management's discussion and analysis" should be read in conjunction with the Consolidated Financial Statements of Ferroglobe as of December 31, 2018 and 2017 and for the years ended December 31, 2018, 2017 and 2016, which are included in this annual report. This discussion includes forward-looking statements, which, although based on assumptions that Ferroglobe considers reasonable, are subject to risks and uncertainties which could cause actual events or conditions to differ materially from those expressed or implied by the forward-looking statements. See "Cautionary Statements Regarding Forward-Looking Statements." For a discussion of risks and uncertainties facing Ferroglobe, see "Item 3.D.—Key Information—Risk Factors."

In accordance with IAS 21 — The Effects of Changes in Foreign Exchange Rates, Ferroglobe's consolidated income statements and consolidated statement of financial position have been translated from the functional currency of each subsidiary, which is determined by the primary economic environment in which each subsidiary operates, into the reporting currency of the Company that is U.S. Dollars.

Principal Factors Affecting Our Results of Operations

Sale prices

Ferroglobe's operating performance is highly correlated to sales prices, which are influenced by several different factors that vary across Ferroglobe's segments.

Silicon metal pricing slowly decreased throughout 2018 due to market supply and demand dynamics. Our customers businesses appeared to be at strong levels in the chemical and aluminum markets during 2018.

Historically manganese-based alloy prices have shown a significant correlation with the price of manganese ore, but 2018 was an anomaly where the manganese ore pricing was high while the manganese-based alloy pricing stayed low, which caused a margin squeeze for Ferroglobe. We anticipate these dynamics to go back to more historical type spreads in 2019. Our customers' businesses appeared at strong levels for steel mill production in 2018.

Our Ferrosilicon business pricing likewise continued to decline as we moved through 2018. This was mostly due to oversupply in Europe as this market was coming off of record price levels from the previous year. Our customers' business appeared at strong levels for steel mill production in 2018.

Under Ferroglobe's pricing policy, which is aimed at reducing dependence on spot market prices, prices applied to its term contracts have a diversity of formulas ranging from prices related to spot market prices to annual or quarterly fixed prices. Ferroglobe sells certain high quality products for which pricing is not directly correlated to spot market prices.

Cost of raw materials

The key raw materials sourced by Ferroglobe are quartz, manganese ore, coal, metallurgical coal, wood and charcoal. Manganese ore is the largest component of the cost base for manganese-based alloys. In 2018, more than 50% of Ferroglobe's total $228.0 million expense with respect to manganese ore fell under annual contractual agreements, while the remaining manganese ore was procured on a spot basis from different ore suppliers. Coal meeting certain standards for ash content and other physical properties is used as a major carbon reductant in silicon-based alloy production. In 2018, coal represented a $190.5 million expense for Ferroglobe. Metallurgical coke, which is used for manganese alloy production, represented a total purchase volume of $50 million in 2018. Wood is both an important element for the production of silicon alloys and used to produce charcoal, which is used as a carbon reductant at Ferroglobe's South African subsidiary Silicon Smelters. Ferroglobe's wood expense amounted to $63.8 million in 2018. The FerroAtlántica

subsidiaries of Ferroglobe source approximately 65% of their quartz needs from FerroAtlántica's mines in Spain and South Africa, and Globe subsidiaries source approximately 78% of their quartz needs from Globe's mines in the United States and Canada. Total quartz consumption in 2018 represented an expense of $114.1 million.

Power

Power constitutes one of the single largest expenses for most of Ferroglobe's products other than manganese-based alloys. Ferroglobe focuses on minimizing energy prices and unit consumption throughout its operations by concentrating its silicon and manganese-based alloy production during periods when energy prices are lower. In 2018, Ferroglobe's total power consumption was 10,086 gigawatt hours with power contracts that vary across its operations.

In Spain and France, FerroAtlántica receives a rebate on a portion of its energy costs in exchange for an agreement to interrupt production, and thus power usage, upon request. FerroAtlántica has power contracts to partly hedge risks related to energy price volatility in Spain.

In France, FerroPem S.A.S. has traditionally had access to relatively low power prices, as it benefited from Electricité de France's green tariff ("Tarif Vert"), and a discount thereon. The green tariffs expired at the end of 2015 and Ferroglobe has negotiated supply contracts based on market prices with two suppliers for years 2016 to 2019, and is currently negotiating long-term supply contracts with suppliers in the market place. Recently enacted regulation enables FerroPem SAS to benefit from reduced tariffs resulting from its agreeing to interrupt production and respond to surges in demand, as well as paying compensation for indirect CO_2 costs under the EU Emission Trading System (ETS) regulation. The new arrangements allow FerroPem S.A.S. to operate competitively on a 12-month basis, avoiding the need to stop for two months due to the Tarif Vert. We believe that the new arrangements will provide power prices comparable to past levels and with some degree of predictability going forward.

In the United States, we attempt to enter into long-term electric supply contracts that value our ability to interrupt load to achieve reasonable rates. Our power supply contracts have, in the past, resulted in stable price structures. In West Virginia, we have a contract with Brookfield Renewable Power to provide, on average, 45% of our power needs, from a dedicated hydroelectric facility, through December 2021 at a fixed rate. Our power needs for the non-hydroelectric component of West Virginia, Ohio, and Alabama are primarily sourced through special contracts that provide competitive rates whereas a portion of the power is also priced at market rates. At our Niagara Falls, New York plant, we have been granted a public sector package including 18.4 megawatts and hydro power through to 2021.

In South Africa, we have an "evergreen" supply agreement with Eskom, the parastatal electricity supplier, for both our Polokwane and eMalahleni plants. Eskom's energy prices are regulated by the National Energy Regulator (NERSA) and price increases are publicly announced in advance. A specific agreement has been approved by NERSA in 2018 for silicon production in Polokwane for three furnaces and in eMalahleni for one furnace. In order to promote silicon production in South Africa, Polokwane and eMalahleni have been offered a two year discount over the public tariffs on the electricity consumed to produce silicon.

Foreign currency fluctuation

Ferroglobe has a diversified production base consisting of production facilities across the United States, Europe, South America, South Africa and Asia. Ferroglobe production costs are mostly dependent on local factors, with the exception of the cost of manganese ore and coal, which are dependent on global commodity prices. The relative strength of the functional currencies of Ferroglobe's subsidiaries influences its competitiveness in the international market, most notably in the case of Ferroglobe's South African operations, which have historically exported a majority of their production to the U.S. and the European Union. For additional information see "Item 11.—Quantitative and Qualitative Disclosures About Market Risk—Foreign Exchange Rate Risk."

Regulatory changes

See "Item 4.B.—Business Overview—Regulatory Matters."

Critical Accounting Policies

The discussion and analysis of Ferroglobe’s financial condition and results of operations is based upon its Consolidated Financial Statements, which have been prepared in accordance with IFRS. The preparation of those financial statements requires Ferroglobe to make estimates and judgments that affect the reported amounts of assets and liabilities, revenues and expenses, the disclosure of contingent assets and liabilities and related disclosure at the date of its financial statements. The estimates and related assumptions are based on available information at the date of preparation of the financial statements, on historical experience and on other relevant factors. Actual results may differ from these estimates under different assumptions and conditions. Critical accounting policies are those that reflect significant judgments of uncertainties and potentially result in materially different results under different assumptions and conditions. The principal items affected by estimates are business combinations, goodwill, impairment of long-lived assets, inventories and income taxes. The following are Ferroglobe’s most critical accounting policies, because they generally involve a comparatively higher degree of judgment in their application. For a description of all of Ferroglobe’s principal accounting policies, see Note 4 to the Consolidated Financial Statements of Ferroglobe included elsewhere in this annual report.

Business combinations

Ferroglobe subsidiaries have completed a number of significant business acquisitions over the past several years. Our business strategy contemplates that we may pursue additional acquisitions in the future. When we acquire a business, the purchase price is allocated based on the fair value of tangible assets and identifiable intangible assets acquired and liabilities assumed. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. Goodwill as of the acquisition date is measured as the residual of the excess of the consideration transferred, plus the fair value of any non-controlling interest in the acquiree at the acquisition date, over the fair value of the identifiable net assets acquired. If, after reassessment, the net of the acquisition date amounts of the identifiable assets acquired and liabilities assumed exceeds the sum of the consideration transferred, the excess is recognized immediately in profit or loss as a bargain purchase gain. We generally engage independent third-party appraisal firms to assist in determining the fair value of assets acquired and liabilities assumed. Such a valuation requires management to make significant estimates, especially with respect to intangible assets. These estimates are based on historical experience and information obtained from the management of the acquired companies. These estimates are inherently uncertain and may impact reported depreciation and amortization in future periods, as well as any related impairment of goodwill or other long lived assets.

See Note 5 to the accompanying audited Consolidated Financial Statements for detailed disclosures related to our acquisitions.

Goodwill

Goodwill represents the excess purchase price of acquired businesses over fair values attributed to underlying net tangible assets and identifiable intangible assets. For the purpose of impairment testing, goodwill is allocated to each of the Company’s cash-generating units (or groups of cash generating units) that is expected to benefit from the synergies of the combination. A cash-generating unit to which goodwill has been allocated is tested for impairment annually, or more frequently when there is an indication that the unit may be impaired. If the recoverable amount of the cash-generating unit is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit pro rata based on the carrying amount of each asset in the unit. Any impairment loss for goodwill is recognized directly in profit or loss. On disposal of the relevant cash-generating unit, the attributable amount of goodwill is included in the determination of the profit or loss on disposal.

The valuation of the Company’s cash generating units requires significant judgment in evaluation of, among other things, recent indicators of market activity and estimated future cash flows, discount rates and other factors. The estimates of cash flows, future earnings, and discount rate are subject to change due to the economic environment and business trends, including such factors as raw material and product pricing, interest rates, expected market returns and volatility of markets served, as well as our future manufacturing capabilities, government regulation and technological change. We believe that the estimates of future cash flows, future earnings, and fair value are reasonable; however, changes in estimates,

circumstances or conditions could have a significant impact on our fair valuation estimation, which could then result in an impairment charge in the future.

During the year ended December 31, 2018, in connection with our annual goodwill impairment test, no impairment charge was recognized.

During the year ended December 31, 2017, in connection with our annual goodwill impairment test, the Company recognized an impairment charge of $30,618 thousand related to the partial impairment of goodwill in Canada, resulting from a decline in future estimated sales prices and a decrease in our estimated long-term growth rate which caused the Company to revise its expected future cash flows from its Canadian business operations.

Ferroglobe operates in a cyclical market, and silicon and silicon-based alloy index pricing and foreign import pressure into the U.S. and Canadian markets impact the future projected cash flows used in our impairment analysis.

Long-lived assets (excluding goodwill)

In order to ascertain whether its assets have become impaired, Ferroglobe compares their carrying amount with their recoverable amount if there are indications that the assets might have become impaired. Where the asset itself does not generate cash flows that are independent from other assets, Ferroglobe estimates the recoverable amount of the cash-generating unit to which the asset belongs. Recoverable amount is the higher of fair value and value in use, which is the present value of the future cash flows that are expected to be derived from continuing use of the asset and from its ultimate disposal at the end of its useful life, discounted at a rate which reflects the time value of money and the risks specific to the business to which the asset belongs.

If the recoverable amount of an asset or cash-generating unit is less than its carrying amount, the carrying amount of the asset is reduced to its recoverable amount, and an impairment loss is recognized as an expense under “net impairment losses” in the consolidated income statement. Where an impairment loss subsequently reverses, the carrying amount of the asset is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset in prior years. A reversal of an impairment is recognized as “other income” in the consolidated income statement. The basis for depreciation or amortization is the carrying amount of the assets, deemed to be the acquisition cost less any accumulated impairment losses.

During 2018 the Company recognized an impairment of $40,537 thousand in Impairment losses in relation to our solar-grade silicon metal project based in Puertollano, Spain. At the end of 2018 the Company has decided to temporarily suspend investment in the project due to deterioration in the market environment for solar grade silicon (or polysilicon) worldwide. The Company is preserving the technology and know-how in order to be able to finalize the construction of the factory as soon as market circumstances change. The Company continues to recognize these project assets at $39,101 thousand based on the fair value less costs of disposal. Fair value less costs of disposal related to land and buildings was determined based on recent sales of comparable industrial properties located near the project. Fair value less costs of disposal related to machinery and equipment was determined by assessing the recoverability of the assets to a market participant. Additionally, during 2018 the Company recognized an intangible asset impairment of $13,947 thousand of development expenditures related to the solar project.

Inventories

Cost of inventories is determined by the average cost method. Inventories are valued at the lower of cost or market value. Circumstances may arise (e.g., reductions in market pricing, obsolete, slow moving or defective inventory) that require the carrying amount of our inventory to be written down to net realizable value. We estimate market and net realizable value based on current and future expected selling prices, as well as expected costs to complete, including utilization of parts and supplies in our manufacturing process. We believe that these estimates are reasonable; however, future market price decreases caused by changing economic conditions, customer demand, or other factors could result in future inventory write-downs that could be material.

Income taxes

The current income tax expense incurred by Ferroglobe subsidiaries on an individual basis is determined by applying the applicable tax rate to the taxable profit for the year, calculated on the basis of accounting profit before tax, increased or decreased, as appropriate, by the permanent differences arising from the application of tax legislation and by the elimination of any tax consolidation adjustments, taking into account tax relief and tax credits. The consolidated income tax expense is calculated by adding together the expense recognized by each of the consolidated subsidiaries, increased or decreased, as appropriate, as a result of the tax effect of consolidation adjustments for accounting purposes.

Ferroglobe's deferred tax assets and liabilities include temporary differences measured at the amounts expected to be payable or recoverable on differences between the carrying amounts of assets and liabilities and their tax bases, and tax loss and tax credit carryforwards. These amounts are measured at the tax rates that are expected to apply in the period when the asset is realized or the liability is settled. Deferred tax liabilities are recognized for all taxable temporary differences, except for those arising from the initial recognition of goodwill. Deferred tax assets are recognized to the extent that it is considered probable that Ferroglobe will have taxable profits in the future against which the deferred tax assets can be utilized. The deferred tax assets and liabilities recognized are reassessed at each reporting date in order to ascertain whether they still exist, and the appropriate adjustments are made on the basis of the findings of the analyses performed.

Significant judgment is required in determining income tax provisions and tax positions. Ferroglobe may be challenged upon review by the applicable taxing authorities, and positions taken may not be sustained. The accounting for uncertain income tax positions requires consideration of timing and judgments about tax issues and potential outcomes and is a subjective estimate. In certain circumstances, the ultimate outcome of exposures and risks involves significant uncertainties. If actual outcomes differ materially from these estimates, they could have a material impact on Ferroglobe's results of operations and financial condition. Interest and penalties related to uncertain tax positions are recognized in income tax expense.

Results of Operations — Year Ended December 31, 2018 Compared to Year Ended December 31, 2017

($ thousands)	Year ended December 31, 2018	2017
Sales	2,274,038	1,741,693
Cost of sales	(1,447,354)	(1,043,395)
Other operating income	46,037	18,199
Staff costs	(341,064)	(301,963)
Other operating expense	(283,930)	(239,926)
Depreciation and amortization charges, operating allowances and write-downs	(119,137)	(104,529)
Impairment losses	(58,919)	(30,957)
Net (loss) gain due to changes in the value of assets	(7,623)	7,504
Gain (loss) on disposal of non-current assets	14,564	(4,316)
Bargain purchase gain	40,142	—
Other losses	—	(2,613)
Operating profit	**116,754**	**39,697**
Finance income	5,374	3,708
Finance costs	(62,022)	(65,412)
Financial derivative gain (loss)	2,838	(6,850)
Exchange differences	(14,136)	8,214
Profit (loss) before tax	**48,808**	**(20,643)**
Income tax (expense) benefit	(24,235)	14,821
Profit (loss) for the year	**24,573**	**(5,822)**
Loss attributable to non-controlling interests	19,088	5,144
Profit (loss) attributable to the Parent	**43,661**	**(678)**

Sales

Sales increased $532,345 thousand, or 30.6%, from $1,741,693 thousand for the year ended December 31, 2017 to $2,274,038 thousand for the year ended December 31, 2018, primarily due to the acquisition of manganese-based alloy plants in France and Norway, which accounted for $230,297 thousand in 2018.

Sales volume increased across all major products (excluding by-products). Silicon metal sales volume increased 8.2%, silicon-based alloys sales volume increased 10.1%, while manganese-based alloys sales volume increased 54.8%, primarily due to the acquisition of two manganese-based alloys plants in France and Norway on February 1, 2018.

Average selling prices of silicon metal and silicon-based alloys increased year over year while average selling prices of manganese-based alloys decreased. The average selling price for silicon metal increased by 16.6% to $2,647/MT in 2018, as compared to $2,270/MT in 2017; the average selling price for silicon-based alloys increased by 14.7% to $1,845/MT in 2018, as compared to $1,608/MT in 2017; and the average selling price for manganese-based alloys decreased by 6.3% to $1,244/MT in 2018, as compared to $1,327/MT in 2017. The increase in average selling prices reflects an upward pricing trend in the markets for silicon metal and silicon-based alloys, while the market for manganese-based alloys remains challenging.

Cost of sales

Cost of sales increased $403,959 thousand, or 38.7%, from $1,043,395 thousand for the year ended December 31, 2017 to $1,447,354 thousand for the year ended December 31, 2018, primarily due to an increase in sales volumes, particularly manganese-based alloys which increased by 150,239 MT due to the acquisition of two manganese-based alloys plants in France and Norway on February 1, 2018.

Costs of sales for plants in North America, which produce silicon-metal and silicon-based alloys, were comparable in 2018 to 2017, accounting for 56% as a percentage of sales. Continued increases in energy costs and an increase in the purchase price of manganese ore impacted costs for manganese-based alloys in Europe.

Other operating income

Other operating income increased $27,838 thousand, or 153.0%, from $18,199 thousand for the year ended December 31, 2017 to $46,037 thousand for the year ended December 31, 2018, primarily due to receiving business interruption insurance proceeds of $5,098 thousand, government grant income of $6,873 thousand, sales of greenhouse gas emission credits of $4,685 thousand, as well as operating income related to the use of CO_2 in the production process.

Staff costs

Staff costs increased $39,101 thousand, or 12.9%, from $301,963 thousand for the year ended December 31, 2017 to $341,064 thousand for the year ended December 31, 2018, primarily due to the restart of the Selma, Alabama facility in September 2017 and closure costs associated with the Niagara and Selma facilities at the end of 2018. Additionally staff costs increased due to the acquisition of two manganese-based alloys plants in France and Norway on February 1, 2018, which contributed $15,300 thousand to staff costs in 2018. Further, there was as an increase in compensation that is dependent on production levels.

Other operating expense

Other operating expense increased $44,004 thousand, or 18.3%, from $239,926 thousand for the year ended December 31, 2017 to $283,930 thousand for the year ended December 31, 2018, primarily due to shipping, freight, and storage costs associated with the increase in sales volume, as well as the acquisition of two manganese-based alloys plants in France and Norway on February 1, 2018, which contributed $14,329 thousand to other operating expenses in 2018.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs increased $14,608 thousand or 14.0%, from $104,529 thousand for the year ended December 31, 2017 to $119,137 thousand for the year ended December 31, 2018, primarily due to new assets placed in service related to hydro plants as well as the acquisition of two manganese-based alloys plants in France and Norway on February 1, 2018, which contributed to $7,916 thousand to depreciation.

Impairment losses

Impairment losses increased $27,962 thousand, or 90.3%, from a loss of $30,957 thousand for the year ended December 31, 2017 to a loss of $58,919 thousand for the year ended December 31, 2018. During the year ended December 31, 2018, the Company recognized an impairment of $40,537 thousand of property, plant and equipment and an impairment of $13,947 thousand of intangible assets related to the Company’s solar grade silicon metal production facility located in Puertollano, Spain due to deterioration in the market environment for solar grade silicon (or polysilicon) worldwide. Additionally during the year ended December 31, 2018, the Company recognized an impairment of $2,309 thousand of property, plant and equipment and an impairment of $2,126 thousand of intangible assets at the Company’s Mangshi facility located in China.

During the year ended December 31, 2017, in connection with our annual goodwill impairment test, the Company recognized an impairment charge of $30,618 thousand related to the partial impairment of goodwill in Canada, resulting from a decline in future estimated sales prices and a decrease in our estimated long-term growth rate which caused the Company to revise its expected future cash flows from its Canadian business operations.

Net (loss) gain due to changes in the value of assets

Net (loss) gain due to the changes in the value of assets in 2018 and 2017 primarily relate to the remeasured fair value of the Company’s timber farms in South Africa as of December 31, 2018 and 2017.

Gain (loss) on disposal of non-current assets

The gain on disposal of non-current assets for the year ended December 31, 2018 relates primarily to a gain on disposal of Hydro plant assets of $11,747 thousand. The net loss of $4,316 thousand for the year ended December 31, 2017 relates primarily to the disposals of certain property plant, and equipment in the U.S. that had a stepped-up fair value at the date of the Business Combination, but were subsequently disposed of during scheduled furnace overhauls in 2017.

Bargain purchase gain

During the year ended December 31, 2018, the Company acquired 100% of the outstanding ordinary shares of Kintuck (France) SAS and Kintuck AS from a wholly-owned subsidiary of Glencore International AG ("Glencore") and obtained control of both entities. The new subsidiaries were renamed as Ferroglobe Mangan Norge and Ferroglobe Manganèse France. The acquisition resulted in a bargain purchase gain of $40,142 thousand as a result of the acquisition date fair value of the net assets acquired in excess of the purchase consideration.

Other losses

Other losses during the year ended December 31, 2017 is primarily related to an adjustment of $2,608 thousand to the carrying amount of property, plant and equipment at hydroelectric plants in Spain that were previously classified as held for sale. An expense was recorded equivalent to the depreciation that would have been charged if the business had not been classified as held for sale.

Finance income

Finance income increased $1,666 thousand, or 44.9%, from $3,708 thousand for the year ended December 31, 2017 to $5,374 thousand for the year ended December 31, 2018, primarily due to the accounts receivable securitization program being in operation for a full year in 2018 compared to five months in 2017. The securitization program resulted in interest income on subordinated loan notes of $3,403 thousand in 2018 compared to $1,935 thousand in 2017.

Finance costs

Finance costs decreased $3,390 thousand, or 5.2%, from $65,412 thousand for the year ended December 31, 2017 to $62,022 thousand for the year ended December 31, 2018. The impact of a full year of interest expense on the Senior Notes and full year of finance costs from the accounts receivable securitization program were offset by a decrease in interest on loans and credit facilities and lower debt factoring costs.

Financial derivative gain (loss)

Financial derivative gain of $2,838 thousand in 2018 and financial derivative loss of $6,850 thousand in 2017 both resulted from the cross currency swap entered into in May 2017. The gain or loss is related to the portion of the notional amount of the cross currency swap that is not designated as a cash flow hedge.

Exchange differences

Exchange differences increased $22,350 thousand, from income of $8,214 thousand for the year ended December 31, 2017 to a loss of $14,136 thousand for the year ended December 31, 2018, primarily due to the fluctuation of foreign exchange rates, mainly the exchange rate between the Euro and the U.S. Dollar.

Income tax (expense) benefit

Income tax expense increased $39,056 thousand, or 263.5%, from an income tax benefit of $14,821 thousand for the year ended December 31, 2017 to an income tax expense of $24,235 thousand for the year ended December 31, 2018. The tax benefit for the year ended December 31, 2017 is related to the impact of U.S. tax reform which resulted in an income tax benefit of $31,200 thousand representing the remeasurement of the Company’s U.S. net deferred tax liability as a consequence of the reduction of the U.S. federal corporate statutory tax rate from 35% to 21% with effect from January 1, 2018, which was offset by income tax expense on taxable income.

Segment operations

During 2017, upon further evaluation of the management reporting structure as a result of the integration of the operations of FerroAtlántica and Globe we have concluded that our Venezuela operations are no longer significant as an operating and reportable segment due to the decision to significantly reduce these operations in 2016. As such, in 2017 we have included our Venezuela operations as part of “Other Segments”. The comparative prior periods have been restated to conform to the 2017 reportable segment presentation.

Operating segments are based upon the Company’s management reporting structure. As such, we report our results in accordance with the following segments:

- Electrometallurgy – North America;
- Electrometallurgy – Europe;
- Electrometallurgy – South Africa; and
- Other Segments.

Electrometallurgy – North America

($ thousands)	Year ended December 31, 2018	2017
Sales	710,716	541,143
Cost of sales	(394,044)	(303,096)
Other operating income	4,943	2,701
Staff costs	(115,555)	(90,802)
Other operating expense	(77,670)	(68,537)
Depreciation and amortization charges, operating allowances and write-downs	(69,009)	(66,789)
Impairment losses	—	(30,618)
Loss on disposal of non-current assets	(208)	(3,718)
Operating profit (loss)	**59,173**	**(19,716)**

Sales

Sales increased $169,573 thousand, or 31.3%, from $541,143 thousand for the year ended December 31, 2017 to $710,716 thousand for the year ended December 31, 2018, primarily due to a 16.5% increase in the average selling price of silicon metal due to better market conditions in the current year than in the prior year and a 7.6% increase in sales volumes of silicon metal due to increased production from the restart of the Company's Selma, Alabama facility in September 2017. There was a 71.8% increase in the average selling price of silicon-based alloys (calcium silicon, magnesium ferrosilicon, and different grades of ferrosilicon) mainly due to increased sales of higher purity ferrosilicon (which have higher selling prices) in 2018 and a 17.5% increase in sales volumes of silicon-based alloys. The North American segment additionally added sales of manganese-based alloys, that were produced by our European plants, to its sales mix contributing additional revenue of $30,574 thousands in 2018.

Cost of sales

Cost of sales increased $90,948 thousand, or 30.0%, from $303,096 thousand for the year ended December 31, 2017 to $394,044 thousand for the year ended December 31, 2018. The increase is primarily due to an increase in metric tons of silicon metal sold partially due the restart of the Selma facility, an increase in metric tons of silicon-based alloys sold due to an increase in customer specific requirements, as well as the addition of manganese-based alloys sales to the sales mix, which added $29,797 thousand to cost of sales in 2018.

Staff costs

Staff costs increased $24,753 thousand, or 27.3%, from $90,802 thousand for the year ended December 31, 2017 to $115,555 thousand for the year ended December 31, 2018, primarily due to an increase in U.S. head count needed for the restart of our Selma, Alabama facility in September 2017 and closure costs associated with the Niagara and Selma facilities at the end of 2018, as well as an increase in compensation that is dependent on production levels.

Other operating expense

Other operating expense increased $9,133 thousand, or 13.3%, from $68,537 thousand for the year ended December 31, 2017 to $77,670 thousand for the year ended December 31, 2018, primarily due to shipping, freight, and storage costs associated with the increase in sales volume.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs increased $2,220 thousand, or 3.3%, from $66,789 thousand for the year ended December 31, 2017 to $69,009 thousand for the year ended December 31, 2018, primarily due to $32,440 thousands of capital expenditures during 2018.

Impairment losses

During the year ended December 31, 2018, in connection with our annual goodwill impairment test, no impairment charge was recognized. During the year ended December 31, 2017, in connection with our annual goodwill impairment test, the Company recognized an impairment charge of $30,618 thousand related to the partial impairment of goodwill in Canada, resulting from a decline in future estimated sales prices and a decrease in our estimated long-term growth rate which caused the Company to revise its expected future cash flows from its Canadian business operations.

Loss on disposal of non-current assets

The loss of $3,718 thousand for the year ended December 31, 2017 relates primarily to the disposals certain property plant, and equipment in the U.S. that had a stepped-up fair value at the date of the Business Combination but were subsequently disposed of during scheduled furnace overhauls in 2017.

Electrometallurgy – Europe

($ thousands)	Year ended December 31, 2018	2017
Sales	1,447,973	1,083,200
Cost of sales	(1,059,474)	(690,589)
Other operating income	39,817	12,681
Staff costs	(177,047)	(147,595)
Other operating expense	(146,143)	(107,130)
Depreciation and amortization charges, operating allowances and write-downs	(34,974)	(27,404)
Net loss due to changes in the value of assets	(7)	—
(Loss) gain on disposal of non-current assets	(8,369)	301
Bargain purchase gain	40,142	—
Other losses	—	(13,604)
Operating profit	**101,918**	**109,860**

Sales

Sales increased $364,773 thousand or 33.7%, from $1,083,200 thousand for the year ended December 31, 2017 to $1,447,973 thousand for the year ended December 31, 2018, primarily due to a $230,297 thousand increase in sales of manganese-based alloys as a result of the acquisition of two manganese-based alloys plants in France and Norway on February 1, 2018. The increase in volume was offset by a 13% decrease in average selling prices of manganese-based alloys. Foreign exchange favorably impacted sales by $47,946 thousand.

Average selling prices (in local currency) for silicon metal, silicon-based alloys and manganese alloys pricing increased 14%, increased 13% and decreased 5%, respectively, primarily due to the market index pricing in Europe. The sales volume of primary products increased of 5% for the year ended December 31, 2018 compared to the year ended December 31, 2017.

Cost of sales

Cost of sales increased $368,885 thousand, or 53.4%, from $690,589 thousand for the year ended December 31, 2017 to $1,059,474 thousand for the year ended December 31, 2018, primarily due to the acquisition of two manganese-based alloys plants in France and Norway on February 1, 2018, resulting in an increase in cost of sales of $210,629 thousand. Cost of sales further increased by $68,495 thousand due to higher sales volumes and increased by $74,453 thousand due to higher costs of raw materials and energy. Foreign exchange differences had an additional negative impact of $15,308 thousand.

Other operating income

Other operating income increased $27,136 thousand, or 214.0%, from $12,681 thousand for the year ended December 31, 2017 to $39,817 thousand for the year ended December 31, 2018, primarily due to government grant income of $6,873 thousand, sales of greenhouse gas emission credits of $4,685 thousand, as well as operating income related to the use of CO_2 in the production process. The Company additionally received insurance proceeds of $5,098 thousand relating to a business interruption claim at plants located in France. There was a favorable foreign exchange impact, which increased Euro-denominated income by $568 thousand.

Staff costs

Staff costs increased $29,452 thousand or 20.0%, from $147,595 thousand for the year ended December 31, 2017 to $177,047 thousand for the year ended December 31, 2018, primarily due to the acquisition of two manganese-based alloys plants in France and Norway on February 1, 2018, which contributed $15,300 thousand to staff cost in 2018. The remainder of the increase is attributable to financial performance based compensation in France. There was an unfavorable foreign exchange impact, which increased Euro-denominated costs by $7,398 thousand.

Other operating expense

Other operating expense increased $39,013 thousand, or 36.4%, from $107,130 thousand for the year ended December 31, 2017 to $146,143 thousand for the year ended December 31, 2018, primarily due to shipping, freight, and storage costs associated with the increase in sales volume, as well as the acquisition of two manganese-based alloys plants in France and Norway on February 1, 2018, which contributed $14,329 thousand to other operating expenses in 2018.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs increased $7,570 thousand, or 27.6%, from $27,404 thousand for the year ended December 31, 2017 to $34,974 thousand for the year ended December 31, 2018, primarily due to the acquisition of two manganese-based alloys plants in France and Norway on February 1, 2018, which contributed $7,916 thousand to depreciation in 2018. There was an unfavorable foreign exchange impact, which increased Euro-denominated costs by $1,216 thousand.

(Loss) gain on disposal of non-current assets

During the year ended December 31, 2018, the loss on disposal of non-current assets in the Europe segment reflects the loss on the parent’s investment in intercompany subsidiaries of Other segments. The loss in the Europe segment partially offsets the gain on disposal of non-current assets in Other segments such that the net gain between the two segments primarily represents the net gain on disposal of Hydro plant assets of $11,747 thousand included within Other segments. Refer to Gain (loss) on disposal of non-current assets in the Results of Operations section above for an explanation of the Company’s Gain (loss) on disposal of non-current assets on a consolidated basis.

Bargain purchase gain

During the year ended December 31, 2018, the Company acquired 100% of the outstanding ordinary shares of Kintuck (France) SAS and Kintuck AS from a wholly-owned subsidiary of Glencore International AG ("Glencore") and obtained control of both entities. The new subsidiaries were renamed as Ferroglobe Mangan Norge and Ferroglobe Manganèse France. The acquisition resulted in a bargain purchase gain of $40,142 thousand as a result of the acquisition date fair value of the net assets acquired in excess of the purchase consideration.

Other losses

Other losses during the year ended December 31, 2017 in the European segment reflects the losses on the parent's investment in intercompany subsidiaries which eliminate during consolidation of all segments. Refer to Other losses in the Results of Operations section above for an explanation of the Company's Other losses on a consolidated basis.

Electrometallurgy – South Africa

($ thousands)	Year ended December 31, 2018	2017
Sales	208,543	122,504
Cost of sales	(137,177)	(81,744)
Other operating income	3,420	2,868
Staff costs	(23,735)	(23,495)
Other operating expense	(26,353)	(24,462)
Depreciation and amortization charges, operating allowances and write-downs	(5,526)	(5,788)
Net (loss) gain due to changes in the value of assets	(7,616)	7,222
Loss on disposal of non-current assets	(261)	(138)
Operating profit (loss)	**11,295**	**(3,033)**

Sales

Sales increased $86,039 thousand, or 70.2%, from $122,504 thousand for the year ended December 31, 2017 to $208,543 thousand for the year ended December 31, 2018, primarily due to a 219% increase in silicon metal sales volumes, as a result of furnaces 1 and 3 of Polokwane plant being idle during 2017 and operational in 2018. Average selling prices of silicon metal increased 5% and average selling prices of silicon-based alloys increased 16% while sales volumes of silicon metal increased 219% and sales volumes of silicon-based alloys increased 12%. There was a positive foreign exchange impact, which increased sales by $5,443 thousand.

Cost of sales

Cost of sales increased $55,433 thousand, or 67.8%, from $81,744 thousand for the year ended December 31, 2017 to $137,177 thousand for the year ended December 31, 2018, primarily due to a 219% increase in silicon metal sales volumes from 2017 to 2018 and a 12% in silicon-based alloy sales volumes. An unfavorable foreign exchange impact increased cost of sales by $3,431 thousand.

Other operating income

Other operating income increased $552 thousand, or 19.2%, from $2,868 thousand for the year ended December 31, 2017 to $3,420 thousand for the year ended December 31, 2018, primarily due to an increase in sales of scrap. There was also a favorable foreign exchange impact, which increased other operating income by $161 thousand.

Staff costs

Staff costs increased $240 thousand, or 1.0%, from $23,495 thousand for the year ended December 31, 2017 to $23,735 thousand for the year ended December 31, 2018, due to the staffing adjustments and employee separation costs in connection with the idling of Polokwane plant during 2017. Foreign exchange impact more than offset the higher costs in local currency in 2017 and increased staff costs by $1,073 thousand.

Other operating expense

Other operating expense increased $1,891 thousand, or 7.7%, from $24,462 thousand for the year ended December 31, 2017 to $26,353 thousand for the year ended December 31, 2018, primarily due to higher variable, selling, and

administrative costs during 2018 as the Polokwane plant was idled or operating at a reduced production level in 2017. Foreign exchange rate movements further increased other operating expense by $1,039 thousand.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $262 thousand, or 4.5%, from $5,788 thousand for the year ended December 31, 2017 to $5,526 thousand for the year ended December 31, 2018 primarily attributable to a depreciation true-up partially offset by an unfavorable foreign exchange impact that increased depreciation and amortization by $365 thousand.

Net (loss) gain due to changes in the value of assets

Net (loss) gain due to the changes in the value of assets in 2018 and 2017 primarily relate to the remeasured fair value of the Company's timber farms in South Africa as of December 31, 2018 and 2017.

Other segments

($ thousands)	Year ended December 31, 2018	Year ended December 31, 2017
Sales	94,111	60,199
Cost of sales	(43,871)	(33,616)
Other operating income	16,859	15,619
Staff costs	(24,727)	(39,851)
Other operating expense	(52,859)	(55,955)
Depreciation and amortization charges, operating allowances and write-downs	(9,628)	(4,557)
Impairment losses	(58,919)	(323)
Gain (loss) on disposal of non-current assets	23,402	(818)
Other losses	—	(2,625)
Operating profit (loss)	**(55,632)**	**(61,927)**

Sales

Sales increased $33,912 thousand, or 56.3%, from $60,199 thousand for the year ended December 31, 2017 to $94,111 for the year ended December 31, 2018, primarily due to a $27,061 thousand increase of sale of energy from Hydro facilities location in Spain resulting from an increase in rain. Sales of silicon-based alloys at the Company's Argentinian facility, Globe Metales S.A., increased $6,973 thousand.

Cost of sales

Cost of sales increased $10,255 thousand, or 30.5%, from $33,616 thousand for the year ended December 31, 2017 to $43,871 thousand for the year ended December 31, 2018, primarily due to an increase in sales volumes of silicon-based alloys at the Company's Argentinian facility, Globe Metales S.A., which resulted in a $5,282 thousand increase in cost of sales. As the Hydro facilities located in Spain do not have cost of sales, there is no corresponding increase in cost of sales for the increase in sales.

Other operating income

Other operating income increased $1,240 thousand, or 7.9%, from $15,619 thousand for the year ended December 31, 2017 to $16,859 thousand for the year ended December 31, 2018, primarily due to a chargeback of services by Ferroglobe to its subsidiaries. The increase was offset by a decrease of income generated from mutual fund investments held at the Company's Argentinian facility, Globe Metales S.A., as these investments were sold during the year.

Staff costs

Staff costs decreased $15,124 thousand, or 38.0%, from $39,851 thousand for the year ended December 31, 2017 to $24,727 thousand for the year ended December 31, 2018, primarily as a result of reduced costs and favorable foreign exchange of $4,201 thousand at our facility in Venezuela. The decrease is also attributable to share-based compensation income on liability settled outstanding share-based awards of $3,886 thousand as a result of a decline in the stock price over the twelve month period ended December 31, 2018 as well as lower discretionary remuneration based on financial performance.

Other operating expense

Other operating expense decreased $3,096 thousand, or 5.5%, from $55,955 thousand for the year ended December 31, 2017 to $52,859 for the year ended December 31, 2018, primarily due to the accrual of $12,444 thousand for accrual of contingent liabilities in 2017. The decrease was offset by an increase in other operating expenses of $4,619 at the Manghsi facility related to impairment of assets.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs increased $5,071 thousand, or 111.3%, from $4,557 thousand for the year ended December 31, 2017 to $9,628 thousand for the year ended December 31, 2018, primarily due to additions to property, plant and equipment associated with the Company's solar project initiative.

Impairment losses

Impairment losses for the year ended December 31, 2018 of $58,919 thousand relates to impairment of fixed assets and intangible assets at the Company's solar grade silicon metal production facility located in Puertollano, Spain and the Company's Mangshi facility located in China. Refer to the Results of Operations section above for an explanation of the Company's Impairment losses.

Gain (loss) on disposal of non-current assets

The gain included in Other segments offsets the loss included in the Europe segment such that the net gain after offsetting the loss between segments primarily represents the gain on disposal of Hydro plant assets of $11,747 thousand. Refer to Gain (loss) on disposal of non-current assets in the Results of Operations section above for an explanation of the Company's Gain (loss) on disposal of non-current assets on a consolidated basis.

Other losses

Other losses during the year ended December 31, 2017 is primarily related to an adjustment of $2,608 thousand to the carrying amount of property, plant and equipment at hydroelectric plants in Spain that were previously classified as held for sale. An expense was recorded equivalent to the depreciation that would have been charged if the business had not been classified as held for sale.

Results of Operations — Year Ended December 31, 2017 Compared to Year Ended December 31, 2016

($ thousands)	Year ended December 31, 2017	2016
Sales	1,741,693	1,576,037
Cost of sales	(1,043,395)	(1,043,412)
Other operating income	18,199	26,215
Staff costs	(301,963)	(296,399)
Other operating expense	(239,926)	(243,946)
Depreciation and amortization charges, operating allowances and write-downs	(104,529)	(125,677)
Impairment losses	(30,957)	(268,089)
Net gain due to changes in the value of assets	7,504	1,891
(Loss) gain on disposal of non-current assets	(4,316)	340
Other losses	(2,613)	(40)
Operating profit (loss)	**39,697**	**(373,080)**
Finance income	3,708	1,536
Finance costs	(65,412)	(30,251)
Financial derivative loss	(6,850)	—
Exchange differences	8,214	(3,513)
Loss before tax	**(20,643)**	**(405,308)**
Income tax benefit	14,821	46,695
Loss for the year	**(5,822)**	**(358,613)**
Loss attributable to non-controlling interests	5,144	20,186
Loss attributable to the Parent	**(678)**	**(338,427)**

Sales

Sales increased $165,656 thousand, or 10.5%, from $1,576,037 thousand for the year ended December 31, 2016 to $1,741,693 thousand for the year ended December 31, 2017, primarily due to an increase in average selling prices across all major products (excluding by-products). The average selling price for silicon metal increased by 3.1% to $2,270/MT in 2017, as compared to $2,201/MT in 2016; the average selling price for silicon-based alloys increased by 14.9% to $1,608/MT in 2017, as compared to $1,400/MT in 2016; and the average selling price for manganese-based alloys increased by 60.7% to $1,327/MT in 2017, as compared to $826/MT in 2016. The increase in average selling prices reflects an upward pricing trend in the markets for silicon metal and silicon-based alloys.

The increase in average selling prices were partially offset by a 2.9% decrease in sales volumes across all major products. Silicon metal sales volume decreased by 4.5% and silicon-based alloys sales volume decreased by 4.9%, while manganese-based alloys sales volume increased by 2.9%.

Cost of sales

Cost of sales decreased $17 thousand, from $1,043,412 thousand for the year ended December 31, 2016 to $1,043,395 thousand for the year ended December 31, 2017, primarily due to a decrease in sales volumes. This decrease was offset by an increase in our cost of production, mainly due to furnace overhauls in North America and in Europe which mainly impacted our silicon metal costs. An increase in energy costs in Europe impacted our costs for silicon-based alloys and an increase in the purchase price of manganese ore impacted our costs for manganese-based alloys.

Other operating income

Other operating income decreased $8,016 thousand, or 30.6%, from $26,215 thousand for the year ended December 31, 2016 to $18,199 thousand for the year ended December 31, 2017, primarily due to an exceptional sale of products manufactured by a third party in 2016. These products were initially purchased for use in Ferroglobe's plants but were ultimately sold to another third party, resulting in non-recurrent other operating income in 2016.

Staff costs

Staff costs increased $5,564 thousand, or 1.9%, from $296,399 thousand for the year ended December 31, 2016 to $301,963 thousand for the year ended December 31, 2017, primarily due to a provision related to labor claims that are ongoing as well as an increase in variable wages and benefits driven by the Company's financial performance in 2017 as compared to 2016. Staff costs also increased due to an increase in head count primarily needed for the restart of our Selma, Alabama facility.

Other operating expense

Other operating expense decreased $4,020 thousand, or 1.6%, from $243,946 thousand for the year ended December 31, 2016 to $239,926 thousand for the year ended December 31, 2017, primarily due to a lower cost structure in our facilities. Selling, general and administrative expenses for our factories and our global and local headquarters decreased year over year, primarily due to a reduction of contracting of external services as well as synergies recognized from the Business Combination.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $21,148 thousand, or 16.8%, from $125,677 thousand for the year ended December 31, 2016 to $104,529 thousand for the year ended December 31, 2017, primarily due to a decrease in depreciation and amortization relating to fully depreciated and amortized fixed assets at the end of 2016. Additionally, there was a decrease in write-downs of trade receivables allowance in 2017 due to lower uncollectable receivable rates associated with improved risk management.

Impairment losses

Impairment losses decreased $237,132 thousand, or 88.5%, from a loss of $268,089 thousand for the year ended December 31, 2016 to a loss of $30,957 thousand for the year ended December 31, 2017. During the year ended December 31, 2017, in connection with our annual goodwill impairment test, the Company recognized an impairment charge of $30,618 thousand related to the partial impairment of goodwill in Canada, resulting from a decline in future estimated sales prices and a decrease in our estimated long-term growth rate which caused the Company to revise its expected future cash flows from its Canadian business operations. During the year ended December 31, 2016, the Company recognized an impairment charge of $193,000 thousand related to the partial impairment of goodwill at the U.S. and Canada, resulting from a sustained decline in sales prices that continued throughout 2016 and which caused the Company to revise its expected future cash flows from Globe's business operations. The impairment associated with the U.S. cash-generating units was $178,900 thousand and the amount that is associated with Canadian cash-generating units was $14,100 thousand. Additionally, during the year ended December 31, 2016 the Company recognized an impairment of non-current operational assets located in Venezuela, totaling $58,472 thousand.

Net gain due to changes in the value of assets

Net gain due to the changes in the value of assets primarily relates to the remeasured fair value of the Company's timber farms in South Africa as of December 31, 2017.

(Loss) gain on disposal of non-current assets

A net loss of $4,316 thousand for the year ended December 31, 2017 relates primarily to the disposals certain property plant, and equipment in the U.S. that had a stepped-up fair value at the date of the Business Combination but were subsequently disposed of during scheduled furnace overhauls in 2017.

Other losses

Other losses during the year ended December 31, 2017 is primarily related to an adjustment of $2,608 thousand to the carrying amount of property, plant and equipment at hydroelectric plants in Spain that were previously classified as held for sale. An expense was recorded equivalent to the depreciation that would have been charged if the business had not been classified as held for sale.

Finance income

Finance income increased $2,172 thousand, or 141.4%, from $1,536 thousand for the year ended December 31, 2016 to $3,708 thousand for the year ended December 31, 2017, primarily due to the accounts receivable securitization program that was entered into in July 2017, which resulted in $1,935 thousand of interest income.

Finance costs

Finance costs increased $35,161 thousand, or 116.2%, from $30,251 thousand for the year ended December 31, 2016 to $65,412 thousand for the year ended December 31, 2017, primarily as a result of the issuance of Senior Notes in February 2017, which resulted in $28,961 thousand of finance costs.

Financial derivative loss

Financial derivative loss of $6,850 thousand resulted from our cross currency swap entered into in May 2017. The loss is related to the portion of the notional amount of the cross currency swap that is not designated as a cash flow hedge.

Exchange differences

Exchange differences decreased $11,727 thousand, from a loss of $3,513 thousand for the year ended December 31, 2016 to income of $8,214 thousand for the year ended December 31, 2017, primarily due to the fluctuation of foreign exchange rates, mainly the exchange rate between the Euro and the U.S. Dollar.

Income tax benefit

Income tax benefit decreased $31,874 thousand, or 68.3%, from an income tax benefit of $46,695 thousand for the year ended December 31, 2016 to an income tax benefit of $14,821 thousand for the year ended December 31, 2017, primarily due to higher taxable income in 2017 than in 2016. The decrease was offset by the impact of U.S. tax reform enacted in 2017 which resulted in an income tax benefit of $31.2 million representing the remeasurement of the Company's U.S. net deferred tax liability as a consequence of the reduction of the U.S. federal corporate statutory tax rate from 35% to 21% with effect from January 1, 2018, which was offset by income tax expense on taxable income.

Electrometallurgy – North America

($ thousands)	Year ended December 31,	
	2017	**2016**
Sales	541,143	521,192
Cost of sales	(303,096)	(325,254)
Other operating income	2,701	362
Staff costs	(90,802)	(82,032)
Other operating expense	(68,537)	(64,606)
Depreciation and amortization charges, operating allowances and write-downs	(66,789)	(73,530)
Impairment losses	(30,618)	(193,000)
Loss on disposal of non-current assets	(3,718)	—
Operating loss	**(19,716)**	**(216,868)**

Sales

Sales increased $19,951 thousand, or 3.8%, from $521,192 thousand for the year ended December 31, 2016 to $541,143 thousand for the year ended December 31, 2017, primarily due to a 4.9% increase in sales volumes partially offset by a 1.1% decrease in the average selling price of silicon metal and a 0.9% decrease in average selling price of silicon-based alloys.

Cost of sales

Cost of sales decreased $22,158 thousand, or 6.8%, from $325,254 thousand for the year ended December 31, 2016 to $303,096 thousand for the year ended December 31, 2017, primarily due to a $10,022 thousand step-up in the fair value of U.S. inventory as part of price accounting associated with the Business Combination, being released into cost of sales as the inventory was sold throughout 2016. Unplanned downtime at our silicon-based alloys production plant due to breaker failure contributed to the increase in costs in 2016. In 2017, the Company implemented cost reduction initiatives in our U.S. and Canadian facilities which helped improve costs in 2017.

Staff costs

Staff costs increased $8,770 thousand, or 10.7%, from $82,032 thousand for the year ended December 31, 2016 to $90,802 thousand for the year ended December 31, 2017, primarily due to an increase in U.S. head count needed for the restart of our Selma, Alabama facility.

Other operating expense

Other operating expense increased $3,931 thousand, or 6.1%, from $64,606 thousand for the year ended December 31, 2016 to $68,537 thousand for the year ended December 31, 2017, primarily due to a $2,200 thousand increase in legal expenses associated with the trade cases in the U.S. and Canada.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $6,741 thousand, or 9.2%, from $73,530 thousand for the year ended December 31, 2016 to $66,789 thousand for the year ended December 31, 2017, primarily due to full amortization of computer software as well as property, plant and equipment becoming fully depreciated at the end of 2016.

Impairment losses

During the year ended December 31, 2017, the Company recognized an impairment charge of $30,618 thousand related to the partial impairment of goodwill in Canada and during the year ended December 31, 2016, the Company recognized an impairment charge of $193,000 thousand related to the partial impairment of goodwill at the U.S. and Canada. For further explanation of the impairments, refer to the Impairment losses in the Results of Operations section above.

Loss on disposal of non-current assets

A net loss of $3,718 thousand for the year ended December 31, 2017 relates primarily to the disposals certain property plant, and equipment in the U.S. that had a stepped-up fair value at the date of the Business Combination but were subsequently disposed of during scheduled furnace overhauls in 2017.

Electrometallurgy – Europe

($ thousands)	Year ended December 31, 2017	2016
Sales	1,083,200	949,547
Cost of sales	(690,589)	(672,026)
Other operating income	12,681	25,908
Staff costs	(147,595)	(132,440)
Other operating expense	(107,130)	(118,269)
Depreciation and amortization charges, operating allowances and write-downs	(27,404)	(31,730)
Impairment losses	—	(1,077)
Gain on disposal of non-current assets	301	—
Other losses	(13,604)	(32,655)
Operating profit (loss)	**109,860**	**(12,742)**

Sales

Sales increased $133,653 thousand, or 14.1%, from $949,547 thousand for the year ended December 31, 2016 to $1,083,200 thousand for the year ended December 31, 2017, primarily due to a 21.9% increase in average selling prices for all primary products as well as a foreign exchange impact which increased sales by $21,862 thousand.

Average selling prices (in local currency) for silicon metal, silicon-based alloys and manganese alloys pricing increased 2.6%, 14.1% and 56.8%, respectively, primarily due to higher market index pricing in Europe. The sales volume of primary products was relatively consistent year-over-year, with an increase of 2.7% for the year ended December 31, 2017 compared to the year ended December 31, 2016.

Cost of sales

Cost of sales increased $18,563 thousand, or 2.8%, from $672,026 thousand for the year ended December 31, 2016 to $690,589 thousand for the year ended December 31, 2017, primarily due to an increase in the price of raw material. In addition, there was an unfavorable foreign exchange impact, which increased Euro-denominated costs by $13,924 thousand.

Other operating income

Other operating income decreased $13,227 thousand, or 51.1%, from $25,908 thousand for the year ended December 31, 2016 to $12,681 thousand for the year ended December 31, 2017, primarily is due to an exceptional sale of products manufactured by a third entity in 2016 (products which were initially purchased for use in Ferroglobe plants). There was a favorable foreign exchange impact, which increased Euro-denominated incomes by $256 thousand.

Staff costs

Staff costs increased $15,155 thousand, or 11.4%, from $132,440 thousand for the year ended December 31, 2016 to $147,595 thousand for the year ended December 31, 2017, primarily due to an increase in variable wages and benefits driven by financial performance for employees in France and in Spain. There was an unfavorable foreign exchange impact, which increased Euro-denominated costs by $2,982 thousand.

Other operating expense

Other operating expense decreased $11,139 thousand, or 9.4%, from $118,269 thousand for the year ended December 31, 2016 to $107,130 thousand for the year ended December 31, 2017, primarily due to a reduction of non-recurring transaction costs related to the Business Combination, which were incurred in 2016. There was an unfavorable foreign exchange impact, which increased Euro-denominated costs by $2,162 thousand.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $4,326 thousand, or 13.6%, from $31,730 thousand for the year ended December 31, 2016 to $27,404 thousand for the year ended December 31, 2017, primarily due to a decrease in write-downs of trade receivables allowances of $5,963 thousand as we reduced our exposure to customers that entered delinquency in 2016. There was an unfavorable foreign exchange impact, which increased Euro-denominated costs by $553 thousand.

Other losses

Other losses for the years ended 2017 and 2016 relate to losses from the parent's investment in intercompany subsidiaries in Other segments, for which these subsidiaries had an impairment to their assets. These losses eliminate during consolidation of all segments. Refer to Other losses in the Results of Operations section above for an explanation of the Company's Other losses on a consolidated basis.

Electrometallurgy – South Africa

	Year ended December 31,	
($ thousands)	**2017**	**2016**
Sales	122,504	142,160
Cost of sales	(81,744)	(99,124)
Other operating income	2,868	3,422
Staff costs	(23,495)	(23,589)
Other operating expense	(24,462)	(28,834)
Depreciation and amortization charges, operating allowances and write-downs	(5,788)	(4,732)
Impairment losses	—	(8,147)
Net gain due to changes in the value of assets	7,222	1,896
(Loss) gain on disposal of non-current assets	(138)	21
Operating loss	**(3,033)**	**(16,927)**

Sales

Sales decreased $19,656 thousand, or 13.8%, from $142,160 thousand for the year ended December 31, 2016 to $122,504 thousand for the year ended December 31, 2017, primarily due to a 63.9% decrease in silicon metal sales volumes, as a result of furnaces 1 and 3 of Polokwane plant being idle during 2017. This decrease was partly offset by a 22.8% increase in silicon-based alloy sales volumes due to an improvement in demand in the domestic market. Average selling prices of all primary products increased 4% in 2017 compared to 2016, and there was a positive foreign exchange impact, which increased sales by $2,489 thousand.

Cost of sales

Cost of sales decreased $17,380 thousand, or 17.5%, from $99,124 thousand for the year ended December 31, 2016 to $81,744 thousand for the year ended December 31, 2017, primarily due to a 63.9% decrease in silicon metal sales volumes from 2016 to 2017, partially offset by an increase of 22.8% in silicon-based alloy sales volumes, as well as an unfavorable foreign exchange impact which increased cost of sales by $1,667 thousand.

Other operating income

Other operating income decreased $554 thousand, or 16.2%, from $3,422 thousand for the year ended December 31, 2016 to $2,868 thousand for the year ended December 31, 2017, primarily due to a decrease in by-product sales as a result of weak demand in the domestic market as well as a reduction of other services provided to third parties. There was a favorable foreign exchange impact, which increased Euro-denominated income by $57 thousand.

Staff costs

Staff costs decreased $94 thousand, or 0.4%, from $23,589 thousand for the year ended December 31, 2016 to $23,495 thousand for the year ended December 31, 2017, due to the staffing adjustments carried out in 2017 in connection with furnaces 1 and 3 of Polokwane plant, which were idle during 2017. This decrease was partially offset by a foreign exchange impact, which increased staff costs by $474 thousand.

Other operating expense

Other operating expense decreased $4,372 thousand, or 15.2%, from $28,834 thousand for the year ended December 31, 2016 to $24,462 thousand for the year ended December 31, 2017, primarily due to lower variable, selling, and administrative costs during 2017 when the plant was idled or operating at a reduced production level. This decrease was partially offset by a foreign exchange impact, which increased other operating expense by $482 thousand.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs increased $1,056 thousand, or 22.3%, from $4,732 thousand for the year ended December 31, 2016 to $5,788 thousand for the year ended December 31, 2017. This change is primarily attributable to higher lower capital expenditures as well as a foreign exchange impact which increased depreciation and amortization charges by $117 thousand.

Impairment losses

Impairment losses during the year ended December 31, 2016, primarily relates to impairment charges comprised of $1,612 thousand of goodwill, $230 thousand of intangibles assets and $7,334 thousand of property, plant and equipment, at the Company’s mining subsidiary, Thaba Chueu Mining (Pty.), Ltd, due to unfavorable market conditions and lower expected cash flows.

Net gain due to changes in the value of assets

Net gain due to the changes in the value of assets primarily relates to the remeasured fair value of the Company’s timber farms in South Africa as of December 31, 2017.

Other segments

	Year ended December 31,	
($ thousands)	**2017**	**2016**
Sales	60,199	90,337
Cost of sales	(33,616)	(79,912)
Other operating income	15,619	4,713
Staff costs	(39,851)	(58,577)
Other operating expense	(55,955)	(37,964)
Depreciation and amortization charges, operating allowances and write-downs	(4,557)	(12,818)
Impairment losses	(323)	(59,248)
(Loss) gain on disposal of non-current assets	(818)	446
Other losses	(2,625)	(2,514)
Operating loss	**(61,927)**	**(155,537)**

Sales

Sales decreased $30,138 thousand, or 33.4%, from $90,337 thousand for the year ended December 31, 2016 to $60,199 for the year ended December 31, 2017, primarily due to the idling of operations at FerroVen, S.A. during 2016, which resulted in a $20,353 thousand decrease in sales during 2017.

Cost of sales

Cost of sales decreased $46,296 thousand, or 57.9%, from $79,912 thousand for the year ended December 31, 2016 to $33,616 thousand for the year ended December 31, 2017, primarily due to the idling of operations at FerroVen, S.A. during 2016, which decreased cost of sales as a result of reduced sales volumes. The devaluation of Venezuelan local currency resulted in a $28,979 thousands decrease in cost of sales. A decrease of $8,134 thousand resulted from the Mangshi facility being idled in 2017. Decreases were partially offset by a $2,616 thousand increase at Metales as we operated with an additional furnace and a $2,668 thousand increase at Yonvey as we resumed production of electrodes.

Other operating income

Other operating income increased $10,906 thousand, or 231.4%, from $4,713 thousand for the year ended December 31, 2016 to $15,619 thousand for the year ended December 31, 2017, primarily due to at chargeback of services by Ferroglobe PLC to its subsidiaries.

Staff costs

Staff costs decreased $18,726 thousand, or 32.0%, from $58,577 thousand for the year ended December 31, 2016 to $39,851 thousand for the year ended December 31, 2017, as a result of executive severance payments of approximately $21,000 thousand in 2016. The decrease was partially offset by an increase in variable wages resulting from an improved financial performance in 2017.

Other operating expense

Other operating expense increased $17,991 thousand, or 47.4%, from $37,964 thousand for the year ended December 31, 2016 to $55,955 for the year ended December 31, 2017, primarily due to the accrual of $12,444 thousand for accrual of contingent liabilities.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $8,261 thousand, or 64.4%, from $12,818 thousand for the year ended December 31, 2016 to $4,557 thousand for the year ended December 31, 2017, primarily due to a $4,025 thousand decrease at FerroVen, S.A. as the assets were written off in 2016 and a $2,625 thousand decrease related to the hydro plants.

Impairment losses

During the year ended December 31, 2016 the Company recognized an impairment of non-current operational assets located in Venezuela, totaling $58,472 thousand.

Other losses

Other losses during the year ended December 31, 2017 is primarily related to an adjustment of $2,608 thousand to the carrying amount of property, plant and equipment at hydroelectric plants in Spain that were previously classified as held for sale. An expense was recorded equivalent to the depreciation that would have been charged if the business had not been classified as held for sale. Other losses during the year ended December 31, 2016 reflects the losses on the parent's investment in intercompany subsidiaries which eliminate during consolidation of all segments.

Effect of Inflation

Management believes that the impact of inflation was not material to Ferroglobe's results of operations in the years ended December 31, 2018, 2017 and 2016, although we experienced the impact of Venezuelan inflation in 2018, 2017 and 2016

on FerroVen, S.A.’s production costs in these years, which resulted in a loss of competitiveness. FerroVen, S.A. was idled in August 2018.

Cyclical Nature of the Industry and Movement in Market Prices, Raw Materials and Input Costs

Our business has historically been subject to fluctuations in the price of our products and market demand for them, caused by general and regional economic cycles, raw material and energy price fluctuations, competition and other factors. The timing, magnitude and duration of these cycles and the resulting price fluctuations are difficult to predict. For example, we experienced a weakened economic environment in national and international metals markets, including a sharp decrease in silicon metal prices in all major markets from late 2014 to late 2017. During the second half of 2018 we experienced a fast and unexpected decline in all of our product prices which adversely affected our results. Any decline in the global silicon metal, manganese- and silicon-based alloys industries could have a material adverse effect on our business, results of operations and financial condition.

B. Liquidity and Capital Resources

Sources of Liquidity

Ferroglobe’s primary sources of long-term liquidity are its Senior Notes with a $350,000 thousand aggregate principal at an interest rate of 9.375%, due on March 1, 2022, and a multicurrency Revolving Credit Facility with an aggregate principal amount of $200,000 thousand maturing on February 27, 2021 ($133,314 thousand drawn down as of December 31, 2018). The Revolving Credit Facility was amended on February 22, 2019 to reduce the principal amount from $250,000 thousand to $200,000 thousand. The amendment also suspended the existing covenant to maintain a maximum total net leverage ratio during an interim period beginning with the first quarter of 2019 and continuing through the first quarter of 2020 and provides a new covenant to maintain a maximum secured net leverage ratio and a new covenant to maintain a minimum cash liquidity level. The new covenants are in effect only during the interim period, after which the existing covenant to maintain a maximum total net leverage ratio will be reinstated. Ferroglobe also focuses on optimizing its working capital, which includes a securitization program whereby up to $300,000 thousand of trade receivables can be sold. The securitization program provided $227,360 thousand of upfront cash consideration at December 31, 2018.

Ferroglobe’s primary short-term liquidity needs are to fund its capital expenditure commitments and operational needs and service its existing debt. Ferroglobe’s long-term liquidity needs primarily relate to debt repayment. Ferroglobe’s core objective with respect to capital management is to maintain a balanced and sustainable capital structure through the economic cycles of the industries in which it has a presence, while keeping the cost of capital at competitive levels so as to fund Ferroglobe’s growth.

For the year ended December 31, 2018, operating activities generated $73,777 thousand in cash, compared to $150,375 thousand in 2017 and $129,169 thousand in 2016. Investing activities used a total of $85,875 thousand of cash in 2018, compared to $74,818 thousand in 2017 and $84,281 thousand in 2016. Financing activities resulted in a total inflow of $53,303 thousand in cash in 2018, compared to an outflow of $113,397 thousand in 2017 and an inflow of $49,917 thousand in 2016. See “Cash Flow Analysis” below for additional information.

As of December 31, 2018 and 2017, Ferroglobe had cash and cash equivalents of $216,647 thousand and $184,472 thousand, respectively. Cash and cash equivalents are primarily held in U.S. Dollars and Euro.

As of December 31, 2018, Ferroglobe’s total gross financial debt was $645,389 thousand as compared to $571,337 thousand as of December 31, 2017. As of December 31, 2018, gross financial debt was comprised of debt instruments of $352,595 thousand ($350,270 in 2017), bank borrowings of $141,012 thousand ($1,003 in 2017), $66,471 thousand of finance leases ($82,633 thousand in 2017), and other financial liabilities of $85,312 thousand ($137,431 thousand in 2017).

Working Capital Position

Taking into account generally expected market conditions, Ferroglobe anticipates that cash flow generated from operations will be sufficient to fund its operations, including its working capital requirements, and to make the required principal and interest payments on its indebtedness during the next 12 months.

As of December 31, 2018, Ferroglobe's working capital position (defined as inventories and trade and other receivables less trade and other payables) was $356,143 thousand.

Capital Expenditures

Ferroglobe incurs capital expenditures in connection with expansion and productivity improvements, production plants maintenance and research and development projects. Capital expenditures are funded through cash generated from operations and financing activities. Ferroglobe's capital expenditures for the years ended December 31, 2018, 2017 and 2016 were $106,136 thousand, $74,616 thousand and $71,119 thousand, respectively. Principal capital expenditures during these periods were primarily for maintenance and improvement works at Ferroglobe's plants and mines. We expect our capital expenditures for 2019 to equal approximately $50,000 thousand. We believe we have the ability to reduce our capital expenditures by, as needed, idling individual electrometallurgy facilities. During 2018, capital expenditures of $32,740 thousand were incurred in connection with our solar grade silicon joint venture as part of an initial phase on top of capital expenditures of €21 million incurred in prior years. As a result of suspending this capital project due to current market conditions no capital expenditures are anticipated in 2019 other than those already committed. If the project continues to subsequent phases, as a result of improved market conditions then we may commit to further phases. Capital expenditures in connection with our solar grade silicon joint venture are financed in part by a loan obtained from the Spanish Ministry of Industry and Energy. See "Item 4.B.—Information on the Company—Business Overview—Research and Development (R&D)—Solar grade silicon" and "Item 7.B.—Major Shareholders and Related Party Transactions—Related Party Transactions." See also "—Tabular Disclosure of Contractual Obligations" for disclosure regarding future committed capital expenditures.

Cash Flow Analysis — Year Ended December 31, 2018 Compared to Year Ended December 31, 2017

The following table summarizes Ferroglobe's primary sources (uses) of cash for the years ended December 31, 2018 and 2017:

	Year ended December 31,	
($ thousands)	**2018**	**2017**
Cash and cash equivalents at beginning of period	184,472	196,982
Cash flows from operating activities	73,777	150,375
Cash flows from investing activities	(85,875)	(74,818)
Cash flows from financing activities	53,303	(113,397)
Exchange differences on cash and cash equivalents in foreign currencies	(9,030)	25,330
Cash and cash equivalents at end of period	216,647	184,472
Cash and cash equivalents at end of period from statement of financial position	216,647	184,472

Ferroglobe paid dividends of $20,642 thousand during the year ended December 31, 2018 and paid nil for the year ended December 31, 2017.

Cash flows from operating activities

Cash flows from operating activities decreased $76,598 thousand, from $150,375 thousand for the year ended December 31, 2017, to $73,777 thousand for the year ended December 31, 2018. Despite weaker performance in the second half of the year, 2018 was a strong year for the Company. Operating profits increased significantly, driven by an increase in sales volumes, improved pricing for silicon metal and silicon-based alloys and a significant contribution from the energy business. Nevertheless, cash flows from operating activities fell by almost half, primarily attributable to the

increase in working capital necessary to sustain the newly acquired manganese alloy businesses in France and Norway. Additionally, 2017 operating cash flows benefited from the replacement of the Company's European invoice factoring facility with a much larger accounts receivable securitization program that also included the United States and Canada.

Income taxes paid increased $9,644 thousand, reflecting payments on account for a more profitable year, while interest increased $3,888 thousand, mainly due to a full year of interest on the Senior Notes.

Cash flows from investing activities

Cash flows from investing activities decreased $11,057 thousand from an outflow of $74,818 thousand for the year ended December 31, 2017 to an outflow of $85,875 thousand for the year ended December 31, 2018. Capital expenditures increased during the year ended December 31, 2018 to $106,136 thousand from $74,616 thousand during the year ended December 31, 2017, which included increased spend on the solar grade silicon pilot plant in Puertollano, Spain. In 2018, the Company invested $20,379 thousand to acquire 100% of the share capital of Glencore's manganese alloy businesses in France and Norway. These outflows were partially offset by proceeds from the disposal of certain non-core assets, including $20,533 thousand from the sale of subsidiary Hidro Nitro Española, S.A. (hydroelectric plants in Aragon, Spain) and $12,734 thousand from the sale of timber farm plantations in South Africa and $6,861 thousand from other asset sales.

Cash flows from financing activities

Cash flows from financing activities increased $166,700 thousand, from an outflow of $113,397 thousand for the year ended December 31, 2017 to an inflow of $53,303 thousand for the year ended December 31, 2018. In 2018, the Company increased bank borrowings, with $135,919 thousand of principal drawn under the Revolving Credit Facility at December 31, 2018 and $6,102 thousand received from the short-term factoring of certain non-trade receivables. These inflows were partially offset by the repayment of loans from Spanish government agencies of $33,096 thousand, $20,100 thousand paid out under the share repurchase program and the payment of $20,642 thousand in dividends to shareholders.

Cash Flow Analysis — Year Ended December 31, 2017 Compared to Year Ended December 31, 2016

The following table summarizes Ferroglobe's primary sources (uses) of cash for the years ended December 31, 2017 and 2016:

($ thousands)	Year ended December 31, 2017	Year ended December 31, 2016
Cash and cash equivalents at beginning of period	196,982	116,666
Cash flows from operating activities	150,375	121,169
Cash flows from investing activities	(74,818)	(84,281)
Cash flows from financing activities	(113,397)	49,917
Exchange differences on cash and cash equivalents in foreign currencies	25,330	(6,489)
Cash and cash equivalents at end of period	184,472	196,982
Cash and cash equivalents at end of period from statement of financial position	184,472	196,931
Cash and cash equivalents at end of period included within assets and disposal groups classified as held for sale	—	51

Ferroglobe did not pay dividends during the year ended December 31, 2017 and paid $54,988 thousand of dividends for the year ended December 31, 2016.

Cash flows from operating activities

Cash flows from operating activities decreased $75,418 thousand, from $150,375 thousand for the year ended December 31, 2016, to $74,957 thousand for the year ended December 31, 2017. The increase was due to an increase in trade receivables of $26,636 thousand, primarily related to our accounts receivable securitization program established in 2017, an increase in accounts payable of $54,320 thousand, offset by an increase in inventories of $102,091 thousand.

Other payments increased $44,888 thousand, primarily related to an increase of $78,727 thousand of payments to our SPV associated with the securitization program in 2017, offset by the $32,500 thousand settlement payment in 2016 in connection with the litigation related to the Business Combination.

Income taxes paid increased $15,831 thousand while interest increased $9,662 thousand due to the debt instrument established in February 2018.

Cash flows from investing activities

Cash flows from investing activities decreased $13,089 thousand from an outflow of $74,818 thousand for the year ended December 31, 2016 to an outflow of $87,907 thousand for the year ended December 31, 2017, primarily due to $9,807 thousand of payments associated with investments in other non-current financial assets primarily related to contributions to Blue Power, a party to the Company's Solar joint venture with Aurinka in 2016 (compared to investments in other non-current financial assets of $343 thousand in 2017). Capital expenditures for the year ended December 31, 2017 were $74,616 thousand compared to $71,119 thousand in 2016.

Cash flows from financing activities

Cash flows from financing activities increased $41,861 thousand from an outflow of $113,397 thousand for the year ended December 31, 2016 to an outflow of $71,536 thousand for the year ended December 31, 2017. This was primarily driven by the issuance of Senior Notes with a $350,000 thousand principal, for which the proceeds were used primarily to repay existing indebtedness, including borrowings to finance investments and certain credit facilities and other loans. This was partly offset by a $54,988 thousand dividend payment to shareholders in 2016 (nil in 2017).

Capital resources

Ferroglobe's core objective is to maintain a balanced and sustainable capital structure through the economic cycles of the industries in which it has a presence, while keeping the cost of capital at competitive levels so as to fund Ferroglobe's growth. In addition to cash flows from continuing operations, the Company's main sources of capital resources are its Senior Notes with an aggregate principal value of $350,000 thousand and a multicurrency Revolving Credit Facility with an aggregate principal amount of $200,000 thousand maturing on February 27, 2021.

Payments of dividends, distributions and advances by Ferroglobe's subsidiaries will be contingent upon their earnings and business considerations and may be limited by legal, regulatory and contractual restrictions. For instance, the repatriation of dividends from Ferroglobe's Venezuelan and Argentinean subsidiaries have been subject to certain restrictions and there is no assurance that further restrictions will not be imposed. Additionally, Ferroglobe's right to receive any assets of its subsidiaries as an equity holder of such subsidiaries, upon their liquidation or reorganization, will be effectively subordinated to the claims of such subsidiaries' creditors, including trade creditors.

The Company's debt instrument and multicurrency revolving credit facility contain certain financial covenants. Details and description of Ferroglobe's debt instrument and multicurrency revolving credit facility are described in Notes 16 and 18 of the Consolidated Financial Statements.

C. Research and Development, Patents and Licenses, etc.

For additional information see "Item 4.B.—Information on the Company—Business Overview—Research and Development (R&D)".

D. Trend Information

We discuss in Item 5.A. above and elsewhere in this annual report, trends, uncertainties, demands, commitments or events for the year ended December 31, 2018 that we believe are reasonably likely to have a material adverse effect on our

revenues, income, profitability, liquidity or capital resources or to cause the disclosed financial information not to be necessarily indicative of future operating results or financial conditions.

E. Off-Balance Sheet Arrangements

We do not have any outstanding off-balance sheet arrangements.

F. Tabular Disclosure of Contractual Obligations

The following table sets forth Ferroglobe's contractual obligations and commercial commitments with definitive payment terms that will require significant cash outlays in the future, as of December 31, 2018.

		Payments Due by Period			
($ thousands)	**Total**	**Less than 1 year**	**1 - 3 years**	**3 - 5 years**	**More than 5 years**
Long-term debt obligations	464,844	32,813	65,625	366,406	—
Capital expenditures	26,935	26,935	—	—	—
Finance leases	66,471	12,999	28,092	25,380	—
Power purchase commitments[(1)]	363,872	152,436	117,720	93,716	—
Purchase obligations[(2)]	82,952	82,952	—	—	—
Operating lease obligations	31,264	9,684	13,421	7,427	732
Total	**1,036,338**	**317,819**	**224,858**	**492,929**	**732**

(1) Represents minimum charges that are enforceable and legally binding, and do not represent total anticipated purchases. Minimum charges requirements expire after providing one year notice of contract cancellation.

(2) The Company has outstanding purchase obligations with suppliers for raw materials in the normal course of business. The disclosed purchase obligation amount represents commitments to suppliers that are enforceable and legally binding and do not represent total anticipated purchases of raw materials in the future.

The table above also excludes certain other obligations reflected in our consolidated balance sheet, including estimated funding for pension obligations, for which the timing of payments may vary based on changes in the fair value of pension plan assets and actuarial assumptions. We expect to contribute approximately $1,037 thousand to our pension plans for the year ended December 31, 2019.

G. Safe Harbor

This annual report contains forward-looking statements within the meaning of Section 27A of the U.S. Securities Act and Section 21E of the U.S. Exchange Act and as defined in the Private Securities Litigation Reform Act of 1995. See "Cautionary Statements Regarding Forward-Looking Statements."

ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

A. Directors, Senior Management and Employees

The following table lists each of our executive officers and directors, their respective ages and positions as of the date of this annual report and their respective dates of appointment. The business address of all our directors and senior management is our business address as set forth in "Item 4.A.—Information on the Company—History and Development of the Company."

Name	Age	Position	Date of appointment
Javier López Madrid	54	Director and Executive Chairman	February 5, 2015
Pedro Larrea Paguaga	55	Director and Chief Executive Officer	June 28, 2017
Phillip Murnane	40	Chief Financial Officer and Principal Accounting Officer	July 9, 2018
José María Alapont	68	Director	January 24, 2018
Donald G. Barger, Jr.	76	Director	December 23, 2015
Bruce L. Crockett	75	Director	December 23, 2015
Stuart E. Eizenstat	76	Director	December 23, 2015
Manuel Garrido y Ruano	53	Director	May 30, 2017
Greger Hamilton	52	Director	December 23, 2015
Javier Monzón	63	Director	December 23, 2015
Pierre Vareille	61	Director	October 26, 2017
Juan Villar-Mir de Fuentes	57	Director	December 23, 2015

Other than employment agreements between Ferroglobe and each of Javier López Madrid, Pedro Larrea Paguaga and Phillip Murnane, there are no service contracts between the officers and directors listed in the table above, on the one hand, and us or any of our subsidiaries on the other, providing for benefits upon termination of employment.

There are no family relationships between our executive officers and directors, except that Javier López Madrid is married to the sister of Juan Villar-Mir de Fuentes.

Set forth below is a brief biography of each of our executive officers and directors.

Javier López Madrid

Javier López Madrid has been Executive Chairman of the Company since December 31, 2016 and Chairman of our Nominations Committee since January 1, 2018. He was first appointed to the Board on February 5, 2015 and was the Company's Executive Vice-Chairman from December 23, 2015 until December 31, 2016.

He has been Chief Executive Officer of Grupo VM since 2008, is a member of the World Economic Forum, Group of Fifty and a member of the Board of several non profit organizations. He is the founder and largest shareholder of Financiera Siacapital and founded Tressis, Spain's largest independent private bank.

Mr. López Madrid holds a Master in Law and Business from ICADE University.

Pedro Larrea Paguaga

Pedro Larrea Paguaga has been Chief Executive Officer of the Company since December 23, 2015 and a member of our Board of Directors since June 28, 2017.

Mr. Larrea was Chairman of FerroAtlántica from 2012 to 2015, and Chief Executive Officer of FerroAtlántica from 2011 to 2015. From 1996 to 2009, he held various executive roles at Endesa, the biggest power company in Spain and Latin America, including as Chairman and CEO of Endesa Latinoamérica. He was a Board director of Enersis from 2007 to 2009 and of Endesa Chile from 1999 to 2002 and from 2006 to 2007, both being Chilean companies listed on the NYSE.

In 2010 and 2011, he held management consulting roles with PwC, where he led the energy sector practice in Spain, and from 1989 to 1995 he worked for McKinsey & Company in Spain, Latin America and the United States.

Mr. Larrea holds a Mining Engineering degree (MSc equivalent) from Universidad Politécnica de Madrid, from where he graduated with honors and an MBA from INSEAD, where he was awarded the Henry Ford II award for academic excellence.

Phillip Murnane

Phillip Murnane was appointed as Chief Financial and Principal Accounting Officer on July 9, 2018. Prior to joining Ferroglobe, he worked at Noble Group from 2012 to 2018, as Chief Operating Officer for the Americas and EMEA and Chief Operating Officer of Global Energy from 2016 to 2018, Chief of Staff from 2014 to 2016 and Global Head of Financial Planning, Reporting and Analysis from 2012 to 2014. He served with Glencore from 2010 to 2012 in a progression of roles including Finance Director and Asset Manager – Zinc and Copper. Prior to that, he served in various roles at both Centrica and Deloitte.

Mr. Murnane holds a Bachelor of Commerce and a Bachelor of Economics from Australian National University and is a Member of the Institute of Chartered Accountants of Australia.

José María Alapont

José María Alapont was appointed to our Board of Directors as a Non-Executive Director on January 24, 2018 and to our Audit Committee and Compensation Committee on May 16, 2018. Mr. Alapont was appointed on January 16, 2019 as our Senior Independent Director and Chairman of our Corporate Governance Committee.

Mr. Alapont holds a number of other Board appointments. Since 2017, he has been a member of the Board of Directors of Ashok Leyland and also a member of its Investment and Technology Committee and since 2018, he has been a member of its Nomination and Remuneration Committee. Mr Alapont has also been a Board Director of the Navistar Inc. and a member of its Finance Committee since 2016 and Chair of its Nomination and Governance Committee since 2018. He has been a member of the Board of Directors of Hinduja Investments and Project Services Ltd since 2016 and of Hinduja Automotive Ltd since 2014.

Mr. Alapont was formerly President and Chief Executive Officer of Federal-Mogul Corporation, the automotive powertrain and safety components supplier, from March 2005 to 2012, Chairman of its Board from 2005 to 2007 and Board director from 2005 to 2013. Prior to that, he was Chief Executive and a Board Director of Fiat Iveco, S.p.A., a leading global manufacturer of commercial trucks, buses, defense and other specialized vehicles from 2003 to 2005. Prior to 2003, he held Executive, Vice President and President positions for more than 30 years at other leading global vehicle manufacturers and suppliers, such as Ford Motor Company, Delphi Corporation and Valeo S.A. His non-executive experience also includes being member of the Board of Directors of the Manitowoc Company Inc. from 2016 to 2018 and a Board Director of Mentor Graphics Corp. from 2011 to 2012. He was a member of the Davos World Economic Forum from 2000 to 2011.

Mr. Alapont holds an Industrial Engineering degree from the Technical School of Valencia and a Philology degree from the University of Valencia in Spain.

Donald G. Barger Jr.

Donald G. Barger, Jr, was appointed to our Board of Directors as a Non-Executive Director on December 23, 2015. He has served as the Chairman of our Compensation Committee and a member of our Nominations Committee since January 1, 2018. From December 23, 2015 to December 31, 2017, he was the Chair of our Nominating and Corporate Governance Committee and a member of our Compensation Committee.

Mr Barger was a member of the Board of Directors of Globe from December 2008 until the closing of the Business Combination and Chairman of Globe's Audit Committee and Compensation Committee. He had a successful 36-year business career in manufacturing and services companies, including as Vice President and Chief Financial Officer of YRC Worldwide Inc. (formerly Yellow Roadway Corporation) from 2000 to 2007 and as advisor to the CEO from 2007 until his retirement in 2008. He was Vice President and Chief Financial Officer of Hillenbrand Industries, a provider of services and products for the health care and funeral services industries, from 1998 to 2000. He was Vice President of Finance and Chief Financial Officer of Worthington Industries, Inc., a diversified steel processor, from 1993 to 1998 and a member of the Board of Directors of Gardner Denver, Inc. and a member on its Audit Committee for his entire 19-year tenure until the company's sale in July 2013, serving as chair of the Audit Committee for 17 of those years. He served on the Board of Directors of Quanex Building Products Corporation for sixteen years, retiring in February 2012. He served on its Audit Committee for 14 years and was its Chair for most of that time.

Mr. Barger has a Bachelor of Science degree from the U.S. Naval Academy and an MBA from the University of Pennsylvania.

Bruce L. Crockett

Bruce L. Crockett was appointed to our Board of Directors as a Non-Executive Director on December 23, 2015. He has been a member of our Audit Committee from that date and has served on our Compensation Committee since January 1, 2018.

Mr. Crockett holds a number of other Board and governance roles. He has been Chairman of the Invesco Mutual Funds Group Board of Directors and a member of its Audit, Investment and Governance Committees, serving on the board since 1991, as Chair since 2003 and on the Board of predecessor companies from 1978. Since 2013, he has been a member of the Board of Directors and, since 2014, Chair of the Audit Committee of ALPS Property & Casualty Insurance Company. He has been Chairman of, and a private investor in, Crockett Technologies Associates since 1996. He is a life trustee of the University of Rochester.

Mr. Crockett was a member of the Board of Directors of Globe from April 2014 until the closing of the Business Combination, as well as a member of Globe's Audit Committee. He was formerly President and Chief Executive Officer of COMSAT Corporation from 1992 until 1996 and its President and Chief Operating Officer from 1991 to 1992, holding a number of other operational and financial positions at COMSAT from 1980, including that of Vice President and Chief Financial Officer. He was a member of the Board of Directors of Ace Limited from 1995 until 2012 and of Captaris, Inc. from 2001 until its acquisition in 2008 and its Chairman from 2003 to 2008.

Mr. Crockett holds an A.B. degree from the University of Rochester, B.S. degree from the University of Maryland, an MBA from Columbia University and an Honorary Doctor of Law degree from the University of Maryland.

Stuart E. Eizenstat

Stuart E. Eizenstat was appotined to our Board of Directors as a Non-Executive Director on December 23, 2015. He has been a member of the Company's Corporate Governance Committee since January 1, 2018 and was appointed to our Nominations Committee on May 16, 2018.

Mr. Eizenstat has been a Senior Counsel at Covington & Burling LLP in Washington, D.C. and Head of its international practice since 2001. He has served as a member of the Advisory Boards of GML Ltd. since 2003 and of the Office of Cherifien de Phosphates since 2010. He was a trustee of BlackRock Funds from 2001 until 2018.

Mr. Eizenstat was a member of Board of Directors of Globe from 2008 until the closing of the Business Combination and Chair of its Nominating Committee. He was a member of the Board of Directors of Alcatel-Lucent from 2008 to 2016 and of United Parcel Service from 2005 to 2015. He has had an illustrious political and advisory career, including serving as Special Adviser to Secretary of State Kerry on Holocaust-Era Issues from 2009 to 2017 and Special Representative of the President and Secretary of State on Holocaust Issues during the Clinton administration from 1993 to 2001. He was Deputy Secretary of the United States Department of the Treasury from July 1999 to January 2001, Under Secretary of

State for Economic, Business and Agricultural Affairs from 1997 to 1999, Under Secretary of Commerce for International Trade from 1996 to 1997, U.S. Ambassador to the European Union from 1993 to 1996 and Chief Domestic Policy Advisor in the White House to President Carter from 1977 to 1981. He is the author of “Imperfect Justice: Looted Assets, Slave Labor, and the Unfinished Business of World War II”; “The Future of the Jews: How Global Forces are Impacting the Jewish People, Israel, and its Relationship with the United States” and “President Carter: The White House Years”.

Mr. Eizenstat holds a B.A. in Political Science, cum laude and Phi Beta Kappa, from the University of North Carolina at Chapel Hill, a J.D. from Harvard Law School and nine honorary doctorate degrees and awards from the United States, French, German, Austrian, Belgian and Israeli governments.

Manuel Garrido y Ruano

Manuel Garrido y Ruano was appointed to our Board of Directors as a Non-Executive Director on May 30, 2017. He was a member of our Nominating and Corporate Governance Committee from May 30, 2017 until December 31, 2017, when he was appointed to our Corporate Governance Committee.

Mr. Garrido y Ruano has been Chief Financial Officer of Grupo Villar Mir since 2003 and a member of the Board or on the steering committee of a number of its subsidiaries in the energy, financial, construction and real estate sectors. He is Professor of Communication and Leadership of the Graduate Management Program at CUNEF in Spain. Mr. Garrido y Ruano was a member of the steering committee of FerroAtlántica until 2015, having previously served as its Chief Financial Officer from 1996 to 2003. He worked with McKinsey & Company from 1991 to 1996, specializing in restructuring, business development and turnaround and cost efficiency projects globally.

Mr. Garrido y Ruano holds a Masters in Civil Engineering with honors from the Universidad Politecnica de Madrid and an MBA from INSEAD.

Greger Hamilton

Greger Hamilton was appointed to our Board of Directors as a Non-Executive Director on December 23, 2015. He was a member of our Compensation Committee from that date until December 31, 2017. He has been Chairman of our Audit Committee since December 23, 2015 and a member of our Corporate Governance Committee since January 1, 2018.

Mr. Hamilton has been Managing Partner of Ovington Financial Partners Ltd since 2009. He is cofounder of the BrainHealth Club and has been a member of its Board of Directors since 2016. From 2009 to 2014, Mr. Hamilton was a partner at European Resolution Capital Partners, where he assisted in the restructuring of international banks in 16 countries, and managing director at Goldman Sachs International from 1997 to 2008. He began his career at McKinsey and Company, where he worked from 1990 to 1997.

Mr. Hamilton holds a B.A. in Business Economics and International Commerce from Brown University.

Javier Monzón

Javier Monzón was appointed to our Board of Directors as a Non-Executive on December 23, 2015. He served as the Chairman of our Compensation Committee and a member of our Audit Committee from December 23, 2015 to December 31, 2017. He was Senior Independent Director and Chairman of our Corporate Governance Committee from January 1, 2018 to January 16, 2019 and has been a member of the Nominations Committee since January 1, 2018.

Mr. Monzón has served as a member of the Board of Directors of Promotora de Informaciones SA (PRISA) since November 2017 and as its Non-Executive Chairman since January 1, 2019. He is also Chairman of its Delegate Commission and of its Appointments, Remuneration and Corporate Governance Committees. He has been a member of the Board of Santander Espana since June 2015 and, in June 2018, he was appointed as Non-Executive Chairman of Open Bank S.A., a subsidiary of Banco Santander. He has been a Board director of 4IQ since April 2017 and a member of the

Board and of the Compensation Committee of Sopra Steria Group since June 2018. He was a member of the Supervisory Board of Lagardere from 2008 to 2017 and of ACS Servicios y Concesiones from 2004 until January 2019.

In the course of his executive career, Mr. Monzón was Chairman and CEO of Indra Sistemas, S.A. from 1992 until 2015. He was a partner at Arthur Andersen between 1989 and 1990. He served as Chief Financial Officer of Telefonica S.A. from 1984 to 1987 and Executive Vice President and Chairman of Telefonica International, S.A. from 1987 to 1989. He began his career at Cajamadrid, where he was a Corporate Banking Director. Mr. Monzón's not-for-profit activities include serving as Chairman of the executive committee of Fundación CYD (Knowledge and Development Foundation) since 2003, member of the Board of Endeavor Spain, and of the international advisory council of Brookings, both from 2014, and Vice-Chairman of the American Chamber of Commerce in Spain in the period from March 2010 to January 2015. He was also Vice-Chairman of the Board of Carlos III University until 2017.

Mr Monzón holds a degree in Economics from Universidad Complutense de Madrid.

Pierre Vareille

Pierre Vareille was appointed to our Board of Directors as a Non-Executive Director on October 26, 2017 and was appointed as a member of our Audit Committee and Compensation Committee with effect from January 1, 2018.

Mr. Vareille has also been a member of the Board of Directors and member of the Audit Committee of Societe BIC SA since 2009 and was appointed as Chairman in May 2018. He has served as a member of the Board of Directors and the Remuneration and Selection Committee of Etex SA since 2017, a member of the Board of Directors and Audit Committee of Verallia SA since 2015 and a member of the Board of Directors and Remuneration Committee of Outokumpu Oyj since 2018. He is a founder of and, since 2014, has been Co-Chairman of the Vareille Foundation.

Mr. Vareille was Chief Executive Officer of Constellium NV from 2012 to 2016, Chairman and Chief Executive Officer of FCI SA from 2008 to 2012 and Group Chief Executive of Wagon PLC from 2004 to 2007. He has extensive experience in the metals and manufacturing sectors and in the management of global private and public industrial companies.

Mr. Vareille is a graduate of the Ecole Centrale de Paris, the leading French engineering school, and holds a degree in Economics and Finance from the Sorbonne University, Paris, France.

Juan Villar-Mir de Fuentes

Juan Villar-Mir de Fuentes was appointed to our Board of Directors as a Non-Executive Director on December 23, 2015.

Mr. Villar-Mir de Fuentes has been Vice Chairman of Inmobiliaria Espacio, S.A since 1996 and Vice Chairman of Grupo Villar Mir, S.A.U. since 1999. He has been a member of the Board of Directors of Obrascon Huarte Lain, S.A. since 1996, a member of the Audit Committee and, later, its Compensation Committee and its Chairman since 2016. He was a Board director and member of the Compensation Committee of Inmobiliaria Colonial, S.A from June 2014 to May 2017. He also was a member of the Board of Directors and of the Compensation Committee of Abertis Infraestructuras, S.A. between 2013 and 2016.

Mr. Villar-Mir de Fuentes is Patron and member of the Patronage Council of Fundación Nantik Lum and Fundación Princesa de Gerona

Mr. Villar-Mir holds a Bachelor's Degree in Business Administration and Economics and Business Management.

B. Compensation

Compensation of executive officers and directors

The table below sets out the remuneration earned by our directors during the year ended December 31, 2018:

($ thousands)	Salary & Fees	Benefits	Pension	Annual Bonus	Long - Term Incentives	Total
Executive Directors						
Javier López Madrid	740,870	329,327	148,174	212,766	1,864,930	3,296,067
Pedro Larrea Paguaga	634,078	297,762	126,815	182,094	1,387,924	2,628,673
Non-Executive Directors						
José María Alapont(1)	128,710	4,005	—	—	—	132,715
Donald G. Barger, Jr.	140,832	18,689	—	—	—	159,521
Bruce L. Crockett	137,495	28,033	—	—	—	165,528
Stuart E. Eizenstat	111,464	14,016	—	—	—	125,480
Manuel Garrido y Ruano	109,462	12,014	—	—	—	121,476
Greger Hamilton	156,183	—	—	—	—	156,183
Javier Monzón	186,515	14,016	—	—	—	200,531
Pierre Vareille	137,495	12,014	—	—	—	149,509
Juan Villar-Mir de Fuentes	93,443	8,009	—	—	—	101,452

1 Mr. Alapont was appointed to the Board on January 24, 2018.

Javier López Madrid holds 68,541 options granted on November 24, 2016 and 154,703 options granted on June 1, 2017 (at target performance in each case). Pedro Larrea Paguaga holds 51,010 options granted on November 24, 2016 and 115,134 options granted on June 1, 2017 (at target performance in each case). Maximum opportunity for each award is 200% of target. On March 21, 2018, Javier López Madrid was granted 113,121 options and Pedro Larrea Paguaga was granted 84,187 options (at target performance in each case). The value reflected in the table above is for the number of shares vesting at target (100% of grant) at the fair value at the date of grant of $22.56, as disclosed in Note 21 to the financial statements for the March 21, 2018 grant. All of these options were granted under the rules of the Company's Equity Incentive Plan 2016, are over ordinary shares in the capital of the Company and have a strike price of nil. The options vest and become exercisable three years from the date of grant, to the extent that performance conditions are satisfied, and subject to continued service with the Company, remain exercisable until the tenth anniversary of their grant date.

On June 14, 2018, Javier López Madrid was granted 22,829 options and Pedro Larrea Paguaga was granted 19,538 options under the Company's Deferred Share Bonus Plan. These options were granted under the rules of the Company's Equity Incentive Plan 2016 and in accordance with the terms of the Company's Annual Bonus Plan, under which any amount of annual bonus in excess of the target amount is deferred into shares. These options are over ordinary shares in the capital of the Company and have a strike price of nil. The options vest and become exercisable three years from the date of grant and have no performance conditions attached to them. The value of these options (at face value at the date of grant) is included in the 'Annual Bonus' value in the table above.

Remuneration policy

In June 2016, our shareholders approved the remuneration policy applicable to executive directors and non-executive directors of the Company as set out in the directors' remuneration report within our U.K. annual report for the year ended December 31, 2015 (the "Policy"), as required by the UK Companies Act 2006 and the Large and Medium-sized Companies and Groups (Accounts and Reports) (Amendment) Regulations 2013. The Policy was approved on June 29, 2016 and applied with effect from January 1, 2016.

The overall aim of our remuneration strategy is to provide appropriate incentives that reflect our high-performance culture and values to maximize returns for our shareholders. In summary, we aim to:

- attract, retain and motivate high-caliber, high-performing employees;
- encourage strong performance and engagement, both in the short and the long term, to enable us to achieve our strategic objectives;
- structure the total remuneration package so that a very significant proportion is linked to performance conditions measured over both the short-term and longer term;
- set fixed pay levels at or around market norms to allow for a greater proportion of total remuneration opportunity to be in variable pay; and
- create strong alignment between the interests of shareholders and executives through both the use of equity in variable incentive plans and the setting of shareholding guidelines for directors.

Consistent with this remuneration strategy, in relation to the Company's executive directors, the Policy provides, in summary, that:

- executive director salaries are set at a rate commensurate with the individual's role, responsibilities and experience, having regard to broader market rates. Salaries are reviewed annually, when Company performance, individual performance, changes in responsibility, levels of increase for the broader employee population and market salary levels will be taken into account. No maximum salary is set under the Policy;
- executive directors may receive a cash allowance in lieu of contribution to a pension, up to a maximum of 20% of base salary per annum, which may include contributions to a U.S. tax-qualified defined contribution 401(k) plan;
- executive directors may receive other market competitive benefits such as medical cover, life assurance and income protection insurance and, where appropriate, relocation allowances (with the Compensation Committee to review relocation allowances annually);
- executive directors are provided with directors' and officers' liability insurance and an indemnity to the fullest extent permitted by the UK Companies Act 2006;
- executive directors are eligible for an annual bonus, which normally has a maximum bonus opportunity of 200% of annual base salary but could have a maximum bonus opportunity of up to 500% of annual base salary in exceptional circumstances. No more than 25% of the maximum bonus payable for each performance condition will be payable for threshold performance. Any bonus award will be subject to the achievement of quantitative and qualitative performance conditions as determined by the Compensation Committee each year (at least two-thirds of the bonus will be based on financial metrics with the balance based on non-financial metrics). Normally any bonus earned in excess of the target amount will be deferred for three years into shares in the Company and the executive director may be granted an additional long-term incentive award of equal value (at maximum) to the amount of annual bonus deferred. Recovery and recoupment provisions apply to all bonus awards for misstatement, error or gross misconduct;
- executive directors are eligible to be granted an award under the Company's long-term incentive plan, at the discretion of the Compensation Committee. Any awards granted would normally vest three years after the date of grant and may, at the Compensation Committee's discretion, be subject to the achievement of performance targets. Under the Policy at least two-thirds of the total long-term incentive awards granted to an executive director in any financial year will be awards where the vesting is subject to achievement of performance targets. Considering feedback and best practice, the Committee has decided all future awards for Executive Directors will

be subject to performance conditions. If an award is granted, the annual target award limit will not normally be higher than 300% of salary (save that, in recruitment, appointment and retention situations, it could be up to 500% of salary) and maximum vesting is normally 200% of target (both measures based on the face value of shares at the date of grant). Recovery and recoupment provisions apply to all long-term incentive awards for misstatement, error or gross misconduct;

- for 2016, reflecting the special nature of the challenges following the Business Combination, the Compensation Committee rebalanced the size of annual bonus and long-term incentive awards to give greater focus to the shorter term priorities of integrating the business. This was a one off arrangement and in 2017 and 2018, the longer-term opportunity was greater than the short term;

- the Company has share ownership guidelines in place under which it recommends that executive directors hold a number of shares in the Company equivalent to 200% of base salary; and

- when determining the remuneration package for a new executive director, the Compensation Committee expects to apply the Policy set out above but may, in some circumstances, need to take account of other relevant factors, such as that individual's existing employment and their personal circumstances.

The Company's executive directors are Mr. López Madrid, who serves as Executive Chairman and Director, and receives a base salary of £555 thousand per annum, and Mr. Larrea Paguaga, who serves as Chief Executive Officer and Director, and receives a base salary of £475 thousand per annum. The salaries of Mr. López Madrid and Mr. Larrea Paguaga remained unchanged following their appointments as Executive Chairman and Director, respectively.

In relation to the Company's non-executive directors, the Policy provides, in summary, that:

- Non-executive directors are paid a basic fee. Supplementary fees are paid for additional responsibilities and activities such as membership of a main Board committee or assuming chairmanship of a committee. Travel fees may be paid to reflect additional time incurred in travelling to meetings.

- Currently, non-executive directors receive a base fee of £70 thousand per annum, with supplemental fees being payable if that non-executive director is also the senior independent director (£35,000 per annum), a member of the Audit Committee (£17,500 per annum), a member of the Compensation Committee (£15,500 per annum), a member of the Corporate Governance Committee (£12,000 per annum) or a Committee Chairman (two times membership fee). Non-executive directors receive a travel fee of either £3,500 (for intercontinental travel) or £1,500 (for continental travel) per meeting. Members of the Nominations Committee receive a fee of £1,500 for each meeting, with a maximum set at £10 thousand per annum. Where the Chair of the Nominations Committee is also an executive director he or she is paid no fee for their chairmanship. Non-executive director fee levels are reviewed periodically, with reference to time commitment, knowledge, experience and responsibilities of the role as well as market levels in comparable companies both in terms of size and sector. No maximum fee level or prescribed annual increase is set under the Policy;

- reasonable expenses incurred by the non-executive directors in carrying out their duties may be reimbursed by the Company including any personal tax payable by the non-executive director as a result of reimbursement of those expenses. The Company may also pay an allowance in lieu of expenses if it deems this appropriate;

- non-executive directors are provided with directors' and officers' liability insurance and an indemnity to the fullest extent permitted by the UK Companies Act 2006; and

- to provide alignment with shareholders, non-executive directors have voluntarily agreed to build and retain a shareholding worth twice their annual fees.

C. Board Practices

Board composition and election of Directors

As of the date of this annual report, our Board of Directors consists of eleven directors, of whom two are executive directors and nine are non-executive directors. The maximum and minimum number of directors is eleven and two respectively. Subject to the approval of the Nominations Committee, the Chief Executive Officer is nominated as a director by the Board of Directors. Of the directors, three are Grupo VM nominees, namely Javier López Madrid, Manuel Garrido y Ruano and Juan Villar Mir. The remaining non-executive directors are independent.

All directors will stand for re-election at the Company's annual general meeting on June 26, 2019. Any director not so elected or re-elected will stand down. Prior to December 31, 2019, the Board may not remove the Executive Chairman from office as a director without cause and no new executive directors may be appointed without the approval of a majority of Grupo VM nominees and a majority of independent directors.

Director independence

Under the Articles of Association, as in effect since October 26, 2017, a director is considered independent if he or she is "independent" as defined in the NASDAQ rules and, while Grupo VM and its Affiliates own 10% or more of the Company's shares, is independent from Grupo VM and its Affiliates. The Board reviewed the independence of its then directors in December 2015 and concluded that each of Messrs. Barger, Crockett, Eizenstat, Hamilton and Monzón met the independence requirements of the NASDAQ rules. Messrs. López Madrid, Garrido y Ruano and Villar Mir are GVM Nominees and are not considered to be independent. The independence of Messrs. Vareille and Alapont was confirmed by the Nominations Committee prior to their recommendation to the Board for appointment.

Certain approvals of the Board of Directors

Pursuant to the Articles of Association, as in effect since October 26, 2017, the approval of certain matters by our Board of Directors requires the approval of more than a simple majority of directors present.

So long as Grupo VM or its Affiliates owns 10% or more of our outstanding shares, any transaction, agreement or arrangement between Grupo VM or any of its Affiliates or Connected Persons (as defined in the articles of association) and the Company or any of its Affiliates (or any amendment, waiver or repeal of any such transaction, agreement or arrangement) requires the approval of a majority of independent, non-conflicted directors.

Prior to December 31, 2019 the Board may not remove the Executive Chairman from office as a director without cause and no new executive directors may be appointed without the approval of a majority of GVM Nominees and a majority of independent directors.

Committees of the Board of Directors

During the year ended December 31, 2018, our Board of Directors had four standing committees: an Audit Committee, a Compensation Committee, a Corporate Governance Committee and a Nominations Committee.

Audit Committee

During the year ended December 31, 2018, our Audit Committee consisted of four directors: Messrs. Alapont, Crockett, Hamilton (as Chair) and Vareille. Mr. Hamilton serves as its Chairman and meets the requirements as an "audit committee financial expert" under the rules of the SEC and qualifies as a financially sophisticated audit committee member as required by the NASDAQ rules relating to audit committees. Our Board has determined that each of these directors satisfies the enhanced independence requirements for audit committee members required by Rule 10A-3 under the U.S. Exchange Act, and is financially literate as that phrase is used in the additional audit committee requirements of the NASDAQ rules.

Our Audit Committee has responsibility to: (1) oversee our accounting and financial reporting processes and the audits of our financial statements; (2) monitor and make recommendations to the Board regarding the auditing and integrity of our consolidated financial statements; (3) be directly responsible for the qualification, selection, retention, independence, performance and compensation of our independent auditors, including resolution of disagreements between management and the auditors regarding financial reporting, for the purpose of preparing or issuing an audit report or performing other audit, review or attest services for us, and have the auditors report directly to the Committee; and (4) provide oversight in respect of our internal audit and accounting and financial reporting processes. The Audit Committee meets at least four times a year. Additional meetings may occur as the Audit Committee or its chair deem advisable.

Compensation Committee

During the year ended December 31, 2018 our Compensation Committee consisted of four directors: Messrs. Barger, Crockett, Alapont and Vareille. Mr. Barger serves as its Chairman. Our Board has determined that each of these directors meets the heightened independence requirements of compensation committee members under SEC rules.

Our Compensation Committee has responsibility to: (1) evaluate and recommend to the Board for approval the compensation of our directors, executive officers and key employees; (2) oversee directly or indirectly all compensation programs involving the use of our stock; (3) produce a report annually on executive compensation for inclusion in our proxy statement for our annual meeting of shareholders; (4) produce a report annually in compliance with remuneration reporting requirements (i.e., a directors' remuneration report), in each case in accordance with applicable rules and regulations; and (5) produce, review on an ongoing basis and update as needed, a directors' remuneration policy. The Compensation Committee meets with such frequency, and at such times, and places and whether in person or electronically/telephonically as it determines is necessary to carry out its duties and responsibilities, but shall meet at least four times annually.

Nominations Committee

From January 1, 2018 to May 15, 2018 our Nominations Committee consisted of three directors: Messrs. López Madrid (as Chair), Barger and Monzón. On May 16, 2018, Mr. Eizenstat was appointed to the Nominations Committee and, since that date, our Nominations Committee has consisted of four directors: Messrs. López Madrid (as Chair), Barger, Eizenstat and Monzón.

Our Nominations Committee has responsibility to review and provide guidance to the Board about the composition of the Board as follows: (a) subject to the provisions of the Articles of Association where a different arrangement may be prescribed, identifying and recommending to the Board for nomination individuals qualified to become Board members, consistent with qualification standards and other criteria approved by the Board for selecting directors; (b) reviewing and providing guidance on the independence of nominees, consistent with applicable laws, NASDAQ requirements and the Articles of Association, and monitoring and ensuring that independent non-executive directors continue to meet these applicable independence requirements; and (c) reviewing and providing guidance on other nominating issues that the Board desires to have reviewed by the Committee.

Corporate Governance Committee

During the year ended December 31, 2018, our Corporate Governance Committee consisted of four directors: Messrs. Stuart Eizenstat, Manuel Garrido y Ruano, Greger Hamilton and Javier Monzón (as Chair). On January 16, 2019, Javier Monzón stepped down from the Committee and its chairmanship and Mr Alapont was appointed in his place. Since that date, our Corporate Governance Committee has consisted of four directors: Messrs. Alapont (as Chair), Eizenstat, Garrido y Ruano and Hamilton.

Our Corporate Governance Committee has responsibility to review and provide guidance to the Board and respond to the Board's requests about governance related matters including: (a) reviewing and providing guidance on the organization of the Board and its committee structure; (b) reviewing and providing guidance on the self-evaluation procedures of the Board and its committees; (c) reviewing and providing guidance on a conflicts register; (d) reviewing and providing guidance on

the Company's code of conduct; (e) reviewing and providing guidance on the Company's insider trading policy; (f) reviewing and providing guidance on proposed changes to the Articles; and (g) considering succession planning, taking into account the challenges and opportunities facing the Company and the skills and expertise needed on the Board in the future, recommending to the Board plans for succession for both executive and non-executive directors.

Senior Independent Director

In October 2017, the Board established the role of Senior Independent Director, to provide a sounding board for the Chairman and to serve as intermediary for the other directors where necessary. Mr. Monzón served as Senior Independent Director from October 26, 2017 to January 16, 2019, when he stepped down from the role and Mr. Alapont was appointed in his place. Mr. Alapont remains our Senior Independent Director since January 16, 2019.

Corporate governance policy

In October 2017, the Board adopted a corporate governance policy ("the Corporate Governance Policy") under which, while Grupo VM has the right under the shareholders agreement in place between it and the Company to require that at least three members of the Board shall be persons proposed by it to the Nominations Committee, there shall be at least five directors on the Board who are independent within the meaning of the Company's Articles of Association. Under this policy the number of independent directors reduces as Grupo VM's rights to propose persons for nomination to the Board also reduce, it being the Board's policy that at all times, there is a majority of directors on the Board who are independent as so defined. The Corporate Governance Policy was reviewed by the Board and renewed for a period of up to eighteen months from February 2019.

Board policy

In 2015, we adopted a Board policy which provides certain practical principles relating to (i) the functioning of the Board; and (ii) the principles under which we will undertake our core management and overall supervision tasks from our London headquarters (the "Board Policy"). As set out in the Board Policy, we provide management and other services (including, but not limited to, administration, financial, commercial and technical services) to Globe, FerroAtlántica and any other subsidiaries from time to time.

D. Employees

As of December 31, 2018, 2017 and 2016, on a consolidated basis, the number of employees was 4,368, 4,049 and 4,018, respectively, excluding temporary employees. We believe our relations with our employees are good and we have not experienced any significant labor disputes or work stoppages.

The following tables show the number of our full-time employees as of December 31, 2018, 2017 and 2016 on a consolidated basis broken down based on business segment and geographical location:

	2018	2017	2016
North America	1,079	1,121	963
Spain	857	900	880
France	1,183	1,040	1,025
South Africa	568	489	718
Rest of the world	681	499	432
Total number of employees	**4,368**	**4,049**	**4,018**

A majority of employees are affiliated with labor unions. Collective bargaining agreements have been entered into in Spain, France, South Africa, the United States and Venezuela. In the past the Company has experienced union activity and strikes. For example, in 2017, there were two one-day strikes at one of our Spanish plants (Cee) without any significant impact on production volume. In France, during February 2019 there was a three day strike at the plants during salary

negotiations. See “Item 3.D.—Key Information—Risk Factors—We are subject to the risk of union disputes and work stoppages at our facilities, which could have a material adverse effect on our business.”

To improve the structure of our labor relations, a national collective agreement (“NCA”) was entered into in Spain on February 2, 2018 with four out of the five trade unions representing over 70% of our workforce there. This NCA regulates matters such as wage increases, annual working time, professional training, gender equality and disciplinary actions until December 31, 2020 and will be rolled out at the Cee, Boo, Monzón, Sabón and Madrid locations and the mines in Spain, where it will operate in conjunction with the relevant site-specific collective bargaining agreement. The salary increases set out in the NCA came into effect on execution of the relevant site-specific agreement and be applied retroactively from January 1, 2018. The NCA is a relevant labor relation framework which establishes uniformity for all the work sites and is completed with the particular matters of every single work site by means of specific CBAs at local level. The Sabón site entered into a new site-particular agreement on March 20, 2018; Boo plant on March 22, 2018; Rocas, Arcillas y Minerales, S.A. on April 13, 2018; Cuarzos Industriales S.A.U. on April 13, 2018; Hidro Nitro Española S.A. (Monzón site) on May 4, 2018; Madrid office on June 27, 2018 and Cee on October 17, 2018. All the mentioned CBAs will expire at the same time as the NCA for consistency reasons. Our research and development employees based in Sabón and employed by FerroAtlántica I+D have no specific collective bargaining agreement, being governed by that in force for the rest of the Sabón plant.

The collective bargaining agreement for Silicio Ferrosolar expired on December 31, 2017, and, as of the date of this report, the negotiations to renew it have not yet started. Until a new collective bargaining agreement is signed, the expired agreement remains effective, except for those provisions which explicitly are only valid during the period between the start and the expiry date. For example, the provisions relating to salary increases are no longer effective beyond the expiry dates.

In France, all employees at FerroPem, S.A.S. plants at Anglefort, Chateau-Feuillet, Les Clavaux, Laudun, Montricher, and Pierrefitte and the Chambéry offices are covered by the French National Collective Chemistry Agreement. This agreement has no expiration date. The “accord d’intéressement”, which is an employee incentive bonus scheme whereby an incentive bonus is distributed according to a profit-sharing formula defined in the agreement, was signed on June 7, 2016 and the “accord de participation”, which is a compulsory profit-sharing agreement under French law, was signed on December 13, 2017. In France, there is an obligatory annual negotiation with the Company Work Council to set salary increases and other relevant subjects could be treated under this negotiation, if required. In February 2019, the agreement for 2019 was concluded.

Employees at Ferroglobe Manganèse France are also covered by the French National Collective Chemistry Agreement. An accord d’intéressement had been signed at the beginning of 2015 and covered the three years from January 1, 2016. A similar agreement for the years 2018 to 2020 has been negotiated and was concluded with the trade union representatives in March 2018. Local employees also benefit from an individual bonus scheme and from the compulsory profit-sharing agreement (accord de participation) signed in 2004.

At Ferroglobe Mangan Norge AS (“FMN”), three trade unions are represented among the employees. There is a collective bargaining agreement in place with Industri Energi, the main trade union for operators, of which all operators except two individuals are members. This agreement is due for renegotiation in May 2020, with annual salary negotiations taking place as normal during May and June 2019. The remaining trade unions represented at FMN are Tekna (an engineers union), and FLT (a supervisors union).

In South Africa, during 2018 negotiations there were some wage disputes. The matters were resolved. There were some restructuring processes that occurred as part of our bargaining unit agreements which included development and adjustments within the Company.

Employees at our South African facilities work under collective bargaining agreements which will expire as follows:

South Africa – Polokwane – June 30, 2019
South Africa – Emalahleni – June 30, 2021 (a 3-year agreement has been signed)
South Africa Thaba Cheue Mining – March 30, 2019
South Africa – Timber & Charcoal – March 31, 2019

New agreements are under negotiation.

Hourly employees at the Selma, Alabama facility are covered by a collective bargaining agreement with the Industrial Division of the Communications Workers of America under a contract that will expire on April 30, 2022. Hourly employees at the Alloy, West Virginia, Niagara Falls, New York and Bridgeport, Alabama facilities are covered by collective bargaining agreements with The United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union under contracts running through March 20, 2022, July 31, 2022, and March 31, 2022, respectively. However, in October 2018, the Selma, Alabama facility issued a notice in accordance with the Worker Adjustment and Retraining Notification Act ("WARN Nottice") to idle operations. Additionally, a WARN Notice was issued at the Niagara facility in December 2018.

Union employees in Argentina work under a contract running through April 30, 2018, the terms of which will remain in place until the government of Argentina ratifies a new agreement.

Operations in Poland are not unionized.

Union employees at the Bécancour plant in Québec are covered by a Union Certification held by CEP, Local 184. The corresponding collective bargaining agreement at the Bécancour facility runs through April 30, 2021, following negotiations completed in 2017.

In China, our Yonvey plant, where operations were restarted in 2017, there is a labor union committee, supervised by the local labor union and required by it to enter into annual agreements on matters such as collective representation, collective salary negotiation and the protection of women's rights. The collective salary agreement in force at Yonvey will remain in effect until August 2019, when it will require renewal. Labor dues at Yonvey have been paid by reference to actual headcount at the site.

E. Share Ownership

The following table and accompanying footnotes show information regarding the beneficial ownership of our shares as of April 12, 2019 by:

- each named executive officer;
- each of our directors; and
- all executive officers and directors as a group.

Shares that may be acquired by an individual or group within 60 days of April 12, 2019, pursuant to the exercise of options, are deemed to be outstanding for the purpose of computing the percentage ownership of such individual or group, but are not deemed to be outstanding for the purpose of computing the percentage ownership of any other person shown in the table.

	Number of Shares Beneficially Owned	Percentage of Outstanding Shares
Directors and Executive Officers:		
Javier López Madrid	42,500	*
Pedro Larrea Paguaga	35,000	*
Phillip Murnane	—	—
José María Alapont	15,000	*
Donald G. Barger, Jr. (1)	21,862	*
Bruce L. Crockett(2)	32,226	*
Stuart E. Eizenstat (3)	14,447	*
Manuel Garrido y Ruano	870	*
Greger Hamilton	5,425	*
Javier Monzón	19,400	*
Juan Villar-Mir de Fuentes	—	—
Pierre Vareille	20,000	*
Directors and Executive Officers as a Group	**206,730**	*

* Less than one percent (1%).

(1) Includes 1,226 shares issuable upon exercise of options over ordinary shares within 60 days of April 12, 2019. The strike price for these options is $20.58 for 1,226 options granted on July 8, 2014 and expiring on July 8, 2019.

(2) Includes 26,226 shares issuable upon exercise of options over ordinary shares within 60 days of April 12, 2019. The strike price for these options is $20.58 for 1,226 options granted on July 8, 2014 and expiring on July 8, 2019 and $16.70 for 25,000 options granted on February 27, 2015 and expiring on February 27, 2020.

(3) Includes 1,226 shares issuable upon exercise of options over ordinary shares within 60 days of April 12, 2019. The strike price for these options is $20.58 for 1,226 options granted on July 8, 2014 and expiring on July 8, 2019.

The options referred to in notes (1) to (3) above were issued under the Globe 2006 Employee, Director and Consultant Stock Plan and were adopted by the Company under the Business Combination. In 2016, the Company adopted the Ferroglobe PLC Equity Incentive Plan (EIP) under which awards may be made to selected employees of the Company. Awards under the EIP have been made to members of senior management, including to Mr. López Madrid and Mr. Larrea Paguaga on the terms set out in "– Compensation" above.

ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

A. Major Shareholders

The following table sets forth certain information regarding beneficial ownership of shares by each stockholder known by us to be the beneficial owner of more than 5% of our shares.

Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to the securities. Percentage of ownership is based on 169,122,682 shares outstanding (excluding those held in Treasury) on April 12, 2019.

	Number of Shares Beneficially Owned	Percentage of Outstanding Shares
Grupo Villar Mir, S.A.U.	91,125,521	53.9 %
Adage Capital Partners. L.P.	13,341,392	7.9 %

As reported on Schedule 13G, filed on February 19, 2016, Adage Capital Partners, L.P., Adage Capital Partners GP, L.L.C. and Adage Capital Advisors, L.L.C. (together, the “Adage Entities”) beneficially owned 8,920,075 shares of the Company, constituting 5.2% of the then outstanding shares. As reported on Schedule 13G/A, filed on February 9, 2017, the Adage Entities beneficially owned 7,687,487 shares of the Company, constituting 4.5% of the then outstanding shares. As reported on Schedule 13G, filed on April 23, 2018, the Adage Entities beneficially owned 8,928,342 shares of the Company, constituting 5.2% of the then outstanding shares. As reported on Schedule 13G/A, filed on 13 February 2019, the Adage Entities beneficially owned 13,341,392 shares of the Company, constituting 7.9% of the then outstanding shares.

As reported on Schedule 13G, filed on February 16, 2016, Alan Kestenbaum beneficially owned 8,840,938 shares of the Company, constituting 5.1% of the then outstanding shares. As reported on Schedule 13G/A, filed on February 14, 2017, Alan Kestenbaum beneficially owned 6,502,363 shares of the Company, constituting 3.8% of the then outstanding shares.

The Company’s shareholders do not have different voting rights.

As of April 12, 2019, Ferroglobe had four record holders in the United States, holding all of our outstanding shares.

B. Related Party Transactions

The following includes a summary of material transactions with any: (i) enterprises that directly or indirectly through one or more intermediaries, control or are controlled by, or are under common control with us, (ii) associates, (iii) individuals owning, directly or indirectly, an interest in the voting power of the Company, that gives them significant influence over us, and close members of any such individual’s family, (iv) key management personnel, including directors and senior management of such companies and close members of such individuals’ families or (v) enterprises in which a substantial interest in the voting power is owned, directly or indirectly, by any person described in (iii) or (iv) or over which such person is able to exercise significant influence.

Grupo VM shareholder agreement

On November 21, 2017, we entered into an amended and restated shareholder agreement with Grupo VM (the “Grupo VM Shareholder Agreement”), as amended on January 23, 2018, that contains various rights and obligations with respect to Grupo VM’s Ordinary Shares, including in relation to the appointment of directors and dealings in the Company’s shares. It sets out a maximum number of directors (the “Maximum Number”) designated by Grupo VM (each, a “Grupo VM Director”) dependent on the percentage of share capital in the Company held by Grupo VM. The Maximum Number is three, if Grupo VM’s percentage of the Company’s shares is greater than 25%; two if the percentage is greater than 15% but less than 25%; and one if the percentage is greater than 10% but less than 15%. As at the date of the Grupo VM Shareholder Agreement, the Board of Directors of the Company has three Grupo VM Directors.

Under the Grupo VM Shareholder Agreement, Grupo VM has the right to submit the names of one or more director candidates (a "Grupo VM Nominee") to the Nominations Committee for consideration to be nominated or appointed as a director as long as it holds 10% or more of Company's shares. If the Nominations Committee does not recommend a Grupo VM Nominee for nomination or appointment or if the requisite approval of the Board of Directors is not obtained in accordance with the Articles, Grupo VM shall, in good faith, and as promptly as possible but in all cases within thirty days, submit the names of one or more additional (but not the same) Grupo VM Nominees for approval. Grupo VM shall continue to submit the names of additional (but not the same) Grupo VM Nominees until such time as the favorable recommendation of the Nominations Committee and requisite approval of the Board of Directors are obtained. On December 23, 2015, Grupo VM designated Javier López Madrid to serve as the Executive Vice-Chairman of the Board in connection with the closing of the Business Combination. Upon the resignation of Alan Kestenbaum as Executive Chairman of the Board, Mr. López Madrid was appointed as Executive Chairman of the Board effective December 31, 2016. Mr. López Madrid is also the Chairman of the Nominations Committee.

The Board of Directors are prohibited from filling a vacancy created by the death, resignation, removal or failure to win re-election of a Grupo VM Director other than with a Grupo VM Nominee. Grupo VM shall have the right to submit a Grupo VM Nominee for appointment to fill a casual vacancy only if the casual vacancy was created by the death, resignation, removal or failure to win re-election of a Grupo VM Director. Grupo VM does not have the right to submit a Grupo VM Nominee for appointment to fill a casual vacancy if the number of Grupo VM Directors equals or exceeds the Maximum Number. In connection with any meeting of shareholders to elect directors, the number of Grupo VM Nominees in the slate of nominees recommended by the Board of Directors must not exceed the Maximum Number.

Subject to certain exceptions, Grupo VM has preemptive rights to subscribe for up to its proportionate share of any shares issued in connection with any primary offerings. The Grupo VM Shareholder Agreement (i) also restricts the ability of Grupo VM and its affiliates to acquire additional shares and (ii) contains a standstill provision that limits certain proposals and other actions that can be taken by Grupo VM or its affiliates with respect to the Company, in each case, subject to certain exceptions, including prior Board approval. The Grupo VM Shareholder Agreement also restricts the manner by which, and persons to whom, Grupo VM or its affiliates may transfer shares. On February 3, 2016, during an in person meeting of our Board, the Board approved the purchase of up to 1% of the shares by Javier López Madrid in the open market pursuant to Section 5.01(b)(vi) of the Grupo VM Shareholder Agreement.

The Grupo VM Shareholder Agreement will terminate on the first date on which Grupo VM and its affiliates hold less than 10% of the outstanding Shares.

AK shareholder agreement

On December 23, 2015, we entered into a separate shareholder agreement with Mr. Kestenbaum and certain of his affiliates (the "AK Shareholder Agreement") that contained various rights and obligations with respect to their shares. Pursuant to the AK Shareholder Agreement, Mr. Kestenbaum was appointed as Executive Chairman of the Board on December 23, 2015 in connection with the closing of the Business Combination. Mr. Kestenbaum resigned as Executive Chairman of the Ferroglobe Board of Directors, effective December 31, 2016.

Under the AK Shareholder Agreement, except with respect to a contested election for directors (other than Grupo VM director nominees), that occurs after the fifth anniversary of the closing of the Business Combination, so long as Mr. Kestenbaum and his affiliates own at least 1% of the total issued and outstanding shares, Mr. Kestenbaum and his affiliates are obliged to vote their shares to cause the election or reelection, as applicable, of the Grupo VM Nominees and the other persons nominated by the Board for election of directors. In the case of a contested election for directors that occurs from and after the fifth anniversary of the closing of the Business Combination, Mr. Kestenbaum and his affiliates may vote their shares with respect to the election of directors (other than the Grupo VM Nominees) in any manner with respect to such contested election for directors. Mr. Kestenbaum and his affiliates must always vote in favor of the Grupo VM Nominees.

The AK Shareholder Agreement also provides that Mr. Kestenbaum will enter into a "gain recognition agreement" with the IRS if he is treated as a "five-percent transferee shareholder" of the Company following the Business Combination,

and will enter into subsequent “gain recognition agreements” with respect to actions or transactions taken by the Company or its affiliates, as required under applicable law.

The AK Shareholder Agreement will terminate upon the aggregate total issued and outstanding shares owned by Mr. Kestenbaum and his affiliates falling below 1%; provided that the tax covenants and indemnification obligation will survive until such time as set forth in the AK Shareholder Agreement.

Registration rights agreement

On December 23, 2015, we entered into a registration rights agreement with Grupo VM and Mr. Kestenbaum pursuant to which we granted certain registration rights to each of Grupo VM and Mr. Kestenbaum.

Agreements with executive officers and key employees

We have entered into agreements with our executive officers and key employees. See “Item 6.A.—Directors, Senior Management and Employees—Directors, Senior Management and Employees.”

VM Energía and Energya VM

VM Energía, a Spanish company wholly-owned by Grupo VM, provided strategic advisory services on the day-to-day operations of FerroAtlántica Group’s hydroelectric plants under two contracts entered into in April 2013 with each of FerroAtlántica and Hidro Nitro Española. VM Energía’s services under these contracts included the provision of advisory services in relation to any economic, technical and administrative aspect of FerroAtlántica Group’s energy operations, the preparation of periodic reports assessing the main risks associated with the energy market and analyzing the performance of each hydroelectric power plant, the provision of advisory services in connection with changes in the applicable energy regulatory framework and related assistance in dealing with the competent energy authorities. For these services FerroAtlántica and Hidro Nitro Española paid VM Energía a monthly remuneration calculated as a percentage of the revenues made each month by FerroAtlántica Group’s hydroelectric power plants. For the fiscal years ended December 31, 2017 and 2016, FerroAtlántica and Hidro Nitro Española made transactions under these contracts to VM Energía of $2,435 thousand and $2,880 thousand, respectively. The contracts had five-year terms and expired on January 1, 2018. An agreement has been entered into between FerroAtlántica and VM Energía as of February 2018 for the provision of technical, economic and regulatory advisory services in respect of the Galician hydro-power assets for a twelve month term, renewing annually for up to 36 months. For the fiscal year ended December 31, 2018, FerroAtlántica made transactions under these contracts to VM Energía of $534 thousand. VM Energía is not legally deemed to be a direct or indirect operator of the hydroelectric power plants owned by FerroAtlántica in spite of the services provided to FerroAtlántica under these strategic advisory services agreements. Hidro Nitro Española was sold and is no longer a direct or indirect subsidiary of the Company with effect from December 31, 2018.

Under an agreement made on March 10, 2014 between FerroAtlántica and VM Energía, VM Energía provided FerroAtlántica with advisory services in connection with the construction in Galicia, Spain of hydro-power plants. The construction of these assets was completed in March 2018 and VM Energía continued to provide services during a two-year warranty period running into 2020. For the fiscal years ended December 31, 2018, 2017 and 2016, FerroAtlántica’s obligations to make payments to VM Enérgia under this agreement amounted to $129 thousand, $265 thousand and $221 thousand, respectively. This agreement was terminated in January 2019.

Under contracts entered into with FerroAtlántica on June 22, 2010 and December 29, 2010, and with Hidro Nitro Española on December 27, 2012 (assigned to FerroAtlántica del Cinca when Hidro Nitro Española was sold in December 2018), VM Energía supplies the energy needs of the Boo, Sabón and Monzón electrometallurgy facilities, as a broker for FerroAtlántica and Hidro Nitro Española (now FerroAtlántica del Cinca) in the wholesale power market. The contracts allow FerroAtlántica and Hidro Nitro Española (now FerroAtlántica del Cinca) to buy energy from the grid at market conditions without incurring costs normally associated with operating in the complex wholesale power market, as well as to apply for fixed price arrangements in advance from VM Energía, based on the energy markets for the power, period and profile applied for. The contracts have a term of one year, which can be extended by the mutual consent of the parties to

the contract. The contracts were renewed in January 2019 and will expire on December 31, 2019, unless extended. FerroAtlántica pays VM Energía a service charge in addition to paying for the cost of energy purchase from the market. For the fiscal years ended December 31, 2018, 2017 and 2016, FerroAtlántica's and Hidro Nitro Española's and (since July 2018) FerroAtlantica del Cinca's obligations to make payments to VM Enérgia under their respective agreements for the purchase of energy plus the service charge amounted to $99,939 thousand, $94,049 thousand and $69,083 thousand, respectively. These contracts are similar to contracts FerroAtlántica signs with other third-party brokers. Deposit guarantees of $1,129 thousand on each were provided to VM Energía in respect of the provision of energy to the Boo and Sabon facilities under agreements entered into on October 20, 2010 in the case of Boo and January 19, 2011 in the case of Sabon. These deposit guarantee agreements terminated on December 31, 2018. FerroAtlántica has also entered into an energy swap agreement with Enérgya VM Generación, S.L. ("Enérgya VM"), a Spanish company wholly-owned by VM Energía, in connection with the energy supply agreements for the plants, dated January 18, 2018. A similar agreement dated January 25, 2016 expired in 2016.

Under contracts entered into with Rocas, Arcillas y Minerales SA ("RAMSA") on December 3, 2010 and with Cuarzos Industriales SA ("CISA") on April 27, 2012, VM Energía supplied the energy needs of the mining facilities operated by those companies, as a broker for RAMSA and CISA in the wholesale power market. RAMSA and CISA are both subsidiaries of the Company operating in the mining sector. For the fiscal years ended December 31, 2018, 2017 and 2016, RAMSA's obligations to make payments to VM Enérgia under this agreement amounted to $526 thousand, $371 thousand and $297 thousand, respectively; and CISA's obligations to make payments to VM Enérgia under this agreement amounted to $277 thousand, $256 thousand and $227 thousand, respectively.

Additionally, for the fiscal year ended December 31, 2018 and 2017, Enérgya VM invoiced other subsidiaries of FerroAtlántica for a total amount of $80 thousand and $32 thousand, respectively. No additional sums were invoiced in the fiscal year to December 31, 2016.

Under contracts dated June 30, 2012, Enérgya VM arranged for the sale of energy produced by FerroAtlántica and Hidro Nitro Española's hydroelectric plants. Pursuant to the contracts, Enérgya VM provided energy market brokerage services and represented FerroAtlántica subsidiaries before the applicable energy market operator, the system operator and the Spanish National Markets and Competition Commission. FerroAtlántica and Hidro Nitro Española paid Enérgya VM a monthly remuneration calculated as a percentage of the sales made each month by their hydroelectric power plants. These contracts came to an end in 2017 and have not been renewed. In January 2018, control and representation contracts were entered into between FerroAtlántica, Hidro Nitro Española and Enérgya VM, under which Energya VM represents FerroAtlántica or Hidro Nitro Española (as appropriate) in delivering energy from the relevant FerroAtlántica's hydro plants to the energy markets in the period to 2020. For the fiscal years ended December 31, 2018, 2017 and 2016, Hidro Nitro Española invoiced Enérgya VM for the sales made by its hydroelectric plant for a total amount of $11,874 thousand, $7,419 thousand and $5,154 thousand, respectively and FerroAtlántica invoiced to Enérgya VM for the sales made by its hydroelectric plant for a total amount of $31,898 thousand, $9,803 thousand and $15,398 thousand, respectively.

For the fiscal years ended December 31, 2018, 2017 and 2016, Hidro Nitro Española's obligations to make payments to Enérgya VM under these agreements amounted to $46 thousand, $111 thousand and $110 thousand, respectively and FerroAtlántica's obligations to make payments to Enérgya VM under these agreements amounted to $224 thousand, $114 thousand and $391 thousand, respectively. Following the disposal of Hidro Nitro Española on 31 December 2018, the arrangements between Hidro Nitro Española and Energya VM in relation to the sale of energy services from or to the hydro plants owned by Hidro Nitro Española are no longer related party transactions.

Under an agreement dated May 29, 2018 between FerroAtlántica and Enérgya VM, Enérgya VM supplies electricity for auxiliary services to FerroAtlántica's hydropower plants in Galicia, Spain. For the fiscal year ended December 31, 2018, FerroAtlántica's obligations to make payments to Energya VM under this agreement amounted to $43 thousand.

Additionally, for the fiscal years ended December 31, 2018, 2017 and 2016, Enérgya VM invoiced FerroAtlántica for energy supplies to auxiliary facilities for a total amount of $42 thousand, $8 thousand and $7 thousand, respectively under contracts entered into in 2014.

Espacio Information Technology, S.A.

Espacio Information Technology, S.A. ("Espacio I.T."), a Spanish company wholly-owned by Grupo VM, provides information technology and data processing services to Ferroglobe PLC and certain FerroAtlántica subsidiaries: FerroAtlántica, FerroAtlántica de Mexico, Silicon Smelters (Pty), Ltd. and FerroPem, S.A.S. pursuant to several contracts.

Under a contract entered into on January 1, 2004, Espacio I.T. provides FerroAtlántica with information processing, data management, data security, communications, systems control and customer support services. The contract has a one-year term, subject to automatic yearly renewal, unless terminated with notice provided three months prior to the scheduled renewal. The base yearly amount due under the contract for these services is $641 thousand, exclusive of VAT and subject to inflation adjustment. For the fiscal years ended December 31, 2018, 2017 and 2016, FerroAtlántica's obligations to make payments to Espacio I.T. under this agreement amounted to $954 thousand, $889 thousand and $680 thousand, respectively.

Under a contract entered into on January 1, 2006, Espacio I.T. provides FerroPem, S.A.S. with information processing, data management, data security, communications, systems control and customer support services. The contract has a one-year term, subject to automatic yearly renewal, unless terminated with notice provided three months prior to the scheduled renewal. The base yearly amount due under the contract for these services is $826 thousand, exclusive of VAT and subject to inflation adjustment. For the fiscal years ended December 31, 2018, 2017 and 2016, FerroPem, S.A.S. made obligations to make payments to Espacio I.T. under this agreement amounted to $960 thousand, $911 thousand and $936 thousand, respectively.

Under a contract entered into on June 26, 2014, Espacio I.T. provides FerroAtlántica de Mexico with information processing, data management, data security, communications, systems control and customer support services. The contract has a two-year term, subject to automatic renewal every two years, unless terminated with notice six months prior to the scheduled renewal. The base yearly amount due under the contract for these services is $20 thousand, exclusive of VAT and subject to inflation adjustment and adjustment based on the level of production of the previous year. For the fiscal years ended December 31, 2018, 2017 and 2016, FerroAtlántica de Mexico's obligations to make payments to Espacio I.T. under this agreement amounted to $20 thousand, $19 thousand and $18 thousand, respectively.

Under a contract entered into on January 1, 2009, Espacio I.T. provides Silicon Smelters (Pty), Ltd. with services including the maintenance and monitoring of the company's network, servers, applications, and user workstations, as well as standard software licenses. The contract has a one-year term, subject to automatic yearly renewal, unless terminated with notice three months prior to the scheduled renewal. The base yearly amount due under the contact is $266 thousand, subject to inflation adjustment. For the fiscal years ended December 31, 2018, 2017 and 2016, Silicon Smelters (Pty), Ltd.'s obligations to make payments to Espacio I.T. under this agreement amounted to $334 thousand, $295 thousand and $262 thousand, respectively.

Under a contract entered into on May 2, 2016, Espacio I.T. provides the Company with services including the maintenance and monitoring of its network, servers, applications, and user workstations, as well as standard software licenses at Quebec Silicon. The contract has a one-year term, subject to automatic yearly renewal, unless terminated with notice three months prior to the scheduled renewal. The base yearly amount due under the contract is $148 thousand, subject to inflation adjustment. For the fiscal years ended December 31, 2018 and 2017, payments made under this contract to Espacio I.T. were $144 thousand and $113 thousand, respectively.

Espacio I.T. also provides development services to FerroAtlántica under a contract dated July 21, 2017 for enhancements to Gesindus, FerroAtlántica's ERP system, and hosting services in connection with the company's document management system under a contract dated February 22, 2017, both on an ongoing basis. FerroAtlántica had transactions with Espacio I.T. under the former contract for the Gesindus development services for the fiscal years ended December 31, 2018 and

2017 of $58 thousand and $131 thousand, respectively, and under the latter contract for the hosting services for the fiscal years ended December 31, 2018 and 2017 of $133 thousand and $205 thousand, respectively.

Under a contract dated November 23, 2015 Espacio I.T. provided development services to FerroAtlántica for separate enhancements to Gesindus. For the fiscal years ended December 31, 2017 and 2016, FerroAtlántica paid Espacio I.T. $182 and $531 thousand, respectively, for these services which were terminated in 2017. Since September 2016, Espacio I.T. has procured for FerroAtlántica and managed its individual user and server licenses from Microsoft, on preferential terms and without charging any commission or mark-up in cost. There is no contract currently in place in relation to these arrangements and the amounts invoiced in connection with this arrangement in the fiscal years ended December 31, 2018, 2017 and 2016 are $1,017 thousand, $326 thousand and $320 thousand, respectively. Espacio I.T. also provides FerroAtlántica with IT outsourcing services in connection with the Mangshi facility in China and provided Hidro Nitro Española with IT services, for neither of which is there a formal contract in place. The amounts invoiced in connection with these services for the fiscal years ended December 31, 2018, 2017 and 2016 were $58 thousand, $88 thousand and $171 thousand, respectively paid by FerroAtlántica and $232 thousand, $224 thousand, and $224 thousand, respectively paid by Hidro Nitro Española (or in the case of 2018, by FerroAtlántica del Cinca).

For the fiscal years ended December 31, 2018, 2017 and 2016, Espacio I.T. and other subsidiaries of Grupo VM involved in the provision of IT services invoiced FerroAtlántica and other subsidiaries of FerroAtlántica and Ferroglobe PLC in a total amount of $302 thousand, $534 thousand and $1,505 thousand, respectively.

In April 2016, the Ferroglobe Board approved a proposal to obtain certain information technology services from Espacio I.T., for a minimum term of five years, at an annual base payment of $360 thousand and requiring an initial investment of $1.7 million during 2016. While the project to which these services relate may proceed at a later date, the timeline for the procurement of these services has not been established and the investment not yet been made. No payments have been made to Espacio I.T. during 2018 in relation to these proposed arrangements.

In June 2018, FerroAtlántica signed a contract with Espacio I.T. for the development of a new Gesindus environment for its new subsidiary, FerroAtlántica del Cinca. The amounts invoiced in connection with this arrangement in fiscal year ended December 31, 2018 were $52 thousand.

Other agreements with Grupo VM

Under the terms of a loan agreement entered into on 24 July 2015 between FerroAtlántica and Inmobiliaria Espacio, S.A. (“IESA”), the ultimate parent of Grupo VM, FerroAtlántica extended to IESA a credit line for treasury purposes of up to $20 million, of which $2.9 million (the “Loan”) remains outstanding. The credit line runs year on year for a maximum period of 10 years and amounts outstanding under it (including the Loan) bear interest annually at the rate equal to the EURIBOR three month rate plus 2.75 percentage points. The availability of the credit line may be cancelled at the end of any year or at any time by IESA.

In 2017, FerroAtlántica received the payment of $6.3 million in discharge of the consideration due from Grupo VM in respect of Grupo VM’s purchase of 2,497 shares in Alloys International Limited, a former subsidiary of FerroAtlántica, under and in accordance with the terms of a share sale and purchase agreement entered into June 30, 2016.

Calatrava RE, a Luxembourg affiliate of Grupo VM, is a reinsurer of the Company’s global marine and property insurance programs. The property and marine cargo insurances are placed with Mapfre Global Risks S.A. with whom the Company contracts for the provision of this insurance. In the period to April 2018, Calatrava RE was a reinsurer of the Company’s third party liability insurance, arranged through QBE, with whom the Company contracted for the provision of this insurance. In April 2018, the Company moved to another insurer for its third party liability cover globally, which ended Calatrava RE’s participation in this program. There are no contracts directly in place directly between the Company and Calatrava RE.

On April 2, 2012 FerroAtlántica entered into a lease agreement with Torre Espacio Castellano S.A (“Torres Espacio”), then a Grupo VM company, of the office premises occupied by FerroAtlántica on the 45th floor of the Torre Espacio

building in Madrid. This lease runs until 2023 and the rent payable under it is $507 thousand per annum. On August 9, 2007, FerroAtlántica entered into a lease agreement with Torre Espacio of the office premises on the 49th floor of the Torre Espacio building in Madrid and parking facilities occupied or used by FerroAtlántica there. This lease runs until 2023 and the rent payable under it is $1,056 thousand per annum. The whole of Grupo VM's interest in Torre Espacio Castellano S.A was sold to a third party in 2015. Torres Espacio Gestión SLU, a wholly owned subsidiary of Grupo VM, manages the premises which are the subject of the leases on behalf of Torres Espacio, including collecting rents and other payments under the terms of the leases from FerroAtlántica on behalf of Torres Espacio.

Aurinka and the Solar JV

Javier López Madrid, a current member of the Board currently owns approximately 100% of the outstanding share capital of Financiera Siacapital which, in turn, holds a 31.33% interest in Aurinka International, S.L. ("Aurinka Int") and a 31.33% interest in Blue Power. Blue Power is a party to the Solar joint venture entered into with Aurinka Photovoltaic Group, S.L. ("Aurinka PV"), which is almost 100% owned by Aurinka Value, S.L., a company which also owns a 31.66% interest in Aurinka Int. Blue Power owns certain intellectual property contributed to the joint venture and provides certain technology consulting services to it, as summarized below. The remaining equity interests in Blue Power and Aurinka Value, S.L. are owned by third party outside investors.

In 2016, FerroAtlántica entered into a project with Aurinka PV for a feasibility study and basic engineering for a UMG solar silicon manufacturing plant. Purchases under this project were approximately $3.4 million for 2016.

On December 20, 2016, FerroAtlántica and its wholly owned subsidiaries, FerroAtlántica, S.A., and Silicio Ferrosolar, S.L.U. ("SFS"), entered into the Solar JV Agreement with Blue Power and Aurinka providing for the formation and operation of a joint venture with the purpose of producing UMG solar silicon. The entry into the joint venture pursuant to the Solar JV Agreement was subject to certain conditions precedent, including the satisfactory completion of an *ex-ante* verification procedure in relation to the ability of the technology to be contributed to the joint venture by Blue Power to meet certain technical and cost parameters and the authorization of the joint venture by Ferroglobe PLC, Blue Power and Aurinka PV's management bodies. All these conditions precedent were met during 2017 and the Solar JV Agreement is now fully binding.

Under the Solar JV Agreement, FerroAtlántica indirectly owns 75% of the operating company formed as part of the joint venture, ("OpCo"), which owns certain assets comprising, among others, constructions at Sabón and a UMG solar silicon plant at Puertollano, Spain. SFS also owns 51% of the company formed as part of the joint venture to hold certain intellectual property rights and know-how contributed by Blue Power and SFS, which licenses such intellectual property rights and know-how to OpCo. Pursuant to the Solar JV Agreement, FerroAtlántica and other subsidiaries have incurred or will incur capital expenditure, subject to the approval of the joint venture board, in connection with the joint venture of up to a maximum of $133,000 thousand over an initial phase of up to 2 years. During the fiscal years ended December 31, 2018 and 2017, FerroAtlántica and other subsidiaries paid Aurinka PV $4,252 thousand and $3,611 thousand, respectively, in connection with the project. Further investment in the joint venture will be determined as the joint venture progresses. In connection with the Solar JV Agreement, FerroAtlántica obtained a loan of approximately $50,000 thousand ("the REINDUS Loan") from the Spanish Ministry of Industry and Energy ("the Ministry") for the purpose of building and operating the UMG solar silicon plant. In November 2018, FerroAtlántica agreed to transfer to OpCo certain assets which had been acquired with the proceeds of the REINDUS Loan and used exclusively by OpCo in connection with the joint venture in consideration of OpCo assuming liability for the REINDUS Loan. The request for this novation was formally submitted to the Ministry in November 2018. On September 25, 2017, OpCo entered into an agreement with Caiz Salceda SLU ("Salceda"), a company ultimately owned by members of the Villar Mir family (who are related to Javier Lopez Madrid by marriage), under which Salceda agrees to construct on its land and lease to the OpCo and to operate and maintain for a term of 25 years a pilot plant for power generation from photovoltaic panels produced with UMG solar silicon, in return for ownership of all power generated at the plant. On June 13, 2016, SFS entered into a loan agreement with Blue Power under which SFS advanced a principal sum of over $9,000 thousand to Blue Power in connection with the project. As at December 31, 2016 the amount outstanding under the loan agreement was $9,845 thousand. On February 24, 2017, the loan was novated to OpCo as part of a capital injection by Blue Power to OpCo.

C. Interests of Experts and Counsel

Not applicable.

ITEM 8. FINANCIAL INFORMATION

A. Consolidated Statements and Other Financial Information

We have included the Consolidated Financial Statements as part of this annual report. See “Item 18.—Financial Statements.”

Legal proceedings

In the ordinary course of our business, Ferroglobe is subject to lawsuits, investigations, claims and proceedings, including, but not limited to, contractual disputes and employment, environmental, health and safety matters. Although we cannot predict with certainty the ultimate resolution of lawsuits, investigations, claims and proceedings, we do not believe any currently-pending legal proceeding to which Ferroglobe is a party will have a material adverse effect on our business, results of operations, or financial condition.

Putative Investor Class Actions

We understand that, on January 22, 2019, a claimed shareholder plaintiff named Lance Treankler filed a putative class action complaint against Ferroglobe PLC, CEO Pedro Larrea and CFO Phillip Murnane in the U.S. District Court for Southern District of New York in Manhattan, seeking money damages for alleged violations of U.S. securities laws. Plaintiff alleges, inter alia, that certain of the Company’s public disclosures prior to its November 26, 2018 third quarter earnings press release were materially false or misleading when made and failed to disclose material adverse facts about the Company’s business, operations, and prospects. We further understand that, on March 19, 2019, another claimed shareholder plaintiff, Jam-Wood Holdings LLC, filed a substantially identical complaint in the same court. Neither plaintiff has effected service of process, such that no response from the defendants is yet due. The Company and the individual defendants believe these plaintiffs’ allegations are of no merit and intend to defend themselves vigorously, if and when the plaintiffs effect service of process, including by moving to dismiss the subject complaints at the appropriate time.

Matters pertaining to Joint Ventures

In March 2017, we received a demand for mediation from our North American joint venture partner regarding a dispute in relation to coal supplied by our subsidiary, Alden, to our North American joint ventures. In 2018, the parties resolved the matter pursuant to a confidential settlement.

Asbestos-related claims

Certain employees of FerroPem, S.A.S., then known as Pechiney Electrometallurgie, S.A. (“PEM”), may have been exposed to asbestos at its plants in France in the decades prior to FerroAtlántica Group’s purchase of that business in December 2004. During the period in question, PEM was wholly-owned by Pechiney Bâtiments, S.A., which had certain indemnification obligations to FerroAtlántica pursuant to the 2004 Share Sale and Purchase Agreement under which our FerroAtlántica acquired PEM. As of the date of this annual report, approximately 93 such employees have “declared” asbestos-related injury to the French social security agencies, based either on the occurrence of work accidents (“*accident du travail*”) or on administrative recognition of an occupational disease (“*maladie professionelle*”). Of these, 61 cases are closed, approximately 32 are pending before the French social security agencies or courts and, of the latter, 13 include assertions of “inexcusable negligence” (“*faute inexcusable*”) which, if upheld, may lead to material liability on the part of FerroPem. Other employees may declare further asbestos-related injuries in the future, and may likewise assert inexcusable negligence. In 2016, FerroPem initiated an arbitration process seeking to enforce indemnification provisions in the Share Sale and Purchase Agreement against Río Tinto France as successor to Pechiney Bâtiments, S.A. with respect

to pending asbestos claims. On July 11, 2017, however, the claims in arbitration were denied in their entirety on various grounds, including that the claims were untimely, and Ferropem is without further recourse against Río Tinto. Litigation against, and material liability on the part of, FerroPem will not necessarily arise in each case, and to date a majority of such declared injuries have been minor and have not led to significant liability on Ferropem's part. Whether material liability will arise is determined case-by-case, often over a period of years, depending on, *inter alia*, the evolution of the claimant's asbestos-related condition, the possibility that the claimant was exposed while working for other employers and, where asserted, the claimant's ability to prove inexcusable negligence on PEM's part. Because of these and other uncertainties, no reliable estimate can be made at this time of FerroPem's eventual liability in these matters, with exception of three grave cases that were litigated through the appeal process and in which claimants' assertions of inexcusable negligence were upheld against FerroPem. Liabilities in respect to asbestos-related claims have been recorded at December 31, 2018 at an estimated amount of $1,775 thousand.

Environmental matters

On August 31, 2016, the U.S. Department of Justice (the "DOJ") requested a meeting with GMI to discuss potential resolution of a July 1, 2015 NOV/FOV that GMI received from the U.S. Environmental Protection Agency (the "EPA") alleging certain violations of the Prevention of Significant Deterioration ("PSD") and New Source Performance Standards provisions of the Clean Air Act associated with a 2013 project performed at GMI's Beverly facility. Specifically, the July 2015 NOV/FOV alleges violations of the facility's existing operating and construction permits, including allegations related to opacity emissions, sulfur dioxide and particulate matter emissions, and failure to keep necessary records and properly monitor certain equipment. On October 27, 2016, GMI met with the DOJ and the EPA to discuss the alleged violations, GMI's preliminary assessment of those alleged violations, and its possible defenses to the NOV/FOV. As a result of that meeting, GMI has agreed to the government's request that GMI prepare an assessment of Best Available Control Technologies ("BACT") that could be applicable to the facility under the federal PSD program, to conduct a ventilation study to assess emissions at the facility, and to continue discussions with the government regarding an appropriate resolution of the NOV/FOV by consent. In February 2017, the EPA formally issued a request under Section 114 of the Clean Air Act, requiring GMI to conduct the ventilation study that GMI had previously agreed to conduct. On January 4, 2017, GMI received a second NOV/FOV dated December 6, 2016, arising from the same facts as the July 2015 NOV/FOV and subsequent EPA inspections. The second NOV/FOV alleges opacity exceedances at certain units, failure to prevent the release of particulate emissions through the use of furnace hoods at a certain unit, and the failure to install Reasonably Available Control Measures (as defined) at certain emission units at the Beverly facility. As part of the on-going consent process to resolve the NOVs/FOVs, the government could demand that GMI install additional pollution control equipment or implement other measures to reduce emissions from the facility, as well as pay a civil penalty. GMI's environmental consultants have completed the ventilation study and a Ventilation Evaluation Report documenting the same, which GMI provided to EPA on October 6, 2017. Since that time, GMI and the government have continued negotiations regarding potential resolution of the NOV/FOVs, which negotiations are ongoing. At this time, however, GMI does not know the extent of potential injunctive relief or the amount of a civil penalty a negotiated resolution of this matter may entail. Should the DOJ and GMI be unable to reach a negotiated resolution of the NOVs/FOVs, the government could institute formal legal proceedings for injunctive relief and civil penalties. The statutory maximum penalty is $93,750 per day per violation, from April 2013 to the present.

Matters pertaining to Mr. López Madrid

The legal proceedings described below are pending in Spain in which Mr. López Madrid has been called as "investigado"[1] by a Spanish criminal investigative court. At the conclusion of criminal investigatory proceedings, the relevant Spanish court may determine to withdraw the investigation without issuing formal charges, excuse certain parties previously called "investigado" on the basis that there is insufficient evidence to issue formal charges, or issue formal charges or indictments against specific named parties.

On October 25, 2012, Mr. López Madrid was called as "investigado" along with several other directors of Bankia, S.A. and Banco Financiero y de Ahorros, S.A., by a Spanish court investigating whether they were involved in the misrepresentation of the financial condition of Bankia, S.A. in connection with its initial public offering. The public prosecutor did not file formal charges against Mr. López Madrid and asked the Court for the termination of the proceedings regarding Mr. López Madrid. However, in Spanish criminal proceedings private parties (such as political parties, unions

or private investors) can also accuse "investigados" in a proceeding and, in the case at hand, some of the private accusing parties did include Mr. López Madrid in their accusation briefs and therefore Mr. López Madrid is deemed an accused party. As publicly announced, Mr. López Madrid and his family were themselves damaged as a result of the initial public offering as they invested in shares and lost approximately 20 million euros. Mr. López Madrid has advised us that he vehemently denies any allegations against him in connection with this matter and intends to defend himself vigorously.

As part of the same proceeding, Mr. López Madrid was called again on January 28, 2015, as "investigado" in the investigation of improper use of credit cards for personal expenditures by several former directors and senior executives of Bankia, S.A. and its predecessor, Caja Madrid. Mr. López Madrid was convicted as an accessory in this matter with a minimum sanction that he satisfied on February 28, 2019 with the payment of a fine of €7,160. The case is now closed.

On June 10, 2014, a physician (the "Physician"), who had previously treated Mr. López Madrid's family, was called as "investigado" in connection with criminal allegations that the Physician had harassed Mr. López Madrid, his family and his associates through anonymous phone calls and messages making false accusations and serious threats, which were received daily over a period of several months. On September 24, 2014, Mr. López Madrid" was called as "investigado" by a Spanish investigative court in connection with criminal allegations that he had sexually harassed the Physician. The court dismissed the complaint of the Physician, although subsequent investigations are being conducted by an appeal court. The criminal proceedings against the Physician continue.

On February 11, 2016, Mr. López Madrid was called as "investigado" by a Spanish investigative court in connection with the "Púnica" investigation into possible bribery relating to awards of public contracts. This investigation, in which numerous individuals have been called as "investigado" thus far, has been pending since October 2014. In connection with this matter, a further investigation (the "Lezo" investigation) was initiated and, on April 20 and 21, 2017, Mr. López Madrid was questioned in relation to an alleged payment in 2007 of €1.4 million in favor of a public officials by Obrascón Huarte Lain, S.A. ("OHL"), a listed company partially owned by Grupo VM. Mr. López Madrid was a non-executive director of OHL at the time of the alleged payment and has never held any executive responsibility at OHL. He remains as "investigado" in both the "Punica" and the "Lezo" investigations but no formal charges have been filed. Mr. López Madrid vehemently denies the allegations against him and intends to defend himself vigorously in these matters.

---

[1] For simplicity purposes, this summary always uses the term "investigado", although the accurate term for the equivalent status in those proceedings initiated prior to October 2015 is "imputado".

Dividend policy

Our Board intends to declare annual (or final) dividends and interim dividends, payable quarterly, to be reviewed each year, but this will depend upon many factors, including the amount of our distributable profits as defined below. Pursuant to the Articles, and subject to applicable law, the Company may by ordinary resolution declare dividends (which shall not exceed the amounts recommended by the directors), and the directors may decide to pay interim dividends. The Articles provide that the directors may pay any dividend if it appears to them that the profits available for distribution justify the payment. Under English law, dividends may only be paid out of distributable reserves of the Company or distributable profits, defined as accumulated realized profits not previously utilized by distribution or capitalization less accumulated realized losses to the extent not previously written off in a reduction or reorganization of capital duly made, as reported to Companies House, and not out of share capital, which includes the share premium account. Further, a U.K. public company may only make a distribution if the amount of its net assets is not less than the aggregate of its called-up share capital and undistributable reserves, and if, and to the extent that, the distribution does not reduce the amount of those assets to less than such aggregate. Distributable profits are determined in accordance with generally accepted accounting principles at the time the relevant accounts are prepared. The amount of Ferroglobe's distributable profits is thus a cumulative calculation. Ferroglobe may be profitable in a single year but unable to pay a dividend if the profits of that year do not offset all the previous year's accumulated losses. The shareholders of Ferroglobe may by ordinary resolution on the recommendation of the directors decide that the payment of all or any part of a dividend shall be satisfied by transferring non-cash assets of equivalent value, including shares or securities in any corporation.

The declaration and payment of future dividends to holders of our Shares will be at the discretion of our Board and will depend upon many factors, including, in addition to the amount of our distributable profits, our financial condition, earnings, legal requirements, and restrictions in our debt agreements and other factors deemed relevant by our Board of Directors. In addition, as a holding company, our ability to pay dividends depends on our receipt of cash dividends from our operating subsidiaries, the payment which may be restricted by the laws of their respective jurisdictions of organization, their respective agreements, and/or covenants under future indebtedness that we or they may incur.

B. Significant Changes

On February 22, 2019, we entered into an amendment to the Revolving Credit Facility Agreement. For further details, see “Item 10.C. – Additional Information – Material Contracts”.

ITEM 9. THE OFFER AND LISTING

A. Offer and Listing Details.

On December 24, 2015, our ordinary shares were listed for trading on the NASDAQ in U.S. Dollars under the symbol “GSM.” Prior to completion of the Business Combination, which occurred on December 23, 2015, shares of Globe’s common stock were registered pursuant to Section 12(b) of the U.S. Exchange Act and listed on NASDAQ under the ticker symbol “GSM.” Globe’s common stock was suspended from trading on the NASDAQ prior to the open of trading on December 24, 2015.

B. Plan of Distribution.

Not applicable.

C. Markets.

Our ordinary shares are traded on the NASDAQ Global Select Market under the symbol “GSM.”

D. Selling Shareholders.

Not applicable.

E. Dilution.

Not applicable.

F. Expenses of the Issue.

Not applicable.

ITEM 10. ADDITIONAL INFORMATION

A. Share Capital.

Not applicable.

B. Memorandum and Articles of Association.

Composition and Nomination of the Board

Pursuant to the Articles, the Board will consist of at least two directors and no more than eleven directors. The directors are nominated by the Board, after being recommended to the Board by the Nominations Committee, for appointment at a general meeting or appointed by the Board where permitted to do so by law. When a person has been approved by the Board for nomination for election as a director at a general meeting of the Company, prior to the first date after the date of adoption of the Articles on which Grupo VM and its affiliates in the aggregate beneficially own less than 10% of the issued ordinary shares of the Company (the “Sunset Day”), Grupo VM and its affiliates shall not vote against the election of that director at the general meeting unless a majority of its nominees on the Board have voted against such nomination. At every annual general meeting, all the directors shall retire from office and will be eligible, subject to applicable law, for nomination for re-appointment in accordance with the Articles.

The board shall constitute a committee (the “Nominations Committee”) to perform the function of recommending a person for director. The Nominations Committee shall consist of three directors, a majority of whom shall be independent directors, as such term is defined in the NASDAQ rules and applicable law. While Grupo VM and its Affiliates own at least 30% of the shares of the Company, the Grupo VM nominees will be entitled to nominate not more than two-fifths of the members of the Nominations Committee.

On December 23, 2015, Grupo VM designated Javier López Madrid to serve as the Executive Vice-Chairman of the Board in connection with the closing of the Business Combination. Upon the resignation of Alan Kestenbaum as Executive Chairman of the Board, Mr. López Madrid was appointed as Executive Chairman of the Board effective December 31, 2016. Mr. López Madrid is also the Chairman of the Nominations Committee.

Board Powers and Function

The members of the Board, subject to the restrictions contained in the Articles, is responsible for the management of the Company’s business, for which purpose they may exercise all our powers whether relating to the management of the business or not. In exercising their powers, the members of the Board must perform their duties to us under English law. These duties include, among others:

- to act within their powers and in accordance with the Articles;
- to act in a way that the directors consider, in good faith, would be most likely to promote our success for the benefit of its members as a whole (having regard to a list of non-exhaustive factors);
- to exercise independent judgment;
- to exercise reasonable care, skill and diligence;
- to avoid conflicts of interest;
- not to accept benefits from third parties; and
- to declare interests in proposed transactions/arrangements.

The Articles provide that the members of the Board may delegate any of the powers which are conferred on them under the Articles to such committee or person, by such means (including by power of attorney), to such an extent and on such terms and conditions, as they think fit.

Share Qualification of Directors

A director is not required to hold any Shares by way of qualification.

Board and Decision Making

The Articles provide that any director may call a meeting of the Board. Subject to the provisions of the U.K. Companies Act 2006, the Executive Chairman may also call general meetings on behalf of the Board. The quorum for such a meeting will be at least a majority of the directors then in office.

Except as otherwise provided in the Articles, a decision may be taken at a duly convened Board meeting with the vote of a majority of the directors present at such meeting who are entitled to vote on such question and each director will have one vote.

A director shall not be counted in the quorum present in relation to a matter or resolution on which he is not entitled to vote (or when his vote cannot be counted) but shall be counted in the quorum present in relation to all other matters or resolutions considered or voted on at the meeting. Except as otherwise provided by the Articles, a director shall not vote at a meeting of the Board or a committee of the Board on any resolution concerning a matter in which he has, directly or indirectly, an interest (other than an interest in shares, debentures or other securities of, or otherwise in or through, us) which could reasonably be regarded as likely to give rise to a conflict with our interests.

Unless otherwise determined by us by ordinary resolution, the remuneration of the non-executive directors for their services in the office of director shall be as the Board may from time to time determine. Any director who holds any executive office or who serves on any committee of the Board or who performs services which the Board considers go beyond the ordinary duties of a director may be paid such special remuneration (by way of bonus, commission, participation in profits or otherwise) as the Board may determine. However, the U.K. Companies Act 2006 requires "quoted" companies, such as the Company, to obtain a binding vote of shareholders on the directors' remuneration policy at least once every three years and an annual advisory (non-binding) shareholders' vote on an on the directors' remuneration in the financial year being reported on and how the directors' remuneration policy will be implemented in the following financial year.

Directors' Borrowing Powers

Under our Board's general power to manage our business, our Board may exercise all the powers to borrow money.

Matters Requiring Majority of Independent Directors Approval

Prior to the Sunset Date, the approval of a majority of the independent directors (who are not conflicted in relation to the relevant matter) shall be required to authorize any transaction agreement or arrangement between Grupo VM or any of its affiliates or connected persons and the Company or any of its Affiliates, or the alteration amendment, repeal or waiver of any such agreement, including any shareholders' agreement between the Company and Grupo VM.

Director Liability

Under English law, members of the Board may be liable to us for negligence, default, breach of duty or breach of trust in relation to us. Any provision that purports to exempt a director from such liability is void. Subject to certain exceptions, English law does not permit us to indemnify a director against any liability attaching to him in connection with any negligence, default, breach of duty or breach of trust in relation to us. The exceptions allow us to:

- purchase and maintain director and officer insurance against any liability attaching in connection with any negligence, default, breach of duty or breach of trust owed to us;

- provide a qualifying third party indemnity provision which permits us to indemnify its directors (and directors of an "associated company" (i.e., a company that is a parent, subsidiary or sister company of Ferroglobe) in respect of proceedings brought by third parties (covering both legal costs and the amount of any adverse judgment),

except for: (i) the legal costs of an unsuccessful defense of criminal proceedings or civil proceedings brought by us an associated company, or the legal costs incurred in connection with certain specified applications by the director for relief where the court refuses to grant the relief; (ii) fines imposed in criminal proceedings; and (iii) penalties imposed by regulatory bodies;

- loan funds to a director to meet expenditure incurred in defending civil and criminal proceedings against him or her (even if the action is brought by us), or expenditure incurred applying for certain specified relief, but subject to the requirement for the director or officer to reimburse us if the defense is unsuccessful; and

- provide a qualifying pension scheme indemnity provision, (which allows us to indemnify a director of a company that is a trustee of an occupational pension scheme against liability incurred in connection with such company's activities as a trustee of the scheme (subject to certain exceptions).

Indemnification Matters

Under the Articles, subject to the provisions of the U.K. Companies Act 2006 and applicable law, we will exercise all of our powers to (i) indemnify any person who is or was a director (including by funding any expenditure incurred or to be incurred by him or her) against any loss or liability, whether in connection with any proven or alleged negligence, default, breach of duty or breach of trust by him or her or otherwise, in relation to us or any associated company; and/or (ii) indemnify to any extent any person who is or was a director of an associated company that is a trustee of an occupational pension scheme (including by funding any expenditure incurred or to be incurred by him or her) against any liability, incurred by him or her in connection with our activities as trustee of an occupational pension scheme; including insurance against any loss or liability or any expenditure he or she may incur, whether in connection with any proven or alleged act or omission in the actual or purported execution or discharge of his or her duties or in the exercise or purported exercise of his or her powers or otherwise in relation to his or her duties, power or offices, whether comprising negligence, default, breach of duty, breach of trust or otherwise, in relation to the relevant body or fund.

Under the Articles and subject to the provisions of the U.K. Companies Act 2006, we may exercise all of our powers to purchase and maintain insurance for or for the benefit of any person who is or was a director, officer or employee of, or a trustee of any pension fund in which our employees are or have been interested, including insurance against any loss or liability or any expenditure he or she may incur, whether in connection with any proven or alleged act or omission in the actual or purported execution or discharge of his or her duties or in the exercise or purported exercise of his or her powers or otherwise in relation to his or her duties, power or offices, whether comprising negligence, default, breach of duty, breach of trust or otherwise, in relation to the relevant body or fund.

No director or former director shall be accountable to us or the members for any benefit provided pursuant to the Articles. The receipt of any such benefit shall not disqualify any person from being or becoming a director.

Director Removal or Termination of Appointment

The general meeting of shareholders will, at all times, have the power to remove a member of the Board by an ordinary resolution, being a resolution passed by a simple majority of votes cast. The Articles also provide that a member of the Board will cease to be a director as soon as:

- the director ceases to be a director by virtue of any provision of the U.K. Companies Act 2006 (including, without limitation, section 168) or he becomes prohibited by applicable law from being a director;

- the director becomes bankrupt or makes any arrangement or composition with the director's creditors generally;

- a registered medical practitioner who is treating that person gives a written opinion to us stating that that person has become physically or mentally incapable of acting as a director and may remain so for more than three months;

- by reason of the director's mental health a court makes an order which wholly or partly prevents the director from personally exercising any powers or rights he would otherwise have;

- the director resigns from office by notice in writing to us;

- in the case of a director who holds any executive office, the director's appointment as such is terminated or expires and the Board resolves that he should cease to be a director;

- the director is absent for more than six consecutive months, without permission of the Board, from meetings of the Board held during that period and the Board resolves that the director should cease to be a director; or

- the director dies.

Committees

Subject to the provisions of the Articles, the directors may delegate any of the powers which are conferred on them under the Articles:

- to a committee consisting of one or more directors and (if thought fit) one or more other persons, to such an extent and on such terms and conditions as the Board thinks fit (and such ability of the directors to delegate applies to all powers and discretions and will not be limited because certain articles refer to powers and discretions being exercised by committees authorized by directors while other articles do not);
- to such person by such means (including by power of attorney), to such an extent, and on such terms and conditions, as they think fit including delegation to any director holding any executive office, any manager or agent such of its powers as the Board considers desirable to be exercised by him; or
- to any specific director or directors (with power to sub-delegate). These powers can be given on terms and conditions decided on by the directors either in parallel with, or in place of, the powers of the directors acting jointly.

Any such delegation shall, in the absence of express provision to the contrary in the terms of delegation, be deemed to include authority to sub-delegate to one or more directors (whether or not acting as a committee) or to any employee or agent all or any of the powers delegated and may be made subject to such conditions as the Board may specify, and may be revoked or altered. The directors can remove any people they have appointed in any of these ways and cancel or change anything that they have delegated, although this will not affect anybody who acts in good faith who has not has any notice of any cancellation or change.

General Meeting

The Board shall convene and the Company shall hold general meetings as annual general meetings in accordance with the U.K. Companies Act 2006. The Board may call general meetings whenever and at such times and places as it shall determine. Subject to the provisions of the U.K. Companies Act 2006, the executive chairman of the Company may also call general meetings on behalf of the Board. On requisition of members pursuant to the provisions of the U.K. Companies Act 2006, the Board shall promptly convene a general meeting in accordance with the requirements of the U.K. Companies Act 2006.

Subject to the provisions of the U.K. Companies Act 2006, an annual general meeting and all other general meetings shall be called by at least such minimum period of notice as is prescribed or permitted under the U.K. Companies Act 2006.

All provisions of the Articles relating to general meetings of the Company shall apply, *mutatis mutandis*, to every separate general meeting of the holders of any class of shares in the capital of the Company.

C. Material Contracts

Revolving Credit Facility

On February 27, 2018, Ferroglobe PLC, as borrower (the "Borrower"), certain subsidiaries of Ferroglobe PLC from time to time party thereto as guarantors, the financial institutions from time to time party thereto as lenders, PNC Bank, National Association, as administrative agent, issuing lender and swing loan lender, PNC Capital Markets LLC, Citizens Bank, National Association and BMO Capital Markets Corp., as joint legal arrangers and bookrunners, Citizens Bank, National Association, as syndication agent, and BMO Capital Markets Corp., as documentation agent entered into the Revolving Credit Facility Agreement. The Revolving Credit Facility Agreement has been amended on October 31, 2018 and on February 22, 2019.

The Revolving Credit Facility, as subsequently amended, provides for borrowings up to an aggregate principal amount of $200 million to be made available to the Borrowers in U.S. Dollars. Multicurrency borrowings under the Revolving Credit Facility will be available in Euros, Pound Sterling and any other currency approved by the Administrative Agent and all of the Lenders. The Revolving Credit Facility contains a sublimit for the issuance of letters of credit in an amount of up to $25 million. Subject to certain exceptions, loans under the Revolving Credit Facility may be borrowed, repaid and reborrowed at any time.

Capitalized terms used but not defined herein have the meanings assigned to them in the Revolving Credit Facility Agreement.

Interest rates

At the Borrower's option, loans under the Revolving Credit Facility will bear interest based on the Base Rate or the Euro-Rate (each as defined below).

Base Rate shall mean, for any day, a fluctuating per annum rate of interest equal to the highest of (a) the Fed Overnight Bank Funding Rate, plus fifty basis points (0.50%), (b) the Prime Rate, and (c) the Daily LIBOR Rate, plus 100 basis points (1.00%). Any change in the Base Rate (or any component thereof) shall take effect at the opening of business on the day such change occurs. Notwithstanding the foregoing, if the Base Rate as determined in the manner provided for above would be less than zero percent (0.00%) per annum, such rate shall be deemed to be zero percent (0.00%) per annum for purposes of the Revolving Credit Facility.

Euro-Rate shall mean the following: (a) with respect to the U.S. Dollar Loans comprising any Borrowing Tranche to which the Euro-Rate Option applies for any Interest Period, the interest rate per annum determined by the Administrative Agent as the rate which appears on the Bloomberg Page BBAM1 (or on such other substitute Bloomberg page that displays rates at which U.S. Dollar deposits are offered by leading banks in the London interbank deposit market), rounded upwards, if necessary, to the nearest 1/100th of 1% per annum (with .005% being rounded up), or the rate which is quoted by another source selected by the Administrative Agent as an authorized information vendor for the purpose of displaying rates at which U.S. Dollar deposits are offered by leading banks in the London interbank deposit market at approximately 11:00 a.m., London time, two (2) Business Days prior to the commencement of such Interest Period as the Relevant Interbank Market offered rate for U.S. Dollars for an amount comparable to such Borrowing Tranche and having a borrowing date and a maturity comparable to such Interest Period, in each case which determination shall be conclusive absent manifest error; (b) with respect to Optional Currency Loans in Euros or British Pounds Sterling comprising any Borrowing Tranche for any Interest Period, the interest rate per annum determined by the Administrative Agent as the rate which appears on the Bloomberg Page BBAM1 (or on such other substitute Bloomberg page that displays rates at which deposits of the relevant Optional Currency is offered by leading banks in the London interbank deposit market), rounded upwards, if necessary, to the nearest 1/100th of 1% (with .005% being rounded up) per annum, or the rate which is quoted by another source selected by the Administrative Agent as an authorized information vendor for the purpose of displaying rates at which such applicable Optional Currencies are offered by leading banks in the London interbank deposit market at approximately 11:00 a.m., London time, two (2) Business Days prior to the commencement of such Interest Period as the Relevant Interbank Market offered rate for deposits in Euros or British Pounds Sterling for an amount comparable to the

principal amount of such Borrowing Tranche and having a borrowing date and a maturity comparable to such Interest Period. The Administrative Agent shall give prompt notice to the Borrower of the Euro-Rate as determined or adjusted in accordance herewith, which determination shall be conclusive absent manifest error; (c) with respect to Optional Currency Loans in any other Optional Currency, the rate per annum designated with respect to such Optional Currency at the time such Optional Currency is approved by the Administrative Agent and Lenders pursuant to Section 2.11.2(c) (Requests for Additional Optional Currencies); or (d) With respect to any Loans available at a Euro-Rate, if at any time, for any reason, the source(s) for the Euro-Rate described above for the applicable currency or currencies is no longer available, then, subject to the provisions of Section 4.5 (Termination of LIBOR), the Administrative Agent may determine a comparable replacement rate (or a replacement rate, plus a spread or margin, in order to attain such comparability) at such time (which determination shall be conclusive absent manifest error). (e) Notwithstanding the foregoing, if the Euro-Rate as determined in the manner provided for above would be less than zero percent (0.00%) per annum, such rate shall be deemed to be zero percent (0.00%) per annum for purposes of the Revolving Credit Facility Agreement.

Guarantees and security

The obligations of the Borrowers are guaranteed by certain subsidiaries of Ferroglobe. The obligations of the Loan Parties (as defined in the Revolving Credit Facility), together with each secured bank product accepted or executed by a Loan Party, are or will be secured by in particular security interests in certain equity interests of subsidiaries of the Loan Parties and certain assets of the Loan Parties.

Covenants

The Revolving Credit Facility contains certain affirmative covenants relating to, among other things: (i) preservation of existence; (ii) payment of taxes; (iii) continuation of business; (iv) maintenance of insurance on its properties and assets; (v) maintenance and protection of rights of properties; (vi) visitation rights granted to the Administrative Agent and (vii) maintain and keep proper books of record and account. The Revolving Credit Facility also contains certain negative covenants, relating to, among other things: (i) debt; (ii) liens; (iii) liquidations, mergers or consolidation; (iv) amendment of organizational documents; (v) restricted payments (including dividends, distributions, issuances of equity interests, redemptions and repurchases of equity interests); (vi) sale and leaseback transactions and (vii) further negative pledges. In addition, the Revolving Credit Facility contains certain maintenance financial covenants, including: (i) maximum Net Total Leverage Ratio and (ii) minimum Interest Coverage Ratio.

On February 22, 2019, the Revolving Credit Facility Agreement was amended. The amendment suspended the maximum Net Total Leverage Ratio during an interim period beginning with the first quarter of 2019 and continuing through the first quarter of 2020 and provided a new covenant to maintain a maximum secured net leverage ratio (the Interim Net Secured Leverage Ratio) and a new covenant to maintain a minimum cash liquidity level (the Cash-Only Liquidity). The new covenants will be in effect only during the interim period, after which the existing covenant to maintain a maximum Net Leverage Ratio will be reinstated.

Senior Notes due 2022

On February 15, 2017, Ferroglobe and Globe (together, the “Issuers”) issued $350 million aggregate principal amount of 9.375% Senior Notes due 2022 (the “Notes”) pursuant to the Indenture. The interest on the Notes is payable semi-annually on March 1 and September 1 of each year, commencing on September 1, 2017. At any time prior to March 1, 2019, the Issuers may redeem all or a portion of the Notes at a redemption price based on a “make-whole” premium. At any time on or after March 1, 2019, the Issuers may redeem all or a portion of the Notes at redemption prices varying based on the period during which the redemption occurs. In addition, at any time prior to March 1, 2019, the Issuers may redeem up to 35% of the aggregate principal amount of the Notes with the net proceeds from certain equity offerings at a redemption price of 109.375% of the principal amount of the Notes, plus accrued and unpaid interest. The Issuers have agreed to pay certain additional amounts in respect of any withholdings or deductions for certain types of taxes in certain jurisdictions on payments to holders of the Notes. The Notes are senior unsecured obligations of the Issuers and are guaranteed on a senior basis by certain subsidiaries of Ferroglobe. The Notes are listed on the Irish Stock Exchange.

The Indenture contains certain negative covenants restricting, among other things, our ability to: (i) make certain advances, loans or investments; (ii) incur indebtedness or issue guarantees; (iii) create security; sell, lease, transfer or dispose of assets; (iv) merge or consolidate with other companies; (v) transfer all or substantially all of our assets; make a substantial change to the general nature of our business; (vi) pay dividends and make other restricted payments; (vii) create or incur liens; (viii) agree to limitations on the ability of our subsidiaries to pay dividends or make other distributions; (ix) engage in sales of assets and subsidiary stock; (x) enter into transactions with affiliates; (xi) amend organizational documents; (xii) enter into sale-leaseback transactions and (xiii) enter into agreements that contain a negative pledge.

REINDUS Loan

On September 8, 2016, FerroAtlántica, S.A., as borrower, and the Spanish Ministry of Industry, Tourism and Commerce (the "Ministry"), as lender, entered into two loan agreements under which the Ministry made available to the borrower loans in aggregate principal amount of €44.9 million and €26.9 million, respectively, in connection with industrial development projects relating to our solar grade silicon project. See "Item 4.B.—Information on the Company—Business Overview—Research and Development (R&D)—Solar grade silicon." The loan of €44.9 million is to be repaid in seven installments over a 10-year period with the first three years as a grace period. Interest on outstanding amounts under each loan accrues at an annual rate of 2.29%. The loan of €26.9 million was repaid in April 2018. As of December 31, 2018, the balance of the remaining loan has been presented within current liabilities.

The agreements governing the loans contain the following limitations on the use of the proceeds of the outstanding loan: (1) the investment of the proceeds must occur between January 1, 2016 and February 24, 2019; (2) the allocation of the proceeds must adhere to certain approved budget categories; (3) if the final investment cost is lower than the budgeted amount, the borrower must reimburse the Ministry proportionally; and (4) the borrower must comply with certain statutory restrictions regarding related party transactions and the procurement of goods and services.

Securitization of trade receivables

On July 31, 2017, the Company entered into an accounts receivables securitization program (the "Program") where trade receivables held by the Company's subsidiaries in the United States, Canada, Spain and France are sold to a special purpose "designated activity company" domiciled and incorporated in Ireland (the "SPE"). Eligible receivables are sold to the SPE on an on-going basis at an agreed upon purchase price of approximately 99% of their invoiced amount. Part of the purchase consideration is funded upfront in cash and part is deferred in the form of senior subordinated and junior subordinated loans from the selling entities to the SPE. Following an amendment on July 27, 2018, up to $300,000 thousand of upfront cash consideration can be provided by the SPE under the Program, financed by ING Bank N.V., as senior lender and Finacity Capital Management Inc., as intermediate subordinated lender. In respect of trade receivables outstanding at December 31, 2018 the SPE had provided upfront cash consideration of approximately $227,360 thousand (2017: $166,525 thousand). The program has a three-year term until July 31, 2020.

The Company is also engaged as master servicer to the SPE whereby the Company is responsible for the cash collection, reporting and cash application of the sold receivables. As master servicer, the Company earns a fixed management fee and an additional servicing fee which entitles the Company to a residual interest upon liquidation of the SPE. The additional servicing fee will only be paid out on liquidation of the SPE and from any excess cash flows remaining after all lenders to the SPE have been repaid.

The agreements under the Program contain certain restrictive covenants limiting the ability of the Company, its subsidiaries participating in the Program or the SPE, as applicable, to, in particular, (1.) create or suffer to exist any adverse claim upon any receivable covered by the Program or any proceeds thereof, (2.) extend, amend, rescind or cancel any receivable covered by the Program, (3.) make any change in the character of the business (for the SPE) or any material change to the credit and collection policy that would be reasonably expected to materially and adversely affect the collectability of the receivables covered by the Program (for the Company and its subsidiaries participating in the Program), (4.) engage in any business other than the transactions contemplated by the Program (for the SPE), (5.) create, incur or permit to exist any debt of any kind other than pursuant to the Program (for the SPE) and (6.) merge into or consolidate with any person, or

permit any other person to merge into or consolidate with it, or purchase, lease or otherwise acquire all or substantially all of the assets of any other person other than pursuant to the Program (for the SPE).

Hydro-electric Finance Lease

On May 25, 2012, FerroAtlántica, S.A., as financial lessee, and NCG Banco, S.A., as financial lessor, entered into a sale and leaseback agreement (the ‘‘Hydro-electric Finance Lease’’) with respect to certain hydro-electric assets in Spain. The financial lessee’s obligations under the Hydroelectric Finance Lease are secured by such hydro-electric assets. NCG Banco, S.A. assigned a portion of its rights under the Hydro-electric Finance Lease to Bankinter, S.A., Caixabank, S.A. and Banco Bilbao Vizcaya Argentaria, S.A.

Payments in respect of the Hydro-electric Finance Lease are to be made in 120 installments, which commenced on May 25, 2012 and continue until maturity on May 25, 2022. The outstanding amounts under this loan accrue interest at a rate equal to six-month EURIBOR plus 3.5%. The Hydro-electric Finance Lease contains certain restrictive covenants, limiting the ability of FerroAtlántica, S.A. to (1) change the intended use of the underlying assets; (2) sell, lease, transfer or otherwise dispose of the underlying assets; (3) proceed with a change of control or (4) create or permit to subsist any security over the underlying assets aside from that provided for in the agreement. A failure to obtain consent from the required lenders and assignees for any of these activities would result in an event of default, and the loan could become immediately due and payable. The bank accounts of FerroAtlántica, S.A. held with NGC Banco, S.A. have been pledged by FerroAtlántica, S.A. to secure its obligations under the Hydro-electric Finance Lease.

Acquisition of Glencore’s European manganese plants in France and Norway

On February 1, 2018, Ferroglobe completed the acquisition from a wholly-owned subsidiary of Glencore International AG ("Glencore") of a 100% interest in Glencore's manganese alloys plants in Mo i Rana (Norway) and Dunkirk (France), after receiving the necessary regulatory approvals in France, Germany and Poland. The new subsidiaries were renamed as Ferroglobe Mangan Norge and Ferroglobe Manganèse France. Ferroglobe has completed the acquisition through its wholly-owned subsidiary FerroAtlántica.

The acquisition of the Glencore plants in France and Norway represents a unique opportunity for Ferroglobe to increase its size in the manganese alloys industry, becoming one of the world's largest producers with over half a million tons of sales of ferromanganese and silicomanganese. In 2016, the combined sales of these plants were approximately 160,000 tons of ferromanganese and 110,000 of silicomanganese. During the same year, Ferroglobe sold approximately 135,000 tons of ferromanganese and 132,000 tons of silicomanganese.

The integration of the acquired assets will allow Ferroglobe to consolidate a network of manganese alloy plants in Europe, to diversify its manganese alloy production base and to capture cost improvements through the sharing of best practices and the optimization of logistics flows. It will also provide significant advantages to our customers as Ferroglobe will be better positioned to serve multiple locations in a more agile and responsive manner.

Simultaneously with the acquisition, Glencore and Ferroglobe have entered into exclusive agency arrangements for the marketing of Ferroglobe's manganese alloys worldwide and the procurement of manganese ores to supply Ferroglobe's plants, in both cases for a period of ten years.

The acquisition price for the two facilities included an up-front payment satisfied on closing plus an earn-out payment, payable over eight and a half years, based on the annual performance of each of the acquired plants.

Other material contracts

See also “Item 7.B.—Major Shareholders and Related Party Transactions—Related Party Transactions.”

D. Exchange Controls

See “Item 3.D.—Key Information—Risk Factors—Risks Related to Our Ordinary Shares.”

E. Taxation.

U.S. federal income taxation

The following is a discussion of the material U.S. federal income tax consequences to U.S. holders (as defined below) of the ownership and disposition of ordinary shares. The discussion is based on and subject to the Code, the U.S. Treasury Regulations promulgated thereunder, administrative rulings and court decisions in effect on the date hereof, all of which are subject to change, possibly with retroactive effect, and to differing interpretations. The discussion applies only to U.S. holders that acquire ordinary shares in exchange for cash in this offering and hold ordinary shares as “capital assets” within the meaning of Section 1221 of the Code (generally, property held for investment). The discussion also assumes that we will not be treated as a U.S. corporation under Section 7874 of the Code. The discussion does not address all aspects of U.S. federal income taxation that may be relevant to particular U.S. holders in light of their personal circumstances, including any tax consequences arising under the Medicare contribution tax on net investment income, or to such shareholders subject to special treatment under the Code, such as:

- banks, thrifts, mutual funds, insurance companies, and other financial institutions,
- real estate investment trusts and regulated investment companies,
- traders in securities who elect to apply a mark-to-market method of accounting,
- brokers or dealers in securities or foreign currency,
- tax-exempt organizations or governmental organizations,
- individual retirement and other deferred accounts,
- U.S. holders whose functional currency is not the U.S. Dollar,
- U.S. expatriates and former citizens or long-term residents of the United States,
- “passive foreign investment companies,” “controlled foreign corporations,” and corporations that accumulate earnings to avoid U.S. federal income tax,
- persons subject to the alternative minimum tax,
- shareholders who hold ordinary shares as part of a straddle, hedging, conversion, constructive sale or other risk reduction transaction,
- “S corporations,” partnerships or other entities or arrangements classified as partnerships for U.S. federal income tax purposes or other pass-through entities (and investors therein),
- persons that actually or constructively own 10% or more of our voting stock, and
- shareholders who received their ordinary shares through the exercise of employee stock options or otherwise as compensation or through a tax-qualified retirement plan.

The discussion does not address any non-income tax consequences or any foreign, state or local tax consequences. For purposes of this discussion, a U.S. holder means a beneficial owner of ordinary shares who is:

- an individual who is a citizen or resident of the United States;
- a corporation (or other entity taxable as a corporation for U.S. federal income tax purposes) created or organized in the United States or under the laws of the United States or any subdivision thereof, or that is otherwise treated as a U.S. tax resident under the Code;
- an estate the income of which is includible in gross income for U.S. federal income tax purposes regardless of its source; or
- a trust if (1) a court within the United States is able to exercise primary supervision over the administration of the trust and one or more U.S. persons have the authority to control all substantial decisions of the trust, or (2) the trust has a valid election in effect under applicable U.S. Treasury Regulations to be treated as a U.S. person for U.S. federal income tax purposes.

If a partnership, including for this purpose any entity that is treated as a partnership for U.S. federal income tax purposes, holds ordinary shares, the tax treatment of a partner in the partnership will generally depend upon the status of the partner and the activities of the partnership. A U.S. holder that is a partnership and the partners in such partnership should consult their tax advisors about the U.S. federal income tax consequences of the ownership and disposition of ordinary shares.

Prospective purchasers are urged to consult their tax advisors with respect to the U.S. federal income tax consequences to them of the purchase, ownership and disposition of ordinary shares, as well as the tax consequences to them arising under U.S. federal tax laws other than those pertaining to income tax (including estate or gift tax laws), state, local and non-U.S. tax laws, as well as any applicable income tax treaty.

Dividends and other distributions on ordinary shares

Dividends will generally be taxed as ordinary income to U.S. holders to the extent that they are paid out of our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. As such, subject to the following discussion of special rules applicable to PFICs (as defined below) and, assuming that ordinary shares continue to be listed on NASDAQ and certain holding-period requirements are met, the gross amount of the dividends paid by us to U.S. holders may be eligible to be taxed at lower rates applicable to dividends paid by a “qualified foreign corporation.” Dividends paid by us will not qualify for the dividends received deduction under Section 243 of the Code otherwise available to corporate shareholders. In general, and subject to the discussion below, the dividend income will be treated as foreign source passive income for U.S. federal foreign tax credit limitation purposes. The rules relating to the determination of the U.S. foreign tax credit are complex and U.S. holders should consult their tax advisors to determine whether and to what extent a credit would be available.

To the extent that the amount of any dividend exceeds our current and accumulated earnings and profits for a taxable year, the excess will first be treated as a tax-free return of capital, causing a reduction in the U.S. holder’s adjusted basis in ordinary shares. The balance of any excess will be taxed as capital gain, which would be long-term capital gain if the U.S. holder has held the ordinary shares for more than one year at the time the dividend is received.

It is possible that we are, or at some future time will be, at least 50% owned by U.S. persons. Dividends paid by a foreign corporation that is at least 50% owned by U.S. persons may be treated as U.S. source income (rather than foreign source passive income) for foreign tax credit purposes to the extent the foreign corporation has more than an insignificant amount of U.S. source income. The effect of this rule may be to treat a portion of any dividends paid by us as U.S. source income, which may limit a U.S. holder’s ability to claim a foreign tax credit with respect to foreign taxes payable or deemed payable in respect of the dividends or other foreign source passive income. The Code permits a U.S. holder entitled to benefits under the United Kingdom-United States Income Tax Treaty to elect to treat any dividends paid by us as foreign source income for foreign tax credit purposes if the dividend income is separated from other income items for purposes of

calculating the U.S. holder's foreign tax credit with respect to U.K. taxes withheld, if any, on the distribution of such dividend income. U.S. holders should consult their own tax advisors about the desirability and method of making such an election.

We generally intend to pay dividends in U.S. Dollars. If we were to pay dividends in a foreign currency or other property, the amount of any such dividend will be the U.S. Dollar value of the foreign currency or other property distributed by us, calculated, in the case of foreign currency, by reference to the exchange rate on the date the dividend is includible in the U.S. holder's income, regardless of whether the payment is in fact converted into U.S. Dollars on the date of receipt. Generally, a U.S. holder should not recognize any foreign currency gain or loss if the foreign currency is converted into U.S. Dollars on the date the payment is received. However, any gain or loss resulting from currency exchange fluctuations during the period from the date the U.S. holder includes the dividend payment in income to the date such U.S. holder actually converts the payment into U.S. Dollars will be treated as ordinary income or loss. That currency exchange or loss (if any) generally will be income or loss from U.S. sources for foreign tax credit purposes.

Sale, exchange or other taxable disposition of ordinary shares

Subject to the following discussion of special rules applicable to PFICs, a U.S. holder will generally recognize taxable gain or loss on the sale, exchange or other taxable disposition of ordinary shares in an amount equal to the difference between the amount realized on such taxable disposition and the U.S. holder's tax basis in the ordinary shares. A U.S. holder's initial tax basis in ordinary shares generally will equal the cost of such ordinary shares.

The source of any such gain or loss is generally determined by reference to the residence of the holder such that it generally will be treated as U.S. source income for foreign tax credit limitation purposes in the case of a sale, exchange or other taxable disposition by a U.S. holder. However, the Code permits a U.S. holder entitled to benefits under the United Kingdom-United States Income Tax Treaty to elect to treat any gain or loss on the sale, exchange or other taxable disposition of ordinary shares as foreign source income for foreign tax credit purposes if the gain or loss is sourced outside of the United States under the United Kingdom-United States Income Tax Treaty and such gain or loss is separated from other income items for purposes of calculating the U.S. holder's foreign tax credit. U.S. holders should consult their own tax advisors about the desirability and method of making such an election.

Gain or loss realized on the sale, exchange or other taxable disposition of ordinary shares generally will be capital gain or loss and will be long-term capital gain or loss if the ordinary shares have been held for more than one year. Non-corporate U.S. holders (including individuals) generally will be subject to U.S. federal income tax on long-term capital gain at preferential rates. The deduction of capital losses is subject to limitations.

Passive foreign investment company considerations

A foreign corporation is a "passive foreign investment company" (a "PFIC") if, after the application of certain "look-through" rules, (1) at least 75% of its gross income is "passive income" as that term is defined in the relevant provisions of the Code, or (2) at least 50% of the value of its assets (determined on the basis of a quarterly average) produce "passive income" or are held for the production of "passive income." The determination as to PFIC status is made annually. If a U.S. holder is treated as owning PFIC stock, the U.S. holder will be subject to special rules generally intended to reduce or eliminate the benefit of the deferral of U.S. federal income tax that results from investing in a foreign corporation that does not distribute all of its earnings on a current basis. These rules may adversely affect the tax treatment to a U.S. holder of dividends paid by us and of sales, exchanges and other dispositions of ordinary shares, and may result in other adverse U.S. federal income tax consequences.

We do not expect to be treated as a PFIC for the current taxable year, and we do not expect to become a PFIC in the future. However, there can be no assurance that the IRS will not successfully challenge this position or that we will not become a PFIC at some future time as a result of changes in our assets, income or business operations. U.S. holders should consult their own tax advisors about the determination of our PFIC status and the U.S. federal income tax consequences of holding ordinary shares if we are considered a PFIC in any taxable year.

Information reporting and backup withholding

In general, information reporting requirements may apply to dividends received by U.S. holders of ordinary shares and the proceeds received on the disposition of ordinary shares effected within the United States (and, in certain cases, outside the United States), paid to U.S. holders other than certain exempt recipients (such as corporations). Backup withholding may apply to such amounts if the U.S. holder fails to provide an accurate taxpayer identification number (generally on an IRS Form W-9) or is otherwise subject to backup withholding. The amount of any backup withholding from a payment to a U.S. holder will be allowed as a refund or credit against the U.S. holder's U.S. federal income tax liability, provided that the required information is timely furnished to the IRS.

Individuals that own "specified foreign financial assets" with an aggregate value of more than $50 thousand (or higher threshold for some married individuals and individuals living abroad) may be required to file an information report (IRS Form 8938) with respect to such assets with their tax returns. Ordinary shares generally will constitute specified foreign financial assets subject to these reporting requirements, unless the ordinary shares are held in an account at a financial institution (which, in the case of a foreign financial account, may also be subject to reporting). Additionally, under recently finalized regulations, a domestic corporation, domestic partnership, or trust (as described in Section 7701(a)(30)(E) of the Code) which is formed or availed of for purposes of holding, directly or indirectly, specified foreign financial assets may be treated as an individual for purposes of these rules. U.S. holders should consult their own tax advisors regarding information reporting requirements relating to their ownership of ordinary shares, and the significant penalties to which they may be subject for failure to comply.

United Kingdom taxation

The following paragraphs are intended as a general guide to current U.K. tax law and HM Revenue & Customs published practice applying as at the date of this annual report (both of which are subject to change at any time, possibly with retrospective effect) relating to the holding of ordinary shares. They do not constitute legal or tax advice and do not purport to be a complete analysis of all U.K. tax considerations relating to the holding of ordinary shares. They relate only to persons who are absolute beneficial owners of ordinary shares (and where the ordinary shares are not held through an Individual Savings Account or a Self-Invested Personal Pension) and who are resident for tax purposes in (and only in) the U.K. (except to the extent that the position of non-U.K. resident persons is expressly referred to).

These paragraphs may not relate to certain classes of holders of ordinary shares, such as (but not limited to):

- persons who are connected with the Company;
- insurance companies;
- charities;
- collective investment schemes;
- pension schemes;
- brokers or dealers in securities or persons who hold ordinary shares otherwise than as an investment;
- persons who have (or are deemed to have) acquired their ordinary shares by virtue of an office or employment or who are or have been officers or employees of the Company or any of its affiliates; and
- individuals who are subject to U.K. taxation on a remittance basis.

These paragraphs do not describe all of the circumstances in which holders of ordinary shares may benefit from an exemption or relief from U.K. taxation. It is recommended that all holders of ordinary shares obtain their own tax advice.

In particular, non-U.K. resident or domiciled persons are advised to consider the potential impact of any relevant double tax agreements.

Dividends

Withholding tax

Dividends paid by the Company will not be subject to any withholding or deduction for or on account of U.K. tax, irrespective of the residence or particular circumstances of the shareholders.

Income tax

An individual holder of ordinary shares who is resident for tax purposes in the U.K. may, depending on his or her particular circumstances, be subject to U.K. tax on dividends received from the Company. An individual holder of ordinary shares who is not resident for tax purposes in the U.K. should not be chargeable to U.K. income tax on dividends received from the Company unless he or she carries on (whether solely or in partnership) any trade, profession or vocation in the U.K. through a branch or agency to which the ordinary shares are attributable (subject to certain exceptions for trading through independent agents, such as some brokers and investment managers).

A nil rate of income tax will currently apply to the first £2 thousand of dividend income received by an individual shareholder in a tax year (the "Nil Rate Amount"), regardless of what tax rate would otherwise apply to that dividend income. Any dividend income received by an individual shareholder in a tax year in excess of the Nil Rate Amount will be subject to income tax at dividend rates determined by thresholds of income, as follows:

- at the rate of 7.5%, to the extent that the relevant dividend income falls below the threshold for the higher rate of income tax;

- at the rate of 32.5%, to the extent that the relevant dividend income falls above the threshold for the higher rate of income tax but below the threshold for the additional rate of income tax; and

- at the rate of 38.1%, to the extent that the relevant dividend income falls above the threshold for the additional rate of income tax.

Dividend income that is within the dividend Nil Rate Amount counts towards an individual's basic or higher rate limits and will therefore potentially affect the level of savings allowance to which an individual is entitled, and the rate of tax that is due on any dividend income in excess of the Nil Rate Amount. In calculating into which tax band any dividend income over the nil rate falls, savings and dividend income are treated as the highest part of an individual's income. Where an individual has both savings and dividend income, the dividend income is treated as the top slice.

Corporation tax

Corporate holders of ordinary shares which are resident for tax purposes in the U.K. should not be subject to U.K. corporation tax on any dividend received from the Company so long as the dividends qualify for exemption (as is likely) and certain conditions are met (including anti-avoidance conditions).

Chargeable gains

A disposal of ordinary shares by a shareholder resident for tax purposes in the U.K. may, depending on the shareholder's circumstances and subject to any available exemptions or reliefs, give rise to a chargeable gain or an allowable loss for the purposes of U.K. capital gains tax and corporation tax on chargeable gains.

If an individual holder of ordinary shares who is subject to U.K. income tax at either the higher or the additional rate becomes liable to U.K. capital gains tax on the disposal of ordinary shares, the applicable rate will be 20%. For an

individual holder of ordinary shares who is subject to U.K. income tax at the basic rate and liable to U.K. capital gains tax on such disposal, the applicable rate would be 10%, save to the extent that any capital gains exceed the unused basic rate tax band. In that case, the rate applicable to the excess would be 20%. No indexation allowance will be available to an individual holder of ordinary shares in respect of any disposal of such shares. However, the capital gains tax annual exempt amount (which is £12,000 (2019/20) for individuals (2018/19: £11,700)) may be available to exempt any chargeable gain, to the extent that the exemption has not already been utilized.

If a corporate holder of ordinary shares becomes liable to U.K. corporation tax on the disposal of ordinary shares, the main rate of U.K. corporation tax (currently 19%) would apply. An indexation allowance may be available to such a holder to give an additional deduction based on the indexation of its base cost in the shares by reference to U.K. retail price inflation over its holding period. An indexation allowance can only reduce a gain on a future disposal, and cannot create a loss.

A holder of ordinary shares which is not resident for tax purposes in the U.K. should not normally be liable to U.K. capital gains tax or corporation tax on chargeable gains on a disposal of ordinary shares. However, an individual holder of ordinary shares who has ceased to be resident for tax purposes in the U.K. for a period of less than five years and who disposes of ordinary shares during that period may be liable on his or her return to the U.K. to U.K. tax on any capital gain realized (subject to any available exemption or relief).

Stamp duty and Stamp Duty Reserve Tax ("SDRT")

The discussion below relates to holders of ordinary shares wherever resident.

Transfers of ordinary shares within a clearance service or depositary receipt system should not give rise to a liability to U.K. stamp duty or SDRT, provided that no instrument of transfer is entered into and that no election that applies to the ordinary shares is or has been made by the clearance service or depositary receipt system under Section 97A of the U.K. Finance Act 1986.

Transfers of ordinary shares within a clearance service where an election has been made by the clearance service under Section 97A of the U.K. Finance Act 1986 will generally be subject to SDRT (rather than U.K. stamp duty) at the rate of 0.5% of the amount or value of the consideration.

Transfers of ordinary shares that are held in certificated form will generally be subject to U.K. stamp duty at the rate of 0.5% of the consideration given (rounded up to the nearest £5). An exemption from U.K. stamp duty is available for a written instrument transferring an interest in ordinary shares where the amount or value of the consideration is £1,000 or less, and it is certified on the instrument that the transaction effected by the instrument does not form part of a larger transaction or series of transactions for which the aggregate consideration exceeds £1,000. SDRT may be payable on an agreement to transfer such ordinary shares, generally at the rate of 0.5% of the consideration given in money or money's worth under the agreement to transfer the ordinary shares. This charge to SDRT would be discharged if an instrument of transfer is executed pursuant to the agreement which gave rise to SDRT and U.K. stamp duty is duly paid on the instrument transferring the ordinary shares within six years of the date on which the agreement was made or, if the agreement was conditional, the date on which the agreement became unconditional. The stamp duty would be duly accounted for if it is paid, an appropriate relief is claimed or the instrument is otherwise certified as exempt.

If ordinary shares (or interests therein) are subsequently transferred into a clearance service or depositary receipt system, U.K. stamp duty or SDRT will generally be payable at the rate of 1.5% of the amount or value of the consideration given (rounded up in the case of U.K. stamp duty to the nearest £5) or, in certain circumstances, the value of the shares (save to the extent that an election has been made under Section 97A of the U.K. Finance Act 1986). This liability for U.K. stamp duty or SDRT will strictly be accountable by the clearance service or depositary receipt system, as the case may be, but will, in practice, generally be reimbursed by participants in the clearance service or depositary receipt system.

F. Dividends and Paying Agents.

Not applicable.

G. Statements by Experts.

Not applicable.

H. Documents on Display.

We previously filed with the SEC our registration statement on Form F-1 on March 15, 2016 with file number 333-209595.

We have filed this annual report on Form 20-F with the SEC under the U.S. Exchange Act. Statements made in this annual report as to the contents of any document referred to are not necessarily complete. With respect to each such document filed as an exhibit to this annual report, reference is made to the exhibit for a more complete description of the matter involved, and each such statement shall be deemed qualified in its entirety by such reference.

We are subject to the informational requirements of the U.S. Exchange Act and file reports and other information with the SEC.

Electronic copies of this material may be obtained from the SEC's Internet site at http://www.sec.gov. The Commission's telephone number is 1-800-SEC-0330.

As a foreign private issuer, we are exempt from the rules under the U.S. Exchange Act prescribing the furnishing and content of proxy statements and will not be required to file proxy statements with the SEC, and its officers, directors and principal shareholders will be exempt from the reporting and "short swing" profit recovery provisions contained in Section 16 of the U.S. Exchange Act.

I. Subsidiary Information.

Not applicable.

ITEM 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

Ferroglobe operates in an international and cyclical industry which exposes it to a variety of financial risks such as currency risk, liquidity risk, interest rate risk, credit risk and risks relating to the price of finished goods, raw materials and power.

The Company's management model aims to minimize the potential adverse impact of such risks upon the Company's financial performance. Risk is managed by the Company's executive management, supported by the Risk Management, Treasury and Finance functions. The risk management process includes identifying and evaluating financial risks in conjunction with the Company's operations and quantifying them by project, region and subsidiary. Management provides written policies for global risk management, as well as for specific areas such as foreign currency risk, credit risk, interest rate risk, liquidity risk, the use of hedging instruments and derivatives, and investment of surplus liquidity. Ferroglobe does not speculatively enter into or trade derivatives.

Market risk

Market risk is the risk that the Company's future cash flows or the fair value of its financial instruments will fluctuate because of changes in market prices. The primary market risks to which the Company is exposed comprise foreign currency risk, interest rate risk and risks related to prices of finished goods, raw materials (principally coal and manganese ore) and power.

Foreign exchange rate risk

Ferroglobe generates sales revenue and incurs operating costs in various currencies. The prices of finished goods are to a large extent determined in international markets, primarily in US dollars and Euros. Foreign currency risk is partly mitigated by the generation of sales revenue, the purchase of raw materials and other operating costs being denominated in the same currencies. Although it has done so on occasions in the past, and may decide to do so in the future, the Company does not generally enter into foreign currency derivatives in relation to its operating cash flows.

Notes and cross currency swap

In February 2017, the Company completed a restructuring of its finances which included the issue of $350,000 thousand 9.375% senior notes due 2022 and the repayment of certain existing indebtedness denominated in a number of currencies across its subsidiaries. The Company is exposed to foreign exchange risk as the interest and principal of the Notes is payable in US dollars, whereas its operations principally generate a combination of US dollar and Euro cash flows. Following approval by the Board, the Company entered into a cross-currency interest rate swap (the "CCS") to exchange 55% of the principal and interest payments due in US dollars for principal and interest payments in Euros. Under the CCS, on a semi-annual basis the Company will receive interest of 9.375% on a notional of $192,500 thousand and pay interest of 8.062% on a notional of €176,638 thousand and it will exchange these Euro and US dollar notional amounts at maturity of the Notes in 2022. The timing of payments of interest and principal under the CCS coincide exactly with those of the Notes. The fair value of the CCS at December 31, 2018 was a liability of $20,384 thousand (2017: $33,648 thousand).

The Parent Company, which has a Euro functional currency, has designated $150,000 thousand of the notional amount of the CCS as a cash flow hedge of the variability of the Euro functional currency equivalents of the future US dollar cash flows of $150,000 thousand of the principal amount of the Notes. The remaining $42,500 thousand of the notional amount of the CCS is not designated as a cash flow hedge and is accounted for at fair value through profit or loss. The Company has performed a sensitivity analysis that indicates that if the Euro was to strengthen (weaken) against the US Dollar by 10% it would record a loss (gain) of $4,615 thousand in respect of the portion of the CCS accounted for at fair value through profit or loss (2017: $5,831 thousand).

Interest rate risk

Ferroglobe is exposed to interest rate risk in respect of its financial liabilities that bear interest at floating rates. These primarily comprise credit facilities and obligations under finance leases related to hydroelectrical installations.

At December 31, the Company's interest-bearing financial liabilities were as follows:

	2018		
	Fixed rate	**Floating rate**	**Total**
	US$'000	**US$'000**	**US$'000**
Bank borrowings	—	141,012	141,012
Obligations under finance leases	—	66,471	66,471
Debt instruments	352,595	—	352,595
Other financial liabilities (*)	61,849	—	61,849
	414,444	**207,483**	**621,927**

(*) Other financial liabilities comprise loans from government agencies and exclude derivative financial instruments.

	2017		
	Fixed rate	**Floating rate**	**Total**
	US$'000	**US$'000**	**US$'000**
Bank borrowings	—	1,003	1,003
Obligations under finance leases	—	82,633	82,633
Debt instruments	350,270	—	350,270
Other financial liabilities (*)	86,238	13,153	99,391
	436,508	**96,789**	**533,297**

(*) Other financial liabilities comprise loans from government agencies and exclude derivative financial instruments.

The Company's finance leases related to its Spanish hydroelectrical installations bear interest at a floating rate tied to EURIBOR. In May 2012, the Company entered into interest rate swaps to fix the interest payable in respect of these lease obligations. During the year ended December 31, 2018, the Company did not enter into any new interest rate derivatives. The market value of the Company's interest rate swap derivatives at December 31, 2018 was a liability of $3,079 thousand, compared to $4,392 thousand at December 31, 2017.

In respect of the above financial liabilities, at December 31, 2018, the Company had floating to fixed interest rate swaps in place covering 31% of its exposure to floating interest rates (2017: 83%). The decrease in the proportion of floating rate financial liabilities covered by interest rate swaps reflects that during 2018 the Company borrowed under the Revolving Credit Facility that is not covered by an interest rate swap.

At December 31, 2018, the Company performed a sensitivity analysis for floating rate financial liabilities that indicates that an increase of 1% in interest rates would have given rise to additional borrowing costs of $1,425 thousand (2017: $161 thousand).

Credit risk

Credit risk refers to the risk that a customer or counterparty will default on its contractual obligations resulting in financial loss. The Company's main credit risk exposure relates to the following financial assets:

- trade and other receivables; and
- loans and receivables (other financial assets) arising from the Company's accounts receivable securitization program.

Trade receivables consist of a large number of customers, spread across diverse industries and geographical areas. The Company has established policies, procedures and controls relating to customer credit risk management. Ongoing credit evaluation is performed on the financial condition of accounts receivable and, where appropriate, the Company insures its trade receivables with reputable credit insurance companies.

Since August 2017, the Company has sold substantially all of the trade receivables generated by its subsidiaries in the U.S., Canada, Spain and France to an accounts receivable securitization program. This has enabled it to monetize these assets earlier and significantly reduce working capital.

Liquidity risk

The purpose of the Company's liquidity and financing policy is to ensure that the Company keeps sufficient funds available to meet its financial obligations as they fall due. The Company's main sources of financing are as follows:

- $350,000 thousand aggregate principal amount of 9.375% Senior Notes due March 1, 2022 (the "Notes"). The proceeds from the Notes, issued by Ferroglobe and Globe (together, the "Issuers") on February 15, 2017, were primarily used to repay certain existing indebtedness of the Parent Company and its subsidiaries. Interest is payable semi-annually on March 1 and September 1 of each year. If Ferroglobe experiences a change of control, the Company is required to offer to redeem the Notes at 101% of their principal amount (further information below).

- $200,000 thousand Revolving Credit Facility. Loans under the Revolving Credit Facility may be borrowed, repaid and reborrowed until the maturity of the facility in February 2021. Borrowings are available to be used to provide for the working capital and general corporate requirements of the Parent Company and its subsidiaries (including permitted acquisitions and permitted capital expenditures). On February 22, 2019, the Company amended the Revolving Credit Facility, which reduced the availability under the facility from $250,000 thousand to $200,000 thousand and provided for modified covenants for an interim period. The amendment suspended the existing covenant to maintain a maximum total net leverage ratio during an interim period beginning with the first quarter of 2019 and continuing through the first quarter of 2020 and provides a new covenant to maintain a maximum secured net leverage ratio and a new covenant to maintain a minimum cash liquidity level. The new covenants will be in effect only during the interim period, after which the existing covenant to maintain a maximum total net leverage ratio will be reinstated. The minimum cash liquidity level required during the interim period is the greater of $150,000 thousand or the Revolving Facility Usage, as defined, in the Revolving Credit Facility Agreement. At December 31, 2018, the principal outstanding on the Revolving Credit Facility was $135,919 thousand.

- Hydroelectric finance lease. In May 2012, the Company entered into a sale and leaseback agreement with respect to certain hydroelectric assets in Spain. The lease payments are due in 120 installments from May 2012 to maturity in May 2022.

The Indenture governing the Company's Notes includes change of control provisions that would require the Company to offer to redeem the outstanding Notes at a purchase price in cash equal to 101% of the principal amount of the notes, plus any accrued and unpaid interest in the event of a change of control. A change in control is defined in the Indenture as the occurrence of any of the following:

1. If the Company becomes aware, that any person or group, other than one of the Permitted Holders (which is defined as Grupo Villar Mir (GVM), Alan Kestenbaum or members of senior management) or affiliates of those Permitted Holders, directly or indirectly controls 35% or more of the Company's voting stock and the aggregate voting stock of the Permitted Holders is the same or a lesser percentage;
2. If the Company sells or otherwise disposes of all or substantially all of its assets;
3. If the Company ceases to hold directly or indirectly 100% of the capital stock of Globe; or
4. If the shareholders or the Company or the U.S. subsidiary approve the liquidation or dissolution of either the Company or Globe.

GVM currently owns approximately 54% of the Company's voting stock and it is the Company's understanding that a significant majority of GVM's shares in the Company are pledged as collateral for GVM's obligations to certain of its lenders ("GVM Lenders"). An enforcement by the GVM Lenders of their security over GVM's shares will not automatically give rise to a change of control. There are contractual provisions in place that limit the likelihood of a change of control arising as a result of any such enforcement. These include a limitation on the number of shares that a GVM Lender is entitled to hold (individually or as a part of a group) to no more than 19% of the Company's outstanding shares and a prohibition on the sale of shares by or on behalf of the GVM Lenders to any purchaser other than one who is believed to be a passive investor who would, following the acquisition, own no more than 15% of the Company's outstanding share capital.

A change of control may occur if a person other than a Permitted Holder were to acquire 35% or more of the Company's outstanding shares at a time when the Permitted Holders held an equal or lesser percentage. So long as GVM maintains its current shareholding, that cannot occur. The position would be less clear following an enforcement and sale of shares by the GVM Lenders to a number of purchasers (per the terms above), as the contractual restrictions on share holdings then may cease to apply. Even so, building a significant stake in the Company would impose disclosure obligations on such a purchaser and is unlikely to occur on an unforeseen or precipitate basis.

Based on our review of the provisions cited above, the Company has concluded that a change of control as defined in the Indenture is unlikely to occur and, accordingly, that the requirement to offer to redeem the Notes at the above-referenced premium is unlikely to come into play. Even if such unlikely developments were to occur, the Company believes it would have access to the credit markets and could utilize other cash generating initiatives, such as permitted divestitures of non-core assets, in order to meet its obligation to offer to redeem the Notes and fulfill such redemption on a timely basis.

Further, on February 22, 2019, the Company amended its Revolving Credit Facility to afford the Company additional flexibility under its financial maintenance covenants during an interim period beginning with the first quarter of 2019 and continuing through the first quarter of 2020.

The Company is committed to continuing to enhance its liquidity and capital structure and is looking at alternative financing arrangements and further non-core asset divestitures.

ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES.

A. Debt Securities.

Not applicable.

B. Warrants and Rights.

Not applicable.

C. Other Securities.

Not applicable.

D. American Depositary Shares.

Not applicable.

PART II

ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES.

None of these events occurred in any of the years ended December 31, 2018, 2017 and 2016.

ITEM 14. MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS.

Not applicable.

ITEM 15. CONTROLS AND PROCEDURES.

A. Evaluation of disclosure controls and procedures

We maintain disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) of the U.S. Exchange Act, that are designed to ensure that information required to be disclosed by the Company in reports that we file or submit under the U.S. Exchange Act is (i) recorded, processed, summarized and reported within the time period specified in the SEC's rules and forms, and (ii) accumulated and communicated to our management, including our Chief Executive Officer (principal executive officer) and Chief Financial Officer (principal financial officer), as appropriate, to allow timely decisions regarding required disclosure. Disclosure controls and procedures, no matter how well designed, can provide only reasonable assurance of achieving the desired control objectives.

Our principal executive officer and principal financial officer have conducted an evaluation of the effectiveness of our disclosure controls and procedures as of the end of the period covered by this annual report. Based on that evaluation, they have concluded that our disclosure controls and procedures were effective.

B. Management's annual report on internal control over financial reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rules 13a-15(f) and 15d-15(f) of the U.S. Exchange Act. Our internal control over financial reporting is designed by management to provide reasonable assurance regarding the reliability of financial reporting and the preparation and fair presentation of our published consolidated financial statements.

Under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, management conducted an assessment of the effectiveness of our internal control over financial reporting as of the end of the period covered by this annual report based on criteria established in the *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on those criteria, management concluded that, as of the end of the period covered by this annual report, our internal control over financial reporting is effective.

Our management's assessment and conclusion on the effectiveness of our internal control over financial reporting as of December 31, 2018 excludes associated transactions and balances derived from the acquisition of Ferroglobe Mangan Norge AS and Ferroglobe Manganèse France SAS (collectively the "Acquired Business"), in accordance with applicable guidance provided by the SEC.

The Acquired Business constitutes approximately 6% of our total assets and 10% of net revenue as of and for the year ended December 31, 2018.

Attestation report of the registered public accounting firm

The report of Deloitte, S.L., our Independent Registered Public Accounting Firm, on our internal control over financial reporting is included herein.

C. Changes in internal control over financial reporting

In addition to integrating the acquired business during 2018, remediation activities were successfully undertaken to address matters identified in our material weakness conclusion as at the end of 2017. In particular we have completed the following actions;

- An Internal Audit function was fully established by the beginning of 2018 and this has been further strengthened with the appointment of PwC as co-source provider to the function;
- The finance teams across the group have been strengthened with additional qualified resources;
- Formal control completion reviews are now undertaken facilitated by the implementation of control documentation software.

ITEM 16. [RESERVED]

ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT.

See "Item 6.C.—Directors, Senior Management and Employees—Board Practices—Committees of board of directors—Audit Committee." Our Board of Directors has determined that Mr. Greger Hamilton qualifies as an "audit committee financial expert" under applicable SEC rules.

ITEM 16B. CODE OF ETHICS.

Our Board of Directors has adopted a Code of Conduct for our employees, officers and directors to govern their relations with current and potential customers, fellow employees, competitors, government and regulatory agencies, the media, and anyone else with whom Ferroglobe PLC has contact. Our Code of Conduct is publicly available on our website at www.ferroglobe.com.

ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES.

The following table provides information on the aggregate fees billed by our principal accountant Deloitte or by other firms, to Ferroglobe PLC and subsidiaries, classified by type of service rendered for the periods indicated, in thousands of U.S. Dollars:

($ thousands)	2018	2017
Audit Fees	6,007	4,854
Audit-Related Fees	20	507
Tax Fees	84	91
Total	**6,111**	**5,452**

Audit Fees are the aggregate fees billed for professional services in connection with the audit of our consolidated annual financial statements and statutory audits of our subsidiaries' financial statements under the rules in which our subsidiaries are organized. Also included are quarterly limited reviews, audits of non-recurring transactions, consents and any audit services required for SEC or other regulatory filings.

Audit-Related Fees are fees charged for assurance and related services that are reasonably related to the performance of the audit or review of our financial statements, and are not restricted to those that can only be provided by the auditor signing the audit report. This category comprises fees billed for comfort letters and agreed upon procedures for grants and other financial compliance.

Tax Fees are fees billed for tax compliance, tax review and tax advice on actual or contemplated transactions.

All Other Fees comprises fees billed in relation to financial advisory services and other services not accounted for under other categories.

Audit Committee's policy on pre-approval of audit and permissible non-audit services of the independent auditor

Subject to shareholder approval of the independent auditor, the Audit Committee has the sole authority to appoint, retain or replace the independent auditor. The Audit Committee is also directly responsible for the compensation and oversight of the work of the independent auditor. These policies generally provide that we will not engage our independent auditors to render audit or non-audit services unless the service is specifically approved in advance by the Audit Committee. The Audit Committee's pre-approval policy, which covers audit and non-audit services provided to us or to any of our subsidiaries, is as follows:

- The Audit Committee shall review and approve in advance the annual plan and scope of work of the independent external auditor, including staffing of the audit, and shall (i) review with the independent external auditor any audit-related concerns and management's response and (ii) confirm that any examination is performed in accordance with the relevant accounting standards.

- The Audit Committee shall pre-approve all audit services and all permitted non-audit services (including the fees and terms thereof) to be performed for us by the independent auditors, to the extent required by law. The Audit Committee may delegate to one or more Committee members the authority to grant pre-approvals for audit and permitted non-audit services to be performed for us by the independent auditor, provided that decisions of such members to grant pre-approvals shall be presented to the full Audit Committee at its next regularly scheduled meeting.

ITEM 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES.

Not applicable.

ITEM 16E. PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS.

During 2018, we repurchased our ordinary shares as described in the following table:

Period	(a) Total number of shares purchased	(b) Average price paid per share	(c)Total number of shares purchased as part of publicly announced plans or programs	(d) Maximum number (or approximately dollar value) of shares that may yet be purchased under the plans or programs
	(In U.S dollars, except share number)			
August 21 - August 31	13,117	7.99	13,117	—
September 1 - September 30	424,994	7.95	424,994	—
October 1 - October 31	2,092,499	6.70	2,092,499	—
November 1 - November 7	363,439	6.65	363,439	—
Total	**2,894,049**	**6.89**	**2,894,049**	**—**

At a general meeting of its shareholders held on August 3, 2018, shareholders granted authority to the Company to effect share repurchases. The Company is accordingly authorized for a period of five years to enter into contracts with appointed brokers under which the Company may undertake purchases of its ordinary shares, acquired by the brokers on the NASDAQ and through other permitted channels, of up to approximately 10% of its issued ordinary share capital, at a minimum price of $0.01 per share, at a maximum price for such shares of 5% above the average volume-weighted average price of the Company's shares over the five business days prior to purchase and subject to additional restrictions (including as to pricing, volume, timing and the use of brokers or dealers) under applicable U.S. securities laws.

On August 21, 2018, the Company announced a share repurchase program authorized by the Board of Directors which allowed for the purchase of up to $20,000 thousand of the Company's ordinary shares in the period ending December 31, 2018. On November 7, 2018, the Company completed the repurchase program, resulting in the acquisition of a total of 2,894,049 ordinary shares for total consideration of $20,100 thousand, including applicable stamp duty of $100. The average price paid per share was $6.89. The share repurchase program resulted in 1,152,958 ordinary shares purchased and cancelled and 1,741,091 ordinary shares purchased into treasury, all of which remained held in treasury at December 31, 2018.

ITEM 16F. CHANGE IN REGISTRANT’S CERTIFYING ACCOUNTANT.

Not applicable.

ITEM 16G. CORPORATE GOVERNANCE.

As a “foreign private issuer,” as defined by the SEC, although we are permitted to follow certain corporate governance practices of England and Wales, instead of those otherwise required under NASDAQ rules for domestic issuers, we intend to follow the NASDAQ corporate governance rules applicable to foreign private issuers. While we voluntarily follow most NASDAQ corporate governance rules, we intend to take advantage of the following limited exemptions:

- Exemption from filing quarterly reports on Form 10-Q or providing current reports on Form 8-K disclosing significant events within four days of their occurrence;

- Exemption from Section 16 rules regarding sales of ordinary shares by insiders, which will provide less data in this regard than shareholders of U.S. companies that are subject to the U.S. Exchange Act;

- Exemption from the NASDAQ rules applicable to domestic issuers requiring disclosure within four business days of any determination to grant a waiver of the code of business conduct and ethics to directors and officers. Although we will require board approval of any such waiver, we may choose not to disclose the waiver in the manner set forth in the NASDAQ rules, as permitted by the foreign private issuer exemption;

- Exemption from the requirement that our Board have a compensation committee that is composed entirely of independent directors with a written charter addressing the committee’s purpose and responsibilities. Currently, our Compensation Committee is composed entirely of independent directors, but we are not certain at this time that we would not take advantage of this exception in the future; and

- Exemption from the requirements that director nominees are selected, or recommended for selection by our Board, either by (1) independent directors constituting a majority of our Board’s independent directors in a vote in which only independent directors participate, or (2) a nominations committee composed solely of independent directors, and that a formal written charter or board resolution, as applicable, addressing the nominations process is adopted.

Furthermore, NASDAQ Rule 5615(a)(3) provides that a foreign private issuer, such as us, may rely on home country corporate governance practices in lieu of certain of the rules in the NASDAQ Rule 5600 Series and Rule 5250(d), provided

that we nevertheless comply with NASDAQ's Notification of Noncompliance requirement (Rule 5625), the Voting Rights requirement (Rule 5640) and that we have an audit committee that satisfies Rule 5605(c)(3), consisting of committee members that meet the independence requirements of Rule 5605(c)(2)(A)(ii). Although we are permitted to follow certain corporate governance rules that conform to England and Wales requirements in lieu of many of the NASDAQ corporate governance rules, we intend to comply with the NASDAQ corporate governance rules applicable to foreign private issuers. Accordingly, our shareholders will not have the same protections afforded to stockholders of companies that are subject to all of the corporate governance requirements of NASDAQ. We may utilize these exemptions for as long as we continue to qualify as a "controlled company" and foreign private issuer.

For additional information see "Item 6.C.—Directors, Senior Management and Employees—Board Practices."

ITEM 16H. MINE SAFETY DISCLOSURE

The information concerning mine safety violations and other regulatory matters required by Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act is included in Exhibit 16.1 to this annual report.

PART III

ITEM 17. FINANCIAL STATEMENTS.

We have elected to provide financial statements pursuant to Item 18.

ITEM 18. FINANCIAL STATEMENTS.

Our Consolidated Financial Statements are included at the end of this annual report.

ITEM 19. EXHIBITS.

Exhibit No.	Exhibit Description
1.1	Articles of Association of Ferroglobe PLC, dated as of October 26, 2017 (incorporated by reference to Exhibit 1.1 to the annual report on Form 20-F filed by the Company on April 30, 2018)
3.1	Amended and Restated Shareholder Agreement, dated as of November 21, 2017, between Grupo VM and Ferroglobe (incorporated by reference to Exhibit 3.1 to the annual report on Form 20-F filed by the Company on April 30, 2018)
3.2	Amendment No. 1, dated January 23, 2018, to the Grupo VM Shareholder Agreement, between Grupo VM and Ferroglobe (incorporated by reference to Exhibit 3.2 to the annual report on Form 20-F filed by the Company on April 30, 2018)
3.3	Shareholder Agreement, dated as of December 23, 2015, between Alan Kestenbaum, certain of his affiliates and Ferroglobe (incorporated by reference to Exhibit 4.3 to the registration statement on Form F-1 filed by the Company on February 18, 2016)
4.1	Amended and Restated Business Combination Agreement, dated as of May 5, 2015, by and between Globe, Grupo VM, FerroAtlántica, Ferroglobe and Merger Sub (incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K filed by Globe with the SEC on May 6, 2015)
4.2	Letter Agreement, dated November 11, 2015, by and among Globe, Grupo VM, FerroAtlántica, Ferroglobe and Merger Sub (incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K filed by Globe with the SEC on November 12, 2015)
4.3	First Amendment to Amended and Restated Business Combination Agreement, dated September 10, 2015 (incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K filed by Globe with the SEC on September 11, 2015)
4.4	Credit Agreement, dated as of February 27, 2018, among Ferroglobe PLC, as borrower, the guarantors party thereto, the lenders party thereto, PNC Bank, National Association, as Administrative Agent, PNC Bank, National Association, as Issuing Lender and Swing Loan Lender, PNC Capital Markets LLC, Citizens Bank, National Association and BMO Capital Markets Corp., as Joint Legal Arrangers and Bookrunners, Citizens Bank, National Association, as Syndication Agent, and BMO Capital Markets Corp., as Documentation Agent (incorporated by reference to Exhibit 4.8 to the annual report on Form 20-F filed by the Company on April 30, 2018)
4.5	First Amendment, dated October 31, 2018, to the Credit Agreement dated February 27, 2018 by and among Ferroglobe PLC, the subsidiary guarantors party thereto, the various financial institutions from time to time party thereto and PNC Bank, as Administrative Agent

Exhibit No.	Exhibit Description
4.6	Second Amendment, dated February 22, 2019, to the Credit Agreement dated February 27, 2018 by and among Ferroglobe PLC, the subsidiary guarantors party thereto, the various financial institutions from time to time party thereto and PNC Bank, as Administrative Agent (incorporated by reference to Exhibit 4.1 on Form 6-K filed by the Company on February 26, 2019)
4.7	Indenture governing the $350,000,000 aggregate principal amount of 9.375% Senior Notes due 2022, dated as of February 15, 2017, among Ferroglobe PLC and Globe Specialty Metals, Inc., as Issuers, the Guarantors party thereto and Wilmington Trust, National Association, as Trustee, Registrar, Transfer Agent and Paying Agent (incorporated by reference to Exhibit 4.35 to the annual report on Form 20-F filed by the Company on May 1, 2017)
4.8†	Employment Agreement, dated January 27, 2011, between Globe and Alan Kestenbaum (incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q filed by Globe with the SEC on May 12, 2011)
4.9†	Amendment, dated February 22, 2015, to the Employment Agreement, dated January 27, 2011, between Globe and Alan Kestenbaum (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed by Globe with the SEC on February 23, 2015)
4.10†	Service Agreement, dated June 21, 2016, between Ferroglobe and Javier López Madrid (incorporated by reference to Exhibit 4.10 to the annual report on Form 20-F filed by the Company on May 1, 2017)
4.11†	Amendment, dated February 7, 2017, to the Service Agreement, dated June 21, 2016, between Ferroglobe and Javier López Madrid (incorporated by reference to Exhibit 4.11 to the annual report on Form 20-F filed by the Company on May 1, 2017)
4.12†	Service Agreement, dated June 21, 2016, between Ferroglobe and Pedro Larrea Paguaga (incorporated by reference to Exhibit 4.13 to the annual report on Form 20-F filed by the Company on April 30, 2018)
4.13†	Amended and Restated Service Agreement, dated June 28, 2017, between Ferroglobe and Pedro Larrea Paguaga
4.14†	2016 Equity Incentive Plan (incorporated by reference to Exhibit 4.14 to the annual report on Form 20-F filed by the Company on April 30, 2018)
4.15†	2006 Employee, Director and Consultant Stock Plan (incorporated by reference to Exhibit 10.1 to the Registration Statement on Form S-1 filed by Globe with the SEC on July 25, 2008)
4.16†	Amendments to 2006 Employee, Director and Consultant Stock Plan (incorporated by reference to Exhibit 10.3 to the Quarterly Report on Form 10-Q filed by Globe with the SEC on February 11, 2011)
4.17†	2010 Annual Executive Bonus Plan (incorporated by reference to Exhibit 10.15 to the Annual Report on Form 10-K filed by Globe with the SEC on September 28, 2010)
4.18†	2011 Annual Executive Long-Term Incentive Plan (incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q filed by Globe with the SEC on May 12, 2011)
4.19†	2012 Long-Term Incentive Plan (incorporated by reference to Exhibit B to Globe's Proxy Statement filed on October 28, 2011)
4.20†	Form Stock Option Agreement (incorporated by reference to Exhibit 10.13 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)

Exhibit No.	Exhibit Description
4.21†	Form Stock Appreciation Right Agreement (incorporated by reference to Exhibit 10.14 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.22†	Form Restricted Stock Unit Grant Agreement (cash settled) (incorporated by reference to Exhibit 10.15 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.23†	Form Restricted Stock Unit Grant Agreement (stock settled) (incorporated by reference to Exhibit 10.16 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.24	IT Services Agreement, dated as of January 1, 2004, between FerroAtlántica and Espacio Information Technology S.A. (incorporated by reference to Exhibit 10.17 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.25	IT Outsourcing Agreement, dated as of June 26, 2014, between FerroAtlántica de Mexico and Espacio Information Technology S.A. (incorporated by reference to Exhibit 10.18 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.26	IT Services Agreement, in force since January 1, 2006, between FerroPem S.A.S. and Espacio Information Technology S.A. (incorporated by reference to Exhibit 10.19 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.27	Outsourcing Agreement, in force since January 1, 2009, between Silicon Smelters (Pty.) Ltd. and Espacio Information Technology S.A. (incorporated by reference to Exhibit 10.20 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.28	Advisory Services Agreement, dated as of April 15, 2013, between FerroAtlántica S.A.U. and Villar Mir Energía S.L. (incorporated by reference to Exhibit 10.21 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.29	Advisory Services Agreement, dated as of April 15, 2013, between Hidro Nitro Española S.A. and Villar Mir Energía S.L. (incorporated by reference to Exhibit 10.22 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.30	Framework agreement for the supply of electricity to the Boo de Guarnizo facility (Cantabria) executed on June 22, 2010, between FerroAtlántica, S.A.U. and Villar Mir Energía S.L., as amended by the amendments provided to Globe (incorporated by reference to Exhibit 10.23 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.31	Framework Agreement, dated as of December 27, 2012, between Hidro Nitro Española S.A. and Villar Mir Energía S.L. (incorporated by reference to Exhibit 10.24 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)

Exhibit No.	Exhibit Description
4.32	Framework Agreement, dated as of December 29, 2010, between FerroAtlántica S.A.U. and Villar Mir Energía S.L. (incorporated by reference to Exhibit 10.25 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.33	Lease Agreement, dated as of August 9, 2007, between Torre Espacio Castellana S.A and FerroAtlántica S.L.U. (incorporated by reference to Exhibit 10.26 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.34	Lease Agreement, dated as of April 2, 2012, between Torre Espacio Castellana S.A and FerroAtlántica S.L.U. (incorporated by reference to Exhibit 10.27 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.35	Representation Contract, dated as of June 30, 2012, between Enérgya VM Generación S.L. and FerroAtlántica S.A.U. (incorporated by reference to Exhibit 10.28 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.36	Representation Contract, dated as of June 30, 2012, between Enérgya VM Generación S.L. and Hidro Nitro Española S.A. (incorporated by reference to Exhibit 10.29 to Amendment No. 1 to the Registration Statement on Form F-4 filed by Ferroglobe (formerly known as VeloNewco Limited) with the SEC on June 24, 2015)
4.37	Registration Rights Agreement, dated as of December 23, 2015, among Ferroglobe, Grupo VM and Alan Kestenbaum (incorporated by reference to Exhibit 10.27 to the registration statement on Form F-1 filed by the Company on February 18, 2016)
8.1	List of Significant Subsidiaries
12.1	Certification of Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
12.2	Certification of the Principal Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
13.1	Certification of the Principal Executive Officers and Principal Financial Officer Pursuant to 18 U.S.C. 1350, as adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
15.1	Consent of Deloitte, S.L., Independent Registered Public Accounting Firm for Ferroglobe PLC
16.1	Mine Safety and Health Administration Safety Data
101	Interactive Data Files formatted in XBRL (Extensible Business Reporting Language)

† Management contract or compensatory plan or arrangement

SIGNATURE

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

Date: April 29, 2019

Ferroglobe PLC
(Registrant)

By: /s/ Pedro Larrea Paguaga
Pedro Larrea Paguaga
Principal Executive Officer

By: /s/ Phillip Murnane
Phillip Murnane
Principal Accounting Officer

FERROGLOBE PLC

AUDITED CONSOLIDATED FINANCIAL STATEMENTS

Consolidated Financial Statements as of December 31, 2018 and 2017 and for each of the three years ended December 31, 2018, 2017 and 2016

Report of Independent Registered Public Accounting Firm on Consolidated Financial Statements as of December 31, 2018 and 2017 and for each of the three years in the period ended December 31, 2018, 2017, and 2016	F-2
Report of Independent Registered Public Accounting Firm on Internal Control over Financial Reporting as of December 31, 2018	F-3
Consolidated Statement of Financial Position as of December 31, 2018 and 2017	F-5
Consolidated Income Statement for the years ended December 31, 2018, 2017 and 2016	F-6
Consolidated Statement of Comprehensive Income (Loss) for the years ended December 31, 2018, 2017 and 2016	F-7
Consolidated Statement of Changes in Equity for the years ended December 31, 2018, 2017 and 2016	F-8
Consolidated Statement of Cash Flows for the years ended December 31, 2018, 2017 and 2016	F-9
Notes to the Consolidated Financial Statements	F-10

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of Ferroglobe PLC

Opinion on the Financial Statements

We have audited the accompanying consolidated statements of financial position of Ferroglobe PLC and subsidiaries (the "Company") as of December 31, 2018 and 2017, and the related consolidated income statements, the consolidated statements of comprehensive income (loss), the consolidated statements of changes in equity, and the consolidated statements of cash flows for each of the three years in the period ended December 31, 2018 and the related notes (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board (“IFRS-IASB”).

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company’s internal control over financial reporting as of December 31, 2018, based on the criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated April 29, 2019, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on these financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Deloitte, S.L.
Madrid, Spain
April 29, 2019

We have served as the Company´s auditor since 1992.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of Ferroglobe PLC

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Ferroglobe PLC and subsidiaries (the “Company”) as of December 31, 2018, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements of the Company as of December 31, 2018 and our report dated April 29, 2019, expressed an unqualified opinion on those financial statements.

As described in management’s annual report on internal control over financial reporting, management excluded from its assessment the internal control over financial reporting as it relates to the associated transactions and balances derived as a result of the acquisition of Ferroglobe Mangan Norge AS and Ferroglobe Manganèse France SAS (collectively, the “Acquired Business”), and which represents approximately 6% of total assets and 10% of net revenue of the consolidated financial statement amounts as of and for the year ended December 31, 2018. Accordingly, our audit did not include the internal control over financial reporting at the Acquired Business.

Basis for Opinion

The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying management’s annual report on internal control over financial reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Deloitte, S.L.
Madrid, Spain
April 29, 2019

FERROGLOBE PLC AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF FINANCIAL POSITION AS OF DECEMBER 31, 2018 AND 2017
Thousands of U.S. Dollars

	Notes	2018 US$'000	2017 US$'000
ASSETS			
Non-current assets			
Goodwill	Note 7	202,848	205,287
Other intangible assets	Note 8	51,822	58,658
Property, plant and equipment	Note 9	888,862	917,974
Other non-current financial assets	Note 10	70,343	89,315
Deferred tax assets	Note 22	14,589	5,273
Non-current receivables from related parties	Note 23	2,288	2,400
Other non-current assets	Note 12	10,486	30,059
Total non-current assets		**1,241,238**	**1,308,966**
Current assets			
Inventories	Note 11	456,970	361,231
Trade and other receivables	Note 10	155,996	111,463
Current receivables from related parties	Note 23	14,226	4,572
Current income tax assets	Note 22	27,404	17,158
Other current financial assets	Note 10	2,523	2,469
Other current assets	Note 12	8,813	9,926
Cash and cash equivalents	Note 10	216,647	184,472
Total current assets		**882,579**	**691,291**
Total assets		**2,123,817**	**2,000,257**
EQUITY AND LIABILITIES			
Equity			
Share capital		1,784	1,796
Reserves		941,707	996,380
Translation differences		(207,366)	(164,675)
Valuation adjustments		(11,559)	(16,799)
Result attributable to the Parent		43,661	(678)
Non-controlling interests		116,145	121,734
Total equity	Note 13	**884,372**	**937,758**
Non-current liabilities			
Deferred income		1,434	3,172
Provisions	Note 15	75,787	82,397
Bank borrowings	Note 16	132,821	—
Obligations under finance leases	Note 17	53,472	69,713
Debt instruments	Note 18	341,657	339,332
Other financial liabilities	Note 19	32,788	49,011
Other non-current liabilities	Note 21	25,030	3,536
Deferred tax liabilities	Note 22	77,379	65,142
Total non-current liabilities		**740,368**	**612,303**
Current liabilities			
Provisions	Note 15	40,570	33,095
Bank borrowings	Note 16	8,191	1,003
Obligations under finance leases	Note 17	12,999	12,920
Debt instruments	Note 18	10,937	10,938
Other financial liabilities	Note 19	52,524	88,420
Payables to related parties	Note 23	11,128	12,973
Trade and other payables	Note 20	256,823	192,859
Current income tax liabilities	Note 22	2,335	7,419
Other current liabilities	Note 21	103,570	90,569
Total current liabilities		**499,077**	**450,196**
Total equity and liabilities		**2,123,817**	**2,000,257**

Notes 1 to 30 are an integral part of the consolidated financial statements

FERROGLOBE PLC AND SUBSIDIARIES

CONSOLIDATED INCOME STATEMENT FOR 2018, 2017 AND 2016
Thousands of U.S. Dollars

	Notes	2018 US$'000	2017 US$'000	2016 (*) US$'000
Sales	Note 25.1	2,274,038	1,741,693	1,576,037
Cost of sales		(1,447,354)	(1,043,395)	(1,043,412)
Other operating income		46,037	18,199	26,215
Staff costs	Note 25.2	(341,064)	(301,963)	(296,399)
Other operating expense		(283,930)	(239,926)	(243,946)
Depreciation and amortization charges, operating allowances and write-downs	Note 25.3	(119,137)	(104,529)	(125,677)
Impairment losses	Note 25.5	(58,919)	(30,957)	(268,089)
Net (loss) gain due to changes in the value of assets	Note 25.5	(7,623)	7,504	1,891
Gain (loss) on disposal of non-current assets	Note 25.6	14,564	(4,316)	340
Bargain purchase gain	Note 5	40,142	—	—
Other losses	Note 29	—	(2,613)	(40)
Operating profit (loss)		**116,754**	**39,697**	**(373,080)**
Finance income	Note 25.4	5,374	3,708	1,536
Finance costs	Note 25.4	(62,022)	(65,412)	(30,251)
Financial derivative gain (loss)	Note 19	2,838	(6,850)	—
Exchange differences		(14,136)	8,214	(3,513)
Profit (loss) before tax		**48,808**	**(20,643)**	**(405,308)**
Income tax (expense) benefit	Note 22	(24,235)	14,821	46,695
Profit (loss) for the year		**24,573**	**(5,822)**	**(358,613)**
Loss attributable to non-controlling interests	Note 13	19,088	5,144	20,186
Profit (loss) attributable to the Parent		**43,661**	**(678)**	**(338,427)**

Earnings per share

		2018	2017	2016 (*)
Profit (loss) attributable to the Parent (US$'000)		43,661	(678)	(338,427)
Weighted average basic shares outstanding		171,406,272	171,949,128	171,838,153
Basic earnings (loss) per ordinary share (US$)	Note 14	**0.25**	**(0.00)**	**(1.97)**
Weighted average basic shares outstanding		171,406,272	171,949,128	171,838,153
Effect of dilutive securities		123,340	—	—
Weighted average dilutive shares outstanding		171,529,612	171,949,128	171,838,153
Diluted earnings (loss) per ordinary share (US$)	Note 14	**0.25**	**(0.00)**	**(1.97)**

(*) The amounts for 2016 have been re-presented to show the results of the Spanish energy business within profit (loss) from continuing operations, as described in Note 1 to the consolidated financial statements.

Notes 1 to 30 are an integral part of the consolidated financial statements

FERROGLOBE PLC AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME (LOSS) FOR 2018, 2017 AND 2016
Thousands of U.S. Dollars

	2018 US$'000	2017 US$'000	2016 US$'000
Net profit (loss)	**24,573**	**(5,822)**	**(358,613)**
Items that will not be reclassified subsequently to income or loss:			
Defined benefit obligation	3,568	4,511	4,297
Tax effect	(296)	—	—
Total	**3,272**	**4,511**	**4,297**
Items that may be reclassified subsequently to income or loss:			
Arising from cash flow hedges	10,006	(24,171)	—
Translation differences	(45,435)	54,670	(319)
Tax effect	—	—	—
Total income and expense recognized directly in equity	**(35,429)**	**30,499**	**(319)**
Items that have been reclassified to income or loss in the period:			
Arising from cash flow hedges	(7,228)	15,138	3,002
Tax effect	(190)	(390)	(751)
Total transfers to income or loss	**(7,418)**	**14,748**	**2,251**
Other comprehensive (loss) income for the year, net of income tax	**(39,575)**	**49,758**	**6,229**
Total comprehensive income (loss) for the year	**(15,002)**	**43,936**	**(352,384)**
Attributable to the Parent	4,976	47,158	(332,198)
Attributable to non-controlling interests	(19,978)	(3,222)	(20,186)

Notes 1 to 30 are an integral part of the consolidated financial statements

FERROGLOBE PLC AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FOR 2018, 2017 AND 2016
Thousands of U.S. Dollars

	Total Amounts Attributable to Owners							
	Issued Shares (Thousands)	Share Capital US$'000	Reserves US$'000	Translation Differences US$'000	Valuation Adjustments US$'000	Result for the Year US$'000	Non-controlling Interests US$'000	Total US$'000
Balance at January 1, 2016	**171,838**	**1,288,787**	**143,170**	**(217,104)**	**(18,435)**	**(43,268)**	**141,823**	**1,294,973**
Comprehensive (loss) income for 2016	—	—	—	(319)	6,548	(338,427)	(20,186)	(352,384)
Share decrease (net effect)	—	(1,287,068)	1,287,068	—	—	—	—	—
Share issuance costs	—	—	(275)	—	—	—	—	(275)
Dividends paid	—	—	(54,988)	—	—	—	—	(54,988)
Distribution of 2015 loss	—	—	(43,268)	—	—	43,268	—	—
Other changes	—	76	721	—	—	—	3,919	4,716
Balance at December 31, 2016	**171,838**	**1,795**	**1,332,428**	**(217,423)**	**(11,887)**	**(338,427)**	**125,556**	**892,042**
Comprehensive income (loss) for 2017	—	—	—	52,748	(4,912)	(678)	(3,222)	43,936
Issue of share capital	139	1	179	—	—	—	—	180
Share-based compensation	—	—	2,405	—	—	—	—	2,405
Distribution of 2016 loss	—	—	(338,427)	—	—	338,427	—	—
Dividends paid to joint venture partner	—	—	—	—	—	—	(7,350)	(7,350)
Non-controlling interest arising on the acquisition of FerroSolar Opco Group S.L.	—	—	—	—	—	—	6,750	6,750
Other changes	—	—	(205)	—	—	—	—	(205)
Balance at December 31, 2017	**171,977**	**1,796**	**996,380**	**(164,675)**	**(16,799)**	**(678)**	**121,734**	**937,758**
Comprehensive (loss) income for 2018	—	—	—	(44,276)	5,591	43,661	(19,978)	(15,002)
Issue of share capital	40	—	240	—	—	—	—	240
Cash settlement of equity awards	—	—	(680)	—	—	—	—	(680)
Share-based compensation	—	—	2,798	—	—	—	—	2,798
Distribution of 2017 loss	—	—	(678)	—	—	678	—	—
Dividends paid	—	—	(20,642)	—	—	—	—	(20,642)
Own shares acquired	(1,153)	(12)	(20,088)	—	—	—	—	(20,100)
Increase of Parent's ownership interest in FerroAtlántica de Venezuela S.A.	—	—	(15,623)	1,585	(351)	—	14,389	—
Balance at December 31, 2018	**170,864**	**1,784**	**941,707**	**(207,366)**	**(11,559)**	**43,661**	**116,145**	**884,372**

Notes 1 to 30 are an integral part of the consolidated financial statements

FERROGLOBE PLC AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF CASH FLOWS FOR 2018, 2017 AND 2016
Thousands of U.S. Dollars

	2018 US$'000	2017 US$'000	2016 US$'000
Cash flows from operating activities:			
Profit (loss) for the year	**24,573**	**(5,822)**	**(358,613)**
Adjustments to reconcile net profit (loss) to net cash provided by operating activities:			
Income tax expense (benefit)	24,235	(14,821)	(46,695)
Depreciation and amortization charges, operating allowances and write-downs	119,137	104,529	125,677
Finance income	(5,374)	(3,708)	(1,536)
Finance costs	62,022	65,412	30,251
Financial derivative (gain) loss	(2,838)	6,850	—
Exchange differences	14,136	(8,214)	3,513
Impairment losses	58,919	30,957	268,089
Bargain purchase gain	(40,142)	—	—
Loss (gain) due to changes in the value of assets	7,623	(7,504)	(1,891)
(Gain) loss on disposal of non-current assets	(14,564)	4,316	(340)
Share-based compensation	2,798	2,405	—
Other loss	—	2,613	40
Changes in operating assets and liabilities:			
(Increase) decrease in inventories	(101,024)	(16,274)	108,207
(Increase) decrease in trade and other receivables	(25,807)	50,168	56,297
Increase in trade and other payables	55,410	17,613	28,572
Other amounts paid due to operating activities	(25,901)	(12,251)	(50,001)
Income tax paid	(36,408)	(26,764)	(10,933)
Interest paid	(43,018)	(39,130)	(29,468)
Net cash provided by operating activities	**73,777**	**150,375**	**121,169**
Cash flows from investing activities:			
Interest and finance income received	3,833	952	1,554
Payments due to investments:			
Acquisition of subsidiaries	(20,379)	—	—
Other intangible assets	(3,313)	(811)	(4,914)
Property, plant and equipment	(106,136)	(74,616)	(71,119)
Other financial assets	—	(343)	(9,912)
Disposals:			
Disposal of subsidiaries	20,533	—	—
Other non-current assets	12,734	—	—
Other	6,853	—	110
Net cash used by investing activities	**(85,875)**	**(74,818)**	**(84,281)**
Cash flows from financing activities:			
Dividends paid	(20,642)	—	(54,988)
Payment for debt issuance costs	(4,905)	(16,765)	—
Repayment of other financial liabilities	(33,096)	—	—
Proceeds from debt issuance	—	350,000	—
Increase (decrease) in bank borrowings:			
Borrowings	252,200	31,455	124,384
Payments	(106,514)	(453,948)	(81,237)
Proceeds from stock option exercises	240	180	—
Other amounts (paid) received due to financing activities	(13,880)	(24,319)	61,758
Payments to acquire or redeem own shares	(20,100)	—	—
Net cash provided (used) by financing activities	**53,303**	**(113,397)**	**49,917**
Total net cash flows for the year	**41,205**	**(37,840)**	**86,805**
Beginning balance of cash and cash equivalents	184,472	196,982	116,666
Exchange differences on cash and cash equivalents in foreign currencies	(9,030)	25,330	(6,489)
Ending balance of cash and cash equivalents	**216,647**	**184,472**	**196,982**

Notes 1 to 30 are an integral part of the consolidated financial statements

Ferroglobe PLC and Subsidiaries

Notes to the Consolidated Financial Statements
December 31, 2018, 2017, and 2016
(U.S. Dollars in thousands, except share and per share data)

1. General information

Ferroglobe PLC and subsidiaries (the "Company" or "Ferroglobe") is among the world's largest producers of silicon metal and silicon-based alloys, important ingredients in a variety of industrial and consumer products. The Company's customers include major silicone chemical, aluminum and steel manufacturers, auto companies and their suppliers, ductile iron foundries, manufacturers of photovoltaic solar cells and computer chips, and concrete producers. Additionally, the Company has been operating hydroelectric plants (hereinafter "energy business") in Spain and France.

Ferroglobe PLC (the "Parent Company" or "the Parent") is a public limited company that was incorporated in the United Kingdom on February 5, 2015 (formerly named 'Velonewco Limited'). The Parent's registered office is 2nd Floor West Wing, Lansdowne House, 57 Berkeley Square, London (United Kingdom).

On December 23, 2015, Ferroglobe PLC consummated the acquisition ("Business Combination") of Globe Specialty Metals, Inc. and subsidiaries ("GSM" or "Globe") and Grupo FerroAtlántica, S.A.U. ("FerroAtlántica").

Presentation of results of Spanish energy business

As described in Note 29 of these financial statements, the Company signed an agreement for the sale of its Spanish energy business on December 12, 2016. The results of operations of the division were previously presented as a discontinued operation in the consolidated financial statements for the year ended December 31, 2016 and the assets and liabilities of the business were classified as held for sale in accordance with requirements of IFRS 5 Non-current Assets Held for Sale and Discontinued Operations as of December 31, 2016. Subsequently, in July 2017, the Company announced that it did not receive the necessary regulatory approvals to divest of these assets and the sale did not proceed. Accordingly, the results of Spanish energy business are presented within continuing operations for the years ended December 31, 2018 and 2017 and the consolidated income statement for the year ended 2016 has been re-presented to show the results of the Spanish energy business within income from continuing operations.

2. Organization and Subsidiaries

Ferroglobe has a diversified production base consisting of production facilities across the United States, Europe, South America, South Africa and Asia.

The subsidiaries of Ferroglobe as of December 31, 2018, classified by business activity, were as follows:

	Percentage of Ownership			
	Direct	Total	Line of Business	Registered
Alabama Sand and Gravel, Inc.	—	100.0	Electrometallurgy - North America	Delaware - USA
Alden Resources, LLC	—	100.0	Electrometallurgy - North America	Delaware - USA
Alden Sales Corporation, LLC	—	100.0	Electrometallurgy - North America	Delaware - USA
ARL Resources, LLC	—	100.0	Electrometallurgy - North America	Delaware - USA
ARL Services, LLC	—	100.0	Electrometallurgy - North America	Delaware - USA
Core Metals Group Holdings, LLC	—	100.0	Electrometallurgy - North America	Delaware - USA
Core Metals Group, LLC	—	100.0	Electrometallurgy - North America	Delaware - USA
Gatliff Services, LLC	—	100.0	Electrometallurgy - North America	Delaware - USA
GBG Holdings, LLC	—	100.0	Electrometallurgy - North America	Delaware - USA
Globe Metallurgical Inc.	—	100.0	Electrometallurgy - North America	Delaware - USA
Globe Metals Enterprises, Inc.	—	100.0	Electrometallurgy - North America	Delaware - USA
GSM Alloys I, Inc.	—	100.0	Electrometallurgy - North America	Delaware - USA
GSM Alloys II, Inc.	—	100.0	Electrometallurgy - North America	Delaware - USA
GSM Enterprises Holdings, Inc.	—	100.0	Electrometallurgy - North America	Delaware - USA
GSM Enterprises, LLC	—	100.0	Electrometallurgy - North America	Delaware - USA
GSM Sales, Inc.	—	100.0	Electrometallurgy - North America	Delaware - USA
LF Resources, Inc.	—	100.0	Electrometallurgy - North America	Delaware - USA
Metallurgical Process Materials, LLC	—	100.0	Electrometallurgy - North America	Delaware - USA
Norchem, Inc.	—	100.0	Electrometallurgy - North America	Florida - USA
QSIP Canada ULC	—	100.0	Electrometallurgy - North America	Canada
Quebec Silicon General Partner	—	51.0	Electrometallurgy - North America	Canada
Quebec Silicon Limited Partnership	—	51.0	Electrometallurgy - North America	Canada
Tennessee Alloys Company, LLC	—	100.0	Electrometallurgy - North America	Delaware - USA
West Virginia Alloys, Inc.	—	100.0	Electrometallurgy - North America	Delaware - USA
WVA Manufacturing, LLC	—	51.0	Electrometallurgy - North America	Delaware - USA
Cuarzos Industriales, S.A.U.	—	100.0	Electrometallurgy - Europe	A Coruña - Spain
Ferroatlántica del Cinca, S.L. (1)	—	99.9	Electrometallurgy - Europe	Spain
Ferroatlántica, S.A.U. (2)	—	100.0	Electrometallurgy - Europe	Madrid - Spain
Ferroglobe Mangan Norge AS (1)	—	100.0	Electrometallurgy - Europe	Norway
Ferroglobe Manganese France SAS (1)	—	100.0	Electrometallurgy - Europe	France
FerroPem, S.A.S.	—	100.0	Electrometallurgy - Europe	France
Grupo FerroAtlántica, S.A.U	100	100.0	Electrometallurgy - Europe	Madrid - Spain
Islenska Kisilfelagio EHF (Icelandic Silicon Corp.)	—	20.1	Electrometallurgy - Europe	Iceland
Kintuck (France) SAS (1)	—	100.0	Electrometallurgy - Europe	France
Kintuck AS (1)	—	100.0	Electrometallurgy - Europe	Norway
Rocas, Arcillas y Minerales, S.A.	—	66.7	Electrometallurgy - Europe	A Coruña - Spain
Rebone Mining (Pty.), Ltd.	—	74.0	Electrometallurgy - South Africa	Polokwane - South Africa
Silicon Smelters (Pty.), Ltd.	—	100.0	Electrometallurgy - South Africa	Polokwane - South Africa
Silicon Technology (Pty.), Ltd.	—	100.0	Electrometallurgy - South Africa	South Africa
Thaba Chueu Mining (Pty.), Ltd.	—	74.0	Electrometallurgy - South Africa	Polokwane - South Africa
16 Front Street, LLC	—	100.0	Other segments	Delaware - USA
Actifs Solaires Bécancour, Inc	—	100.0	Other segments	Canada
Cuarzos Indus. de Venezuela (Cuarzoven), S.A.	—	100.0	Other segments	Venezuela
Emix, S.A.S.	—	100.0	Other segments	France
ECPI, Inc.	—	100.0	Other segments	Delaware - USA
FerroAtlántica Canada Company Ltd	—	100.0	Other segments	Canada
Ferroatlántica de México, S.A. de C.V.	—	100.0	Other segments	Nueva León - Mexico
Ferroatlántica de Venezuela (FerroVen), S.A.	—	99.9	Other segments	Venezuela
Ferroatlántica Deutschland, GmbH	—	100.0	Other segments	Germany
Ferroatlántica do Brasil Mineraçao Ltda.	—	70.0	Other segments	Brazil
Ferroatlántica I+D, S.L.U.	—	100.0	Other segments	Madrid - Spain
FerroAtlántica India Private Limited	—	100.0	Other segments	India
FerroAtlántica International Ltd	—	100.0	Other segments	United Kingdom
Ferroatlántica y Cía., F. de Ferroaleac. y Metales, S.C.	—	100.0	Other segments	Madrid - Spain
Ferroatlántica, S.A.U. (2)	—	100.0	Other segments	Madrid - Spain
Ferroglobe Services (UK) PLC	100	100.0	Other segments	United Kingdom
FerroManganese Mauritania SARL	—	90.0	Other segments	Mauritania
Ferroquartz Company Inc.	—	100.0	Other segments	Canada
Ferroquartz Holdings, Ltd (Hong Kong)	—	100.0	Other segments	Hong Kong
FerroQuartz Mauritania SARL	—	90.0	Other segments	Mauritania
FerroQuébec Company Inc.	—	100.0	Other segments	Canada
Ferrosolar OPCO Group SL.	—	75.0	Other segments	Spain
Ferrosolar R&D SL.	—	51.0	Other segments	Spain
FerroTambao, SARL	—	90.0	Other segments	Burkina Faso
Ganzi Ferroatlántica Silicon Industry Company, Ltd.	—	75.0	Other segments	Sichuan - China
GBG Financial LLC	—	100.0	Other segments	Delaware - USA
GBG Holdings, LLC	—	100.0	Other segments	Delaware - USA
Globe Argentina Holdco, LLC	—	100.0	Other segments	Delaware - USA
Globe BG, LLC	—	100.0	Other segments	Delaware - USA
Globe LSE, Inc.	—	100.0	Other segments	Delaware - USA
Globe Metales S.R.L.	—	100.0	Other segments	Argentina
Globe Metallurgical Carbon, LLC	—	100.0	Other segments	Delaware - USA
Globe Specialty Metals, Inc.	100	100.0	Other segments	Delaware - USA
GSM Financial, Inc.	—	100.0	Other segments	Delaware - USA
GSM Netherlands, BV	—	100.0	Other segments	Netherlands
Laurel Ford Resources, Inc.	—	100.0	Other segments	Delaware - USA
Mangshi FerroAtlántica Mining Indus. Serv. Ltd	—	100.0	Other segments	Mangshi, Dehong -Yunnan -China
Mangshi Sinice Silicon Industry Company Limited	—	100.0	Other segments	Mangshi, Dehong -Yunnan -China
MST Financial Holdings, LLC	—	100.0	Other segments	Delaware - USA
MST Financial, LLC	—	100.0	Other segments	Delaware - USA
MST Resources, LLC	—	100.0	Other segments	Delaware - USA
Ningxia Yonvey Coal Industrial Co., Ltd.	—	98.0	Other segments	China
Photosil Industries, SAS	—	100.0	Other segments	France
Silicio Ferrosolar, SLU	—	100.0	Other segments	Spain
Solsil, Inc.	—	92.4	Other segments	Delaware - USA
Ultra Core Polska (UCP)	—	100.0	Other segments	Poland
Ultracore Energy SA	—	100.0	Other segments	Argentina

(1) Entered into the scope of consolidation during 2018.
(2) FerroAtlántica, S.A.U. carries on business activities in both "Electrometallurgy – Europe" and "Other segments" (energy business)

Subsidiaries are all companies over which Ferroglobe has control.

Control is achieved when the Company:

- has power over the investee;
- is exposed, or has rights, to variable returns from its involvement with the investee; and
- has the ability to use its power over the investee to affect the amount of the investor's returns.

The Company has power over the investee when the voting rights are sufficient to give it the practical ability to direct the relevant activities of the investee unilaterally. The Company considers all relevant facts and circumstances in assessing whether or not the Company's voting rights in an investee are sufficient to give it power, including:

- the total voting rights held by the Company relative to the size and dispersion of holdings of the other vote holders;
- potential voting rights held by the Company, other vote holders or other parties;
- rights arising from other contractual arrangements; and
- any additional facts and circumstances that indicate that the Company has, or does not have, the current ability to direct the relevant activities at the time these decisions need to be made, including voting patterns at previous shareholders' meetings.

Consolidation of a subsidiary begins when the Company obtains control over the subsidiary and ceases when the Company loses control of the subsidiary.

The Company uses the acquisition method to account for the acquisition of subsidiaries. According to this method, the consideration transferred for the acquisition of a subsidiary corresponds to the fair value of the assets transferred, the liabilities incurred and the equity interests issued by the Company. The consideration transferred also includes the fair value of any asset or liability resulting from a contingent consideration arrangement. Any contingent consideration transferred by the Company is recognized at fair value at the date of acquisition. Subsequent changes in the fair value of the contingent consideration classified as an asset or a liability are recognized in accordance with IAS 39 either in the income statement or in the statement of comprehensive (loss) income. The costs related to the acquisition are recognized as expenses in the years incurred. The identifiable assets acquired and the liabilities and contingent liabilities assumed in a business combination are initially recognized at their fair value at the date of acquisition. The Company recognizes any non-controlling interest in the acquiree at the non-controlling interest's proportionate share of the acquiree's identifiable net assets.

Profit or loss for the period and each component of other comprehensive (loss) income are attributed to the owners of the Company and to the non-controlling interests. The Company attributes total comprehensive (loss) income to the owners of the Company and to the non-controlling interests even if the profit or loss of the non-controlling interests gives rise to a balance receivable.

All assets and liabilities, equity, income, expenses and cash flows relating to transactions between subsidiaries are eliminated in full in consolidation.

3. Basis of presentation and basis of consolidation

3.1 Basis of presentation

These consolidated financial statements have been issued in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board and interpretations issued by the International Financial Reporting Interpretations Committee (collectively "IFRS").

The consolidated financial statements have been authorized for issuance on April 29, 2019.

All accounting policies and measurement bases with effect on the consolidated financial statements were applied in their preparation.

The consolidated financial statements were prepared on a historical cost basis, with the exceptions disclosed in the notes to the consolidated financial statements, where applicable, and in those situations where IFRS requires that financial assets and financial liabilities are valued at fair value.

3.2 International financial reporting standards

Application of new accounting standards

New and amended standards and interpretations adopted by the Company

Standards, interpretations and amendments effective from January 1, 2018, applied by the Company in the preparation of these consolidated financial statements:

- IFRS 9 'Financial Instruments'
- IFRS 15 'Revenue from Contracts with Customers'
- IFRS 2 (Amendment) 'Classification and Measurement of Share-based Payment Transactions'
- IFRS 4 (Amendment). 'Applying IFRS 9 'Financial Instruments' with IFRS 4 'Insurance Contracts''
- IFRIC Interpretation 22 'Foreign Currency Transactions and Advance Consideration'
- Annual improvements cycle to IFRS 2014-2016
- IAS 40 (Amendment) 'Transfers of Investments Property'

The impacts of applying IFRS 9 and IFRS 15 for the first time are discussed further below. The applications of the other amendments and interpretations above did not have an impact on the consolidated financial statements of the Company. The Company has not early adopted any standards, interpretations or amendments that have been issued but are not yet effective.

Adoption of IFRS 9 – Financial Instruments

IFRS 9 addresses the classification, measurement and recognition of financial assets and financial liabilities, introduces a new impairment model for financial assets, as well as new rules for hedge accounting. The standard replaced IAS 39 – Financial Instruments: Recognition and Measurement, in its entirety. Ferroglobe adopted IFRS 9 and the related consequential amendments to other IFRSs in the financial reporting period beginning January 1, 2018. The Company has applied the new standard in accordance with the transition provisions of IFRS 9.

Comparatives have not been restated. There were no adjustments to opening reserves at January 1, 2018. The Company's revised accounting policies in relation to financial instruments are provided in Notes 4.5 and 4.6.

Classification and measurement: IFRS 9 provides a single classification and measurement approach for financial assets that reflects the business model in which they are managed and their cash flow characteristics. For financial liabilities the existing classification and measurement requirements of IAS 39 are largely retained. The principal change in classification was that those financial assets previously classified as "loans and receivables" under IAS 39 are now classified as "financial assets measured at amortized cost" (for further details see Note 10). There were no changes in measurement as a result of adopting IFRS 9.

Derecognition of financial liabilities: IFRS 9 sets out that when the terms of a financial liability are modified without this resulting in derecognition, a gain or loss should be recognized. This modification gain or loss is equal to the difference between the present value of the cash flows under the original and modified terms discounted at the original effective interest rate. Previously, under IAS 39, this gain or loss was amortized over the life of the modified financial liability through the effective interest rate. At January 1, 2018, Ferroglobe has no outstanding financial liabilities that had previously been modified and therefore there was no impact to the Company's statement of financial position upon adoption of IFRS 9. The accounting for any future modifications would follow IFRS 9.

Impairment: IFRS 9 introduced a forward-looking expected credit loss model that may result in earlier recognition of credit losses than the incurred loss model of IAS 39. The simplified approach was used for trade and other receivables. Substantially all of the Company's trade receivables in the US, Canada, France and Spain are sold and derecognized pursuant to an accounts receivable securitization program (see Note 10). Given the short-term nature of the majority of Ferroglobe's remaining financial assets, the low level of credit losses and the Company's active management of credit risk, the effects of the change in impairment model were assessed to be immaterial.

Hedge accounting: IFRS 9 simplified hedge accounting requirements and more closely aligned them to an entity's risk management strategy. Upon adoption of IFRS 9, Ferroglobe's existing hedge relationship continued to qualify as an effective cash flow hedge and there was no impact of the standard on the Company's statement of financial position at January 1, 2018. IFRS 9 has also clarified that when measuring ineffectiveness in a hedging relationship, currency basis is an item that that is present in certain derivatives, such as Ferroglobe's cross currency swap (see Note 19), but not in the hedged item. This difference may result in increased ineffectiveness and volatility in Ferroglobe's profit or loss in the future, but the impact of this to date has not been material.

Adoption of IFRS 15 – Revenue from Contracts with Customers

IFRS 15 provides a single model of accounting for revenue arising from contracts with customers, focusing on the identification and satisfaction of performance obligations. The standard replaced all existing revenue standards and interpretations in IFRS. Ferroglobe adopted IFRS 15 for the financial reporting period beginning January 1, 2018.

The Company's revised accounting policy in relation to revenue is provided in Note 4.16.

Under IFRS 15, revenue from contracts with customers is recognized when or as the Company satisfies a performance obligation by transferring a promised good or service to a customer. A good or service is transferred when the customer obtains control of that good or service. The transfer of control of silicon metal, silicon-based specialty alloys, ferroalloys and other items sold by the Company usually coincides with title passing to the customer and as guided by the Incoterms. The Company principally satisfies its performance obligations at a point in time and the amounts of revenue recognized relating to performance obligations satisfied over time are not significant. The accounting for revenue under IFRS 15 does not, therefore, represent a substantive change from the Company's previous practice for recognizing revenue from sales to customers. The Company identified certain minor changes in accounting relating to its revenue from contracts with customers but the new standard had no material effect on the group's net assets as at January 1, 2018 and so no transition adjustment is presented.

New and amended standards and interpretations not yet adopted

Certain new accounting standards and interpretations have been published that are not mandatory for the reporting period ended December 31, 2018 and have not been early adopted by the Company. With the exception of IFRS 16 'Leases', which is discussed further below, there are no standards or interpretations that are not yet effective and that would be expected to have a material impact on the entity in the current or future reporting periods and on foreseeable future transactions.

IFRS 16 – Leases

IFRS 16 Leases replaces the existing standard on accounting for leases, IAS 17, and the related interpretations. The Company will apply the standard from its mandatory adoption date of January 1, 2019 and will transition to the standard in accordance with the modified retrospective approach; the prior year figures will not be adjusted. The analysis conducted as part of the Company-wide project on initial application indicated that IFRS 16 will have a material effect on components of the consolidated financial statements and the presentation of the net assets, financial position and results of operations of Ferroglobe:

Balance sheet: IFRS 16 requires lessees to adopt a uniform approach to the presentation of leases. In future, assets must be recognized for the right of use received and liabilities must be recognized for the payment obligations entered into for all leases. The Company will make use of the relief options provided for leases of low-value assets and short-term leases (shorter than twelve months). In contrast, the accounting requirements for lessors remain largely unchanged, particularly with regard to the continued requirements to classify leases according to IAS 17. For leases that have been classified to date as operating leases in accordance with IAS 17, the lease liability will be recognized at the present value of the remaining lease payments, discounted using the lessee's incremental borrowing rate at the time the standard is first applied. The right-of-use asset will generally be measured at the amount of the lease liability. Advance payments and liabilities from the previous financial year will also be accounted for. The analysis conducted as part of the Company-wide project on initial application indicated the probable recognition of lease liabilities in the balance sheet totaling around $28,250 thousand (January 1, 2019) as a result of the transition. Retained earnings will not change on initial application. Net debt will rise accordingly due to the material increase in lease liabilities.

Income statement: In contrast to the presentation to date of operating lease expenses, in future depreciation charges on right-of-use assets and the interest expense from unwinding of the discount on the lease liabilities will be recognized. In 2019 this change is expected to decrease other operating expenses by $9,684 thousand and increase depreciation expense and finance costs by $8,890 thousand and $1,215 thousand, respectively.

Cash flow statement: The change in presentation of operating lease expenses will result in a corresponding improvement of cash flows from operating activities and a decline in cash flows from financing activities.

3.3 Currency

The Parent's functional currency is the Euro. The functional currencies of subsidiaries are determined by the primary economic environment in which each subsidiary operates.

The reporting currency of the Company is U.S. Dollars and as such the accompanying results and financial position have been translated pursuant to the provisions indicated in IAS 21.

All differences arising from the aforementioned translation are recognized in equity under "Translation differences".

Upon the disposal of a foreign operation, the translation differences relating to that operation deferred as a separate component of consolidated equity are recognized in the consolidated income statement when the gain or loss on disposal is recognized.

3.4 Responsibility for the information and use of estimates

The information in these consolidated financial statements is the responsibility of Ferroglobe's management.

Certain assumptions and estimates were made by management in the preparation of these consolidated financial statements, including:

- The impairment losses on certain assets, including property, plant and equipment and goodwill.
- The useful life of property, plant and equipment and intangible assets.
- The fair value of certain unquoted financial assets.
- The assumptions used in the actuarial calculation of pension liabilities.
- The discount rate used to calculate the present value of certain collection rights and payment obligations.
- Provisions for contingencies and environmental liabilities.
- The calculation of income tax and of deferred tax assets and liabilities.

The Company based its estimates and judgments on historical experience, known or expected trends and other factors that are believed to be reasonable under the circumstances. Actual results may differ materially from these estimates. Changes in accounting estimates are applied in accordance with IAS 8.

At the date of preparation of these consolidated financial statements no events had taken place that might constitute a significant source of uncertainty regarding the accounting effect that such events might have in future reporting periods.

3.5 Basis of consolidation

The financial statements of the subsidiaries are fully consolidated with those of the Parent. Accordingly, all balances and effects of the transactions between consolidated companies are eliminated in consolidation.

Non-controlling interests are presented in "Equity – Non-controlling interests" in the consolidated statement of financial position, separately from the consolidated equity attributable to the Parent. The share of non-controlling interests in the profit or loss for the year is presented under "Loss attributable to non-controlling interests" in the consolidated income statement.

When necessary, adjustments are made to the financial statements of subsidiaries to align the accounting policies used to the accounting policies of the Company.

4. Accounting policies

The principal IFRS accounting policies applied in preparing these consolidated financial statements were in effect at the date of preparation are described below.

4.1 Goodwill

Goodwill arising on consolidation represents the excess of the cost of acquisition over the Company's interest in the fair value of the identifiable assets and liabilities of a subsidiary at the date of acquisition.

Any excess of the cost of the investments in the consolidated companies over the corresponding underlying carrying amounts acquired, adjusted at the date of first-time consolidation, is allocated as follows:

1. If it is attributable to specific assets and liabilities of the companies acquired, increasing the value of the assets (or reducing the value of the liabilities) whose market values were higher (lower) than the carrying amounts at which they had been recognized in their balance sheets and whose accounting treatment was similar to that of the same assets (liabilities) of the Company amortization, accrual, etc.

2. If it is attributable to specific intangible assets, recognizing it explicitly in the consolidated statement of financial position provided that the fair value at the date of acquisition can be measured reliably.

3. The remaining amount is recognized as goodwill, which is allocated to one or more specific cash-generating units.

Goodwill is only recognized when it has been acquired for consideration and represents, therefore, a payment made by the acquirer for future economic benefits from assets of the acquired company that are not capable of being individually identified and separately recognized.

On disposal of a subsidiary, the attributable amount of goodwill is included in the determination of the gain or loss on disposal.

4.2 Other intangible assets

Other intangible assets are assets without physical substance which can be individually identified either because they are separable or because they arise as a result of a legal or contractual right or of a legal transaction or were developed by the consolidated companies. Only intangible assets whose value can be measured reliably and from which the Company expects to obtain future economic benefits are recognized in the consolidated statement of financial position.

Intangible assets are recognized initially at acquisition or production cost. The aforementioned cost is amortized systematically over each asset's useful life. At each reporting date, these assets are measured at acquisition cost less accumulated amortization and any accumulated impairment losses, if any. The Company reviews amortization periods and amortization methods for finite-lived intangible assets at the end of each fiscal year.

The Company's main intangible assets are as follows:

Development expenditures

Development expenditures are capitalized if they meet the requirements of identifiability, reliability in cost measurement and high probability that the assets created will generate economic benefits. Developmental expenditures are amortized on a straight-line basis over the useful lives of the assets, which are between four and ten years.

Expenditures on research activities are recognized as expenses in the years in which they are incurred.

Power supply agreements

Power supply agreements are amortized on a straight-line basis over the term in which the agreement is effective.

Rights of use

Rights of use granted are amortized on a straight-line basis over the term in which the right of use was granted from the date it is considered that use commenced. Rights of use are generally amortized over a period ranging from 10 to 20 years.

Computer software

Computer software includes the costs incurred in acquiring or developing computer software, including the related installation. Computer software is amortized on a straight-line basis over two to five years.

Computer system maintenance costs are recognized as expenses in the years in which they are incurred.

Other intangible assets

Other intangible assets include:

- Supply agreements which are amortized in accordance with their estimated useful lives (see Note 8).

- CO_2 emissions allowances (“rights held emit greenhouse gasses”) which are not amortized, but rather are expensed when used (see Note 4.20).

4.3 Property, plant and equipment

Cost

Property, plant and equipment for our own use are initially recognized at acquisition or production cost and are subsequently measured at acquisition or production cost less accumulated depreciation and any accumulated impairment losses.

When the construction and start-up of non-current assets require a substantial period of time, the borrowing costs incurred over that period are capitalized.

The costs of expansion, modernization or improvements leading to increased productivity, capacity or efficiency or to a lengthening of the useful lives of the assets are capitalized. Repair, upkeep and maintenance expenses are recognized in the consolidated income statement for the year in which they are incurred.

Mineral reserves are recorded at fair value at the date of acquisition. Depletion of mineral reserves is computed using the units-of-production method utilizing only proven and probable reserves (as adjusted for recoverability factors) in the depletion base.

Property, plant and equipment in the course of construction are transferred to property, plant and equipment in use at the end of the related development period.

Depreciation

The Company depreciates property, plant and equipment using the straight-line method at annual rates based on the following years of estimated useful life:

	Years of Estimated Useful Life
Properties for own use	25-50
Plant and machinery	8-20
Tools	12.5-15
Furniture and fixtures	10-15
Computer hardware	4-8
Transport equipment	10-15

Land included within property, plant and equipment is considered to be an asset with an indefinite useful life and, as such, is not depreciated, but rather it is tested for impairment annually. The Company reviews residual value, useful lives, and the depreciation method for property, plant and equipment annually.

Environment

The costs arising from the activities aimed at protecting and improving the environment are accounted for as an expense for the year in which they are incurred. When they represent additions to property, plant and equipment aimed at minimizing the environmental impact and protecting and enhancing the environment, they are capitalized to non-current assets.

4.4 Impairment of property, plant and equipment, intangible assets and goodwill

In order to ascertain whether its assets have become impaired, the Company compares their carrying amount with their recoverable amount at the end of the reporting period, or more frequently if there are indications that the assets might have become impaired. Where the asset itself does not generate cash flows that are independent from other assets, the Company estimates the recoverable amount of the cash-generating unit to which the asset belongs.

Recoverable amount is the higher of:

- Fair value: the price that would be agreed upon by two independent parties, less estimated costs to sell, and

- Value in use: the present value of the future cash flows that are expected to be derived from continuing use of the asset and from its ultimate disposal at the end of its useful life, discounted at a rate which reflects the time value of money and the risks specific to the business to which the asset belongs.

If the recoverable amount of an asset (or cash-generating unit) is less than its carrying amount, the carrying amount of the asset is reduced to its recoverable amount, and an impairment loss is recognized as an expense under “Impairment losses” in the consolidated income statement.

Where an impairment loss subsequently reverses (not permitted in the case of goodwill), the carrying amount of the asset is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset in prior years. A reversal of an impairment loss is recognized as “Other income” in the consolidated income statement.

The basis for depreciation is the carrying amount of the assets, deemed to be the acquisition cost less any accumulated impairment losses.

4.5 Financial instruments

Financial assets and financial liabilities are recognized in the Company's statement of financial position when the Company becomes a party to the contractual provisions of the instrument.

Financial assets and financial liabilities are initially measured at fair value. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities at fair value through profit or loss) are added to or deducted from the fair value of the financial assets or financial liabilities, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at fair value through profit or loss are recognized immediately in profit or loss.

The Company has elected to apply the limited exemption in IFRS 9 relating to classification, measurement and impairment requirements for financial instruments, and accordingly comparative periods have not been restated and remain in line with the previous standard IAS 39 "Financial Instruments: Recognition and Measurement". For further understanding of the impact of the transition to IFRS 9, refer to Note 3.

Financial assets

From January 1, 2018, the Company classifies its financial assets into the following categories: those to be measured subsequently at fair value (either through other comprehensive income or through profit or loss) and those to be measured at amortized cost. The classification depends on the entity's business model for managing the financial assets and the contractual terms of the cash flows.

Financial assets measured at amortized cost

Financial assets are classified as measured at amortized cost when they are held in a business model whose objective is to collect contractual cash flows and the contractual terms of the financial asset give rise on specific dates to cash flows that are solely payments of principal and interest on the principal amount outstanding. Such assets are carried at amortized cost using the effective interest method if the time value of money is significant. Gains and losses are recognized in profit or loss when the assets are derecognized or impaired and when interest is recognized using the effective interest method. This category of financial assets includes trade receivables, receivables from related parties and cash and cash equivalents.

Financial assets measured at fair value through other comprehensive income

Debt instruments are classified as measured at fair value through other comprehensive income when they are held in a business model whose objective is achieved by both collecting contractual cash flows and selling the financial assets, and the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding. All movements in the fair value of these financial assets are taken through other comprehensive income, except for the recognition of impairment gains or losses, interest income calculated using the effective interest method and foreign exchange gains and losses. When the financial asset is derecognized, the cumulative fair value gain or loss previously recognized in other comprehensive income is reclassified to the income statement.

Equity instruments are classified as measured at fair value through other comprehensive income if, on initial recognition, the Company makes an irrevocable election to designate the instrument as at fair value through other comprehensive income. The election is made on an instrument-by-instrument basis and is not permitted if the equity investment is held for trading. Fair value gains or losses on revaluation of such equity investments are recognized in other comprehensive income and accumulated in the valuation adjustments reserve. When the

equity investment is derecognized, there is no reclassification of fair value gains or losses previously recognized in other comprehensive income to the income statement. Dividends are recognized in the income statement when the right to receive payment is established.

Financial assets measured at fair value through profit or loss

Financial assets are classified as measured at fair value through profit or loss when the asset does not meet the criteria to be measured at amortized cost or at fair value through other comprehensive income. Such assets are carried on the balance sheet at fair value with gains or losses recognized in the income statement. This category includes loans associated with the Company's accounts receivable securitization program and certain equity investments in listed companies.

Derecognition of financial assets

The Company derecognizes a financial asset when:

- the rights to receive cash flows from the asset have expired; or
- the Company has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Company has transferred substantially all the risks and rewards of the asset, or (b) the Company has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

On derecognition of a financial asset in its entirety, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognized in profit or loss.

If the Company retains substantially all of the risks and rewards of ownership of a transferred financial asset, the Company continues to recognize the financial asset and also recognizes a collateralized borrowing for the proceeds received.

Impairment of financial assets

The expected credit loss model is applied for recognition and measurement of impairments in financial assets measured at amortized cost and debt instruments held at fair value through other comprehensive income. The loss allowance for the financial asset is measured at an amount equal to the 12-month expected credit losses. If the credit risk on the financial asset has increased significantly since initial recognition, the loss allowance for the financial asset is measured at an amount equal to the lifetime expected credit losses. Changes in loss allowances are recognized in profit and loss. For trade receivables, a simplified impairment approach is applied recognizing expected lifetime losses from initial recognition. For this purpose, the Company has established a provision matrix that is based on its historical credit loss experience, adjusted for forward-looking factors specific to the debtors and the economic environment.

The Company writes off a financial asset when there is information indicating that the debtor is in severe financial difficulty and there is no realistic prospect of recovery, e.g. when the debtor has been placed under liquidation or has entered into bankruptcy proceedings, or in the case of trade receivables, when the amounts are over two years past due, whichever occurs sooner. Financial assets written off may still be subject to enforcement activities under the Company's recovery procedures, considering legal advice where appropriate. Any recoveries made are recognized in profit or loss.

Financial liabilities

The subsequent measurement of financial liabilities depends on their classification, as described below:

Financial liabilities measured at fair value through profit or loss

Financial liabilities that meet the definition of held for trading are classified as measured at fair value through profit or loss. Such liabilities are carried on the balance sheet at fair value with gains or losses recognized in the income statement. This category includes contingent consideration and derivatives, other than those designated as hedging instruments in an effective hedge.

Derivatives designated as hedging instruments in an effective hedge

These derivatives are carried on the balance sheet at fair value. The treatment of gains and losses arising from revaluation is described below in the accounting policy for derivative financial instruments and hedging activities.

Financial liabilities measured at amortized cost

This is the category most relevant to the Company and comprises all other financial liabilities, including bank borrowings, debt instruments, financial loans from government agencies, payables to related parties and trade and other payables.

After initial recognition, other financial liabilities are subsequently measured at amortized cost using the effective interest method. Amortized cost is calculated by considering any issue costs and any discount or premium on settlement.

Derecognition of financial liabilities

The Company derecognizes financial liabilities when, and only when, the Company's obligations are discharged, cancelled or have expired. The difference between the carrying amount of the financial liability derecognized and the consideration paid and payable is recognized in profit or loss. When the Company exchanges with the existing lender one debt instrument into another one with substantially different terms, such exchange is accounted for as an extinguishment of the original financial liability and the recognition of a new financial liability. Similarly, the Company accounts for substantial modification of terms of an existing liability or part of it as an extinguishment of the original financial liability and the recognition of a new liability. It is assumed that the terms are substantially different if the discounted present value of the cash flows under the new terms, including any fees paid net of any fees received and discounted using the original effective rate is at least 10 per cent different from the discounted present value of the remaining cash flows of the original financial liability. If the modification is not substantial, the difference between the carrying amount of the liability before the modification and the present value of the cash flows after modification are recognized in profit or loss as a modification gain or loss.

4.6 Derivative financial instruments and hedging activities

In order to mitigate the economic effects of exchange rate and interest rate fluctuations to which it is exposed as a result of its business activities, the Company uses derivative financial instruments, such as cross currency swaps and interest rate swaps.

The Company's derivative financial instruments are set out in Note 19 to these consolidated financial statements and the Company's financial risk management policies are set out in Note 27.

Derivatives are initially recognized at fair value at the date a derivative contract is entered into and are subsequently remeasured to their fair value at each balance sheet date. The resulting gain or loss is recognized in

profit or loss immediately unless the derivative is designated and effective as a hedging instrument, in which event the timing of the recognition of profit or loss depends on the nature of the hedge relationship. The gain or loss recognized in respect of derivatives that are not designated and effective as a hedging instrument is recognized in the consolidated income statement in the line item financial derivative gain (loss).

A derivative with a positive fair value is recognized as a financial asset within the line item other financial assets whereas a derivative with a negative fair value is recognized as a financial liability within the line item other financial liabilities. A derivative is presented as a non-current asset or non-current liability if the remaining maturity of the instrument is more than 12 months and it is not expected to be realized or settled within 12 months.

Hedge accounting

The Company designates certain derivatives as cash flow hedges. For further details, see Note 19 of the consolidated financial statements.

At the inception of the hedge relationship, the Company documents the relationship between the hedging instrument and the hedged item, along with its risk management objectives and its strategy for undertaking the hedge transaction. Furthermore, at the inception of the hedge and on an ongoing basis, the Company documents whether the hedging instrument is effective in offsetting changes in fair values or cash flows of the hedged item attributable to the hedged risk.

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognized in other comprehensive income. The gain or loss relating to any ineffective portion is recognized immediately in profit or loss and is included in the financial derivative gain (loss) line item.

Amounts previously recognized in other comprehensive income and accumulated in equity in the valuation adjustments reserve are reclassified to profit or loss in the periods when the hedged item is recognized in profit or loss, in the same line of the income statement as the recognized hedged item.

Hedge accounting is discontinued when the Company revokes the hedging relationship, the hedging instrument expires or is sold, terminated, or exercised, or no longer qualifies for hedge accounting. Any gain or loss recognized in other comprehensive income at that time is accumulated in equity and is recognized when the forecast transaction is ultimately recognized in profit or loss. When a forecast transaction is no longer expected to occur, the gain or loss accumulated in equity is recognized immediately in profit or loss.

4.7 Fair value measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either: in the principal market for the asset or liability; or in the absence of a principal market, in the most advantageous market for the asset or liability.

The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest.

The Company uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorized within the fair value hierarchy, described as follows, based on the lowest level input that is significant to the fair value measurement as a whole:

- Level 1 — Quoted (unadjusted) market prices in active markets for identical assets or liabilities.
- Level 2 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is directly or indirectly observable.
- Level 3 — Valuation techniques for which the lowest level input that is significant to the fair value measurement is unobservable.

For those assets and liabilities measured at fair value at the balance sheet date, further information on fair value measurement is provided in Note 28.

4.8 Inventories

Inventories comprise assets (goods) which:

- Are held for sale in the ordinary course of business (finished goods); or
- Are in the process of production for such sale (work in progress); or
- Will be consumed in the production process or in the rendering of services (raw materials and spare parts).

Inventories are stated at the lower of acquisition or production cost and net realizable value. The cost of each inventory item is generally calculated as follows:

- Raw materials, spare parts and other consumables and replacement parts: the lower of weighted average acquisition cost and net realizable value.
- Work in progress, finished goods and semi-finished goods: the lower of production cost (which includes the cost of materials, labor costs, direct and indirect manufacturing expenses) or net realizable value in the market.

Obsolete, defective or slow-moving inventories have been reduced to net realizable value.

Net realizable value is the estimated selling price less all the estimated costs of selling and distribution.

The amount of any write-down of inventories (as a result of damage, obsolescence or decrease in the selling price) to their net realizable value and all losses of inventories are recognized as expenses in the year in which the write-down or loss occurs. Any subsequent reversals are recognized as income in the year in which they arise.

The consumption of inventories is recognized as an expense in “Cost of sales” in the consolidated income statement in the period in which the revenue from their sale is recognized.

4.9 Biological assets

The Company recognizes biological assets when:

- It controls the asset as a result of past events;
- It is probable that future economic benefits associated with the asset will flow to the entity; and
- The fair value or cost of the asset can be measured reliably.

Biological assets are measured at fair value less estimated costs to sell.

The gains or losses arising on the initial recognition of a biological asset at fair value less costs to sell are included in the consolidated income statement for the period in which they arise.

4.10 Cash and cash equivalents

The Company classifies under “Cash and cash equivalents” any liquid financial assets, such as for example cash on hand and at banks, deposits and liquid investments, that can be converted into cash within three months and are subject to an insignificant risk of changes in value.

4.11 Provisions and contingencies

When preparing the consolidated financial statements, the Parent’s directors made a distinction between:

- Provisions: present obligations, either legal, contractual, constructive or assumed by the Company, arising from past events, the settlement of which is expected to give rise to an outflow of economic benefits the amount or timing of which are uncertain; and
- Contingent liabilities: possible obligations that arise from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more future events not wholly within the control of the Company, or present obligations arising from past events the amount of which cannot be estimated reliably or whose settlement is not likely to give rise to an outflow of economic benefits.
- Contingent assets: possible assets that arise from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the entity.

The consolidated financial statements include all the material provisions with respect to which it is considered that it is probable that the obligation will have to be settled. Contingent liabilities are not recognized in the consolidated financial statements, but rather are disclosed, as required by IAS 37 (see Note 24).

Provisions are classified as current or non-current based on the estimated period of time in which the obligations covered by them will have to be met. They are recognized when the liability or obligation giving rise to the indemnity or payment arises, to the extent that its amount can be estimated reliably.

“Provisions” includes the provisions for pension and similar obligations assumed; provisions for contingencies and charges, such as for example those of an environmental nature and those arising from litigation in progress or from outstanding indemnity payments or obligations, and collateral and other similar guarantees provided by the Company; and provisions for medium- and long- term employee incentives.

Contingent assets are not recognized, but are disclosed where an inflow of economic benefits is probable. If it has become virtually certain that an inflow of economic benefits will arise, the asset and the related income are recognized in the financial statements in the period in which the change occurs.

Defined contribution plans

Certain employees have defined contribution plans which conform to the Spanish Pension Plans and Funds Law. The main features of these plans are as follows:

- They are mixed plans covering the benefits for retirement, disability and death of the participants.
- The sponsor undertakes to make monthly contributions of certain percentages of current employees' salaries to external pension funds.

The annual cost of these plans is recognized under Staff costs in the consolidated income statement.

Defined benefit plans

IAS 19, Employee Benefits requires defined benefit plans to be accounted for:

- Using actuarial techniques to make a reliable estimate of the amount of benefits that employees have earned in return for their service in the current and prior periods.
- Discounting those benefits in order to determine the present value of the obligation.
- Determining the fair value of any plan assets.
- Determining the total amount of actuarial gains and losses and the amount of those actuarial gains and losses that must be recognized.

The amount recognized as a benefit liability arising from a defined benefit plan is the total net sum of:

- The present value of the obligations.
- Minus the fair value of plan assets (if any) out of which the obligations are to be settled directly.

The Company recognizes provisions for these benefits as the related rights vest and on the basis of actuarial studies. These amounts are recognized under "Provisions" in the consolidated statement of financial position, on the basis of their expected due payment dates. All plan assets are separately from the rest of the Company's assets.

Environmental provisions

Provisions for environmental obligations are estimated by analyzing each case separately and observing the relevant legal provisions. The best possible estimate is made on the basis of the information available and a provision is recognized provided that the aforementioned information suggests that it is probable that the loss or expense will arise and it can be estimated in a sufficiently reliable manner.

The balance of provisions and disclosures disclosed in Notes 15 and 24 reflects management's best estimation of the potential exposure as of the date of preparation of these financial statements.

4.12 Leases

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership, which usually has the option to purchase the assets at the end of the lease under the terms agreed upon when the lease was arranged. All other leases are classified as operating leases.

Finance leases

At the commencement of the lease term, the Company recognizes finance leases as assets and liabilities in the consolidated statement of financial position at amounts equal to the fair value of the leased asset or, if lower, the present value of the minimum lease payments. To calculate the present value of the lease payments the interest rate stipulated in the finance lease is used.

The cost of assets acquired under finance leases is presented in the consolidated statement of financial position on the basis of the nature of the leased asset. The depreciation policy for these assets is consistent with that for property, plant and equipment for own use.

Finance charges are recognized over the lease term on a time proportion basis.

Operating leases

In operating leases, the ownership of the leased asset and substantially all the risks and rewards relating to the leased asset remain with the lessor.

Lease income and expenses from operating leases are credited or charged to income on an accrual basis depending on whether the Company acts as the lessor or lessee.

4.13 Current assets and liabilities

In general, assets and liabilities are classified as current or non-current based on the Company's operating cycle. However, in view of the diverse nature of the activities carried on by the Company, in which the duration of the operating cycle differs from one activity to the next, in general assets and liabilities expected to be settled or fall due within twelve months from the end of the reporting period are classified as current items and those which fall due or will be settled within more than twelve months are classified as non-current items.

4.14 Income taxes

Income tax expense represents the sum of current tax and deferred tax. Income tax is recognized in the income statement except to the extent that it relates to items recognized in other comprehensive income or directly in equity, in which case the related tax is recognized in other comprehensive income or directly in equity.

The current income tax expense is based on domestic and international statutory income tax rates in the tax jurisdictions where the Company operates related to taxable profit for the period. The taxable profit differs from net profit as reported in the income statement because it is determined in accordance with the rules established by the applicable taxation authorities which includes temporary differences, permanent differences, and available credits and incentives.

The Company's deferred tax assets and liabilities are provided on temporary differences at the balance sheet date between financial reporting and the tax basis of assets and liabilities, then applying enacted tax rates expected to be in effect for the year in which the differences are expected to reverse. Deferred tax assets are recognized for deductible temporary differences, carry-forward of unused tax credits and losses, to the extent that it is probably that taxable profit will be available against which the deductible temporary difference and carryforwards of unused tax credits and losses can be utilized. The deferred tax assets and liabilities that have been recognized are

reassessed at the end of each reporting period in order to ascertain whether they still exist, and adjustments are made on the basis of the findings of the analyses performed.

Income tax payable is the result of applying the applicable tax rate in force to each tax-paying entity, in accordance with the tax laws in force in the country in which the entity is registered. Additionally, tax deductions and credits are available to certain entities, primarily relating to inter-company trades and tax treaties between various countries to prevent double taxation.

Income tax expense is recognized in the consolidated income statement, except to the extent that it arises from a transaction which is recognized directly to "consolidated equity", in which case the tax is recognized directly to "consolidated equity."

Deferred tax assets and liabilities are offset only when there is a legally enforceable right to set off current tax assets against current tax liabilities and when the deferred tax assets and liabilities relate to income taxes levied by the same taxation authority or either the same taxable entity or different taxable entities where there is an intention to settle the current tax assets and liabilities on a net basis or to realize the assets and settle the liabilities simultaneously.

4.15 Foreign currency transactions

Foreign currency transactions are initially recognized in the functional currency of the subsidiary by applying the exchange rates prevailing at the date of the transaction.

Subsequently, at each reporting date, monetary assets and liabilities denominated in foreign currencies are translated to euros at the rates prevailing on that date.

Any exchange differences arising on settlement or translation at the closing rates of monetary items are recognized in the consolidated income statement for the year.

Note 4.6 details the Company's accounting policies for these derivative financial instruments. Also, Note 27 to these consolidated financial statements details the financial risk policies of Ferroglobe.

4.16 Revenue recognition

The Company recognizes sales revenue related to the transfer of promised goods or services when control of the goods or services passes to the customer. The amount of revenue recognized reflects the consideration to which the Company is or expects to be entitled in exchange for those goods or services.

In the Company's electrometallurgy business, revenue is principally generated from the sale of goods, including silicon metal and silicon- and manganese-based specialty alloys. The Company mainly satisfies its performance obligations at a point in time; the amounts of revenue recognized relating to performance obligations satisfied over time are not significant. The point in time at which control is transferred to the buyer is determined based on the agreed delivery terms, which follow Incoterms 2010 issued by International Chamber of Commerce.

In most instances, control passes and sales revenue is recognized when the product is delivered to the vessel or vehicle on which it will be transported, the destination port or the customer's premises. There may be circumstances when judgment is required based on the five indicators of control below.

- The customer has the significant risks and rewards of ownership and has the ability to direct the use of, and obtain substantially all of the remaining benefits from, the goods or service.
- The customer has a present obligation to pay in accordance with the terms of the sales contract.

- The customer has accepted the asset. Sales revenue may be subject to adjustment if the product specification does not conform to the terms specified in the sales contract, but this does not impact the passing of control. Specification adjustments have been immaterial historically.

- The customer has legal title to the asset. The Company may retain legal title until payment is received but this is for credit risk purposes only.

- The customer has physical possession of the asset. This indicator may be less important as the customer may obtain control of an asset prior to obtaining physical possession, which may be the case for goods in transit.

Where the Company sells on ‘C’ terms (e.g., CIF, CIP, CFR and CPT), the Company is responsible (acts as principal) for providing shipping services and, in some instances, insurance after the date at which control of goods passes to the customer at the loading point. The Company therefore has separate performance obligations for freight and insurance services that are provided solely to facilitate sale of the commodities it produces. Revenue attributable to freight and insurance services is not usually material.

Where the Company sells on ‘D’ terms (e.g., DDP, DAP and DAT), the Company arranges and pays for the carriage and retains the risk of the goods until delivery at an agreed destination, where ownership and control is transferred.

Where the Company sells on ‘F’ terms (e.g., FCA and FOB), the customer arranges and pays for the main transportation. Risk and control are transferred to the customer when the goods are handed to the carrier engaged by the customer.

The Company’s products are sold to customers under contracts which vary in tenure and pricing mechanisms. The majority of pricing terms are either fixed or index-based for monthly, quarterly or annual periods, with a smaller proportion of volumes being sold on the spot market.

Within each sales contract, each unit of product shipped is a separate performance obligation. Revenue is generally recognized at the contracted price as this reflects the stand-alone selling price. Sales revenue excludes any applicable sales taxes.

Physical exchanges with counterparties in the same line of business in order to facilitate sales to customers are reported net, as are sales and purchases made with a common counterparty, as part of an arrangement similar to a physical exchange.

Revenue from the energy business is based on the power generated and put on the market at regulated prices and is recognized when the energy produced is transferred to the power network.

Interest income is recognized as the interest accrues using the effective interest rate, the rate that exactly discounts estimated future cash receipts through the expected life of the financial instrument to the net carrying amount of the financial asset.

Dividend income from investments is recognized when the shareholders’ right to receive the payment is established.

4.17 Expense recognition

Expenses are recognized on an accrual basis, i.e. when the actual flow of the related goods and services occurs, regardless of when the resulting monetary or financial flow arises.

An expense is recognized in the consolidated income statement when there is a decrease in the future economic benefits related to a reduction of an asset, or an increase in a liability, which can be measured reliably. This means

that an expense is recognized simultaneously with the recognition of the increase in a liability or the reduction of an asset. Additionally, an expense is recognized immediately in the consolidated income statement when a disbursement does not give rise to future economic benefits or when the requirements for recognition as an asset are not met. Also, an expense is recognized when a liability is incurred and no asset is recognized, as in the case of a liability relating to a guarantee.

4.18 Grants

Government grants are recognized where there is reasonable assurance that the grant will be received and all attached conditions will be complied with. When the grant relates to an expense item, it is recognized as income on a systematic basis over the periods that the related costs, for which it is intended to compensate, are expensed. When the grant relates to an asset, it is recognized as income in equal amounts over the expected useful life of the related asset.

4.19 Termination benefits

Under current labor legislation, the Company is required to pay termination benefits to employees whose employment relationship is terminated under certain conditions. The payments for termination benefits, when they arise, are charged as an expense when the decision to terminate the employment relationship is taken.

4.20 CO2 emission allowances

CO_2 emission allowances are measured at cost of acquisition. Allowances acquired free of charge under governmental schemes are initially measured at market value at the date received. At the same time, a grant is recognized for the same amount under “deferred income”.

Emissions allowances are not amortized, but rather are expensed when used.

At year end, the Company assesses whether the carrying amount of the allowances exceeds their market value in order to determine whether there are indicators of impairment. If there are such indicators, the Company determines whether these allowances will be used in the production process or earmarked for sale, in which case the necessary impairment losses would be recognized. Provisions are released when the factors leading to the valuation adjustment have ceased to exist.

A provision for liabilities and charges is recognized for expenses related to the emission of greenhouse gases. This provision is maintained until the company is required to settle the liability by surrendering the corresponding emission allowances. These expenses are accrued as greenhouse gases are emitted.

When an expense is recognized for allowances acquired free of charge, the corresponding “deferred income” is taken to operating income. The Company derecognizes allowances surrendered at their carrying amount and recognizes those received at their fair value when received. The difference between both values is recognized as “deferred income”.

4.21 Share-based compensation

The Company recognizes share-based compensation expense based on the estimated grant date fair value of share-based awards using a Black-Scholes option pricing model. Prior to vesting, cumulative compensation cost equals the proportionate amount of the award earned to date. The Company has elected to treat each award as a single award and recognize compensation cost on a straight-line basis over the requisite service period of the entire award. If the terms of an award are modified in a manner that affects both the fair value and vesting of the award, the total amount of remaining unrecognized compensation cost (based on the grant-date fair value) and the incremental fair value of the modified award are recognized over the amended vesting period.

4.22 Assets and disposal groups classified as held for sale, liabilities associated with assets held for sale and discontinued operations

Assets and disposal groups classified as held for sale include the carrying amount of individual items, disposal groups or items forming part of a business unit earmarked for disposal (discontinued operations), whose sale in their present condition is highly likely to be completed within one year from the reporting date. Therefore, the carrying amount of these items, which may or may not be of a financial nature, will likely be recovered through the proceeds from their disposal.

Liabilities associated with non-current assets held for sale include the balances payable arising from the assets held for sale or disposal groups and from discontinued operations.

Assets and disposal groups classified as held for sale are measured at the lower of fair value less costs to sell and their carrying amount at the date of classification in this category. Non-current assets held for sale are not depreciated as long as they remain in this category.

4.23 Consolidated statement of cash flows

The following terms are used in the consolidated statement of cash flows, prepared using the indirect method, with the meanings specified as follows:

1. Cash flows: inflows and outflows of cash and cash equivalents, which are short-term, highly liquid investments that are subject to an insignificant risk of changes in value.
2. Operating activities: activities constituting the object of the subsidiaries forming part of the consolidated Company and other activities that are not investing or financing activities.
3. Investing activities: the acquisition and disposal of long-term assets and other investments not included in cash and cash equivalents.
4. Financing activities: activities that result in changes in the size and composition of the equity and borrowings of the Company that are not operating or investing activities.

5. Business Combinations

Business combinations are accounted for using the acquisition method. The identifiable assets acquired and liabilities assumed are recognized at their fair values at the acquisition date. Acquisition costs are recognized in profit or loss as incurred.

Goodwill is initially measured as the excess of the aggregate of the consideration transferred, the amount recognized for any non-controlling interest and the acquisition-date fair values of any previously held interest in the acquiree over the fair value of the identifiable assets acquired and liabilities assumed at the acquisition date. If, after reassessment, the net of the acquisition date amounts of the identifiable assets acquired and liabilities assumed exceeds the sum of the consideration transferred, the excess is recognized immediately in profit or loss as a bargain purchase gain.

When the consideration transferred by the Company in a business combination includes an asset or liability resulting from a contingent consideration arrangement, the contingent consideration is measured at its acquisition-date fair value and included as part of the consideration transferred in a business combination.

Contingent consideration that is classified as equity is not remeasured at subsequent reporting dates and its subsequent settlement is accounted for within equity. Contingent consideration that is classified as an asset or a liability is remeasured at subsequent reporting dates at fair value with the corresponding gain or loss being recognized in profit or loss. Changes in fair value of the contingent consideration that qualify as measurement period adjustments are adjusted retrospectively, with corresponding adjustments against goodwill. Measurement period adjustments are adjustments that arise from additional information obtained during the ‘measurement period’ (which cannot exceed one year from the acquisition date) about facts and circumstances that existed at the acquisition date.

On February 1, 2018 the Company acquired 100% of the outstanding ordinary shares of Kintuck (France) SAS and Kintuck AS from a wholly-owned subsidiary of Glencore International AG (“Glencore”) and obtained control of both entities. The new subsidiaries were renamed as Ferroglobe Mangan Norge AS and Ferroglobe Manganèse France SAS. The Company completed the acquisition through its wholly-owned subsidiary Ferroatlántica.

Simultaneously with the acquisition, Glencore and Ferroglobe have entered into exclusive agency arrangements for the marketing of Ferroglobe’s manganese alloys worldwide and the procurement of manganese ores to supply Ferroglobe’s plants, in both cases for a period of ten years.

The business combination was recorded following IFRS 3 Business Combinations, with identifiable assets acquired and liabilities assumed provisionally recorded at their estimated fair values on the acquisition date while costs associated with the acquisition are expensed as incurred. The Company utilized the services of third-party valuation consultants, along with internal estimates and assumptions, to estimate the initial fair value of the assets acquired. The third-party valuation consultants utilized several appraisal methodologies including market and cost approaches to estimate the fair value of the identifiable net assets acquired.

The following is an estimate of the fair value of assets acquired and the liabilities assumed by Ferroglobe reconciled to the value of the acquisition consideration.

	Balances US$'000
ASSETS	
Non-current assets	
Other intangible assets	45
Property, plant and equipment	62,487
Other non-current financial assets	50
Total non-current assets acquired	**62,582**
Current assets	
Inventories	21,314
Trade and other receivables	24,785
Other current assets	1,397
Cash and cash equivalents	29,530
Total current assets acquired	**77,026**
Total assets acquired	**139,608**
LIABILITIES	
Non-current liabilities	
Deferred tax liabilities	90
Total non-current liabilities assumed	**90**
Current liabilities	
Trade and other payables	18,048
Provisions	735
Current income tax liabilities	396
Other current liabilities	4,066
Total current liabilities assumed	**23,245**
Total liabilities assumed	**23,335**
Net assets acquired	**116,273**
Satisfied by:	
Cash	49,909
Contingent consideration	26,222
Total consideration transferred	**76,131**
Gain on bargain purchase	**40,142**
Net cash outflow arising on acquisition	
Cash consideration	49,909
Less: cash and cash equivalent balances acquired	(29,530)
	20,379

The gain on bargain purchase was primarily attributable to the fact that the production of manganese alloys was considered an ancillary business to the seller, coupled with previous weaker manganese alloy pricing in the marketplace. The gain is recorded in the caption ‘Bargain purchase gain’ in the consolidated income statement.

The fair value of Trade and other receivables includes trade receivables with a fair value of $11,900 thousand. There is no difference between the gross contractual value and fair value.

The contingent consideration arrangement requires the Company to pay the former owners of Kintuck (France) SAS and Kintuck AS a sliding scale commission based on the silicomanganese and ferromanganese sales spreads of

Ferroglobe Mangan Norge and Ferroglobe Manganèse France, up to a maximum amount of $60,000 thousand (undiscounted). The contingent consideration applies to sales made up to eight and a half years from the date of acquisition.

The potential undiscounted amount of all future payments that the Company could be required to make under the contingent consideration arrangement is between $0 thousand and $60,000 thousand.

The fair value of the contingent consideration arrangement of $26,222 thousand was estimated by applying the income approach based on a Monte Carlo simulation considering various scenarios of fluctuation of future manganese alloy spreads as well at the cyclicality of manganese alloy pricing. The fair value measurement is based on significant inputs that are not observable in the market, which IFRS 13 Fair Value Measurement refers to as Level 3 inputs. Key assumptions include discount rates of 11.5 percent and 11.0 percent for Ferroglobe Mangan Norge and Ferroglobe Manganèse France respectively. Average simulated revenues in Ferroglobe Mangan Norge and Ferroglobe Manganèse France combined are between $269,256 thousand and $312,526 thousand per year.

Ferroglobe Mangan Norge and Ferroglobe Manganèse France contributed $112,445 thousand and $117,852 thousand respectively to the Company's revenue, and incurred losses of $10,148 thousand and $10,436 thousand respectively for the period between the date of acquisition and December 31, 2018.

If the acquisition of Ferroglobe Mangan Norge and Ferroglobe Manganèse France had been completed on the first day of the financial year, Company revenues for the period would have been $2,289,931 thousand and Company profit would have been $45,007 thousand.

6. Segment reporting

Operating segments are based upon the Company's management reporting structure. The Company's operating segments are primarily at a country level as this is how the Chief Operating Decision Maker (CODM) assesses performance and makes decisions about resource allocation. This is due to the integrated operations within each country and the ability to reallocate production based on the individual capacity of each plant. Additionally, economic factors that may impact our results of operations, such as currency fluctuations and energy costs, are also assessed at a country level.

The Company's North America reportable segment is the result of the aggregation of the operating segments of the United States and Canada. These operating segments have been aggregated as they have similar long-term economic characteristics and there is similarity of competitive and operating risks and the political environment in the United States and Canada. The Company's Europe reportable segment is the result of the aggregation of the operating segments of Spain, France and Norway. Similar to our United States and Canada operating segments, our Spain, France and Norway operating segments are grouped together based on the relative similarity of the EBITDA margins, competitive risks, currency risks (i.e. risks relating to the Euro), operating risks and, given they are each part of the European Union and the European Economic Community, the political and economic environment.

During 2017, upon further evaluation of the management reporting structure, it was concluded that our reportable segments would be amended to no longer reflect Venezuela as a separate reportable segment. The decision was taken as a result of on-going economic, political and social instability in the region which has resulted in uncertainty surrounding the cash flow generation capacity of our operations. During the year-ended December 31, 2016, due to the uncertainty in Venezuela substantially all assets were impaired. The segment previously recognized 'Electrometallurgy – Venezuela' now forms part of our 'Other segments'. The comparative periods have been restated to conform to the 2018 and 2017 reportable segment presentation.

The consolidated income statements at December 31, 2018, 2017 and 2016, by reportable segment, are as follows:

	2018					
	Electrometallurgy - North America US$'000	**Electrometallurgy - Europe US$'000**	**Electrometallurgy - South Africa US$'000**	**Other segments US$'000**	**Adjustments/ Eliminations (**) US$'000**	**Total US$'000**
Sales	710,716	1,447,973	208,543	94,111	(187,305)	**2,274,038**
Cost of sales	(394,044)	(1,059,474)	(137,177)	(43,871)	187,212	**(1,447,354)**
Other operating income	4,943	39,817	3,420	16,859	(19,002)	**46,037**
Staff costs	(115,555)	(177,047)	(23,735)	(24,727)	—	**(341,064)**
Other operating expense	(77,670)	(146,143)	(26,353)	(52,859)	19,095	**(283,930)**
Depreciation and amortization charges, operating allowances and write-downs	(69,009)	(34,974)	(5,526)	(9,628)	—	**(119,137)**
Impairment losses	—	—	—	(58,919)	—	**(58,919)**
Net loss due to changes in the value of assets	—	(7)	(7,616)	—	—	**(7,623)**
(Loss) gain on disposal of non-current assets	(208)	(8,369)	(261)	23,402	—	**14,564**
Bargain purchase gain	—	40,142	—	—	—	**40,142**
Operating profit (loss)	**59,173**	**101,918**	**11,295**	**(55,632)**	**—**	**116,754**
Finance income	804	11,035	199	32,556	(39,220)	**5,374**
Finance costs	(4,109)	(40,831)	(5,298)	(51,004)	39,220	**(62,022)**
Financial derivative gain	—	—	—	2,838	—	**2,838**
Exchange differences	(1,194)	(10,561)	2,284	(4,665)	—	**(14,136)**
Profit (loss) before tax	**54,674**	**61,561**	**8,480**	**(75,907)**	**—**	**48,808**
Income tax (expense) benefit	4,949	(15,048)	(3,582)	(10,554)	—	**(24,235)**
Profit (loss) for the year	**59,623**	**46,513**	**4,898**	**(86,461)**	**—**	**24,573**
Loss (profit) attributable to non-controlling interests	4,785	(332)	358	14,277	—	**19,088**
Profit (loss) attributable to the Parent	**64,408**	**46,181**	**5,256**	**(72,184)**	**—**	**43,661**

	2017					
	Electrometallurgy - North America US$'000	**Electrometallurgy - Europe US$'000**	**Electrometallurgy - South Africa US$'000**	**Other segments US$'000**	**Adjustments/ Eliminations (**) US$'000**	**Total US$'000**
Sales	541,143	1,083,200	122,504	60,199	(65,353)	**1,741,693**
Cost of sales	(303,096)	(690,589)	(81,744)	(33,616)	65,650	**(1,043,395)**
Other operating income	2,701	12,681	2,868	15,619	(15,670)	**18,199**
Staff costs	(90,802)	(147,595)	(23,495)	(39,851)	(220)	**(301,963)**
Other operating expense	(68,537)	(107,130)	(24,462)	(55,955)	16,158	**(239,926)**
Depreciation and amortization charges, operating allowances and write-downs	(66,789)	(27,404)	(5,788)	(4,557)	9	**(104,529)**
Impairment losses	(30,618)	—	—	(323)	(16)	**(30,957)**
Net gain due to changes in the value of assets	—	—	7,222	—	282	**7,504**
(Loss) gain on disposal of non-current assets	(3,718)	301	(138)	(818)	57	**(4,316)**
Other (loss) gain	—	(13,604)	—	(2,625)	13,616	**(2,613)**
Operating (loss) profit	**(19,716)**	**109,860**	**(3,033)**	**(61,927)**	**14,513**	**39,697**
Finance income	448	6,733	404	191,261	(195,138)	**3,708**
Finance costs	(4,567)	(40,106)	(7,361)	(48,486)	35,108	**(65,412)**
Financial derivative loss	—	—	—	(6,850)	—	**(6,850)**
Exchange differences	(191)	5,938	(1,197)	3,730	(66)	**8,214**
(Loss) profit before tax	**(24,026)**	**82,425**	**(11,187)**	**77,728**	**(145,583)**	**(20,643)**
Income tax (expense) benefit	29,386	(26,031)	2,068	9,692	(294)	**14,821**
Profit (loss) for the year	**5,360**	**56,394**	**(9,119)**	**87,420**	**(145,877)**	**(5,822)**
Loss (profit) attributable to non-controlling interests	4,734	(370)	(147)	951	(24)	**5,144**
Profit (loss) attributable to the Parent	**10,094**	**56,024**	**(9,266)**	**88,371**	**(145,901)**	**(678)**

	2016 (*)					
	Electrometallurgy - North America US$'000	**Electrometallurgy - Europe US$'000**	**Electrometallurgy - South Africa US$'000**	**Other segments US$'000**	**Adjustments/ Eliminations (**) US$'000**	**Total US$'000**
Sales	521,192	949,547	142,160	90,337	(127,199)	**1,576,037**
Cost of sales	(325,254)	(672,026)	(99,124)	(79,912)	132,904	**(1,043,412)**
Other operating income	362	25,908	3,422	4,713	(8,190)	**26,215**
Staff costs	(82,032)	(132,440)	(23,589)	(58,577)	239	**(296,399)**
Other operating expense	(64,606)	(118,269)	(28,834)	(37,964)	5,727	**(243,946)**
Depreciation and amortization charges, operating allowances and write-downs	(73,530)	(31,730)	(4,732)	(12,818)	(2,867)	**(125,677)**
Impairment losses	(193,000)	(1,077)	(8,147)	(59,248)	(6,617)	**(268,089)**
Net gain (loss) due to changes in the value of assets	—	—	1,896	—	(5)	**1,891**
Gain (loss) on disposal of non-current assets	—	—	21	446	(127)	**340**
Other (loss) gain	—	(32,655)	—	(2,514)	35,129	**(40)**
Operating (loss) profit	**(216,868)**	**(12,742)**	**(16,927)**	**(155,537)**	**28,994**	**(373,080)**
Finance income	1	11,551	744	6,639	(17,399)	**1,536**
Finance costs	(3,249)	(16,540)	(6,038)	(13,629)	9,205	**(30,251)**
Exchange differences	(438)	2,436	(2,164)	(3,290)	(57)	**(3,513)**
(Loss) profit before tax	**(220,554)**	**(15,295)**	**(24,385)**	**(165,817)**	**20,743**	**(405,308)**
Income tax benefit (expense)	9,982	(10,505)	4,433	40,160	2,625	**46,695**
(Loss) profit for the year	**(210,572)**	**(25,800)**	**(19,952)**	**(125,657)**	**23,368**	**(358,613)**
Loss (profit) attributable to non-controlling interests	6,044	(93)	856	11,827	1,552	**20,186**
(Loss) profit attributable to the Parent	**(204,528)**	**(25,893)**	**(19,096)**	**(113,830)**	**24,920**	**(338,427)**

(*)The consolidated Income Statement for the period ended December 31, 2016 has been re-presented to show the results of the Spanish energy business within income from continuing operations as part of the Other segments, as described in Note 1 to the consolidated financial statements. In addition, the Venezuela segment is reflected as part of the Other segments.

(**) The amounts correspond to transactions between segments that are eliminated in the consolidation process.

The consolidated statements of financial position at December 31, 2018 and 2017, by reportable segment are as follows:

	2018					
	Electrometallurgy - North America US$'000	Electrometallurgy - Europe US$'000	Electrometallurgy - South Africa US$'000	Other segments US$'000	Consolidation Adjustments/ Eliminations (*) US$'000	Total US$'000
Goodwill	202,848	—	—	—	—	**202,848**
Other intangible assets	22,798	26,476	1,292	1,256	—	**51,822**
Property, plant and equipment	467,616	219,520	56,679	145,047	—	**888,862**
Inventories	113,673	288,669	35,944	18,684	—	**456,970**
Trade and other receivables (**)	267,974	274,291	50,665	834,515	(1,254,935)	**172,510**
Cash and cash equivalents	76,791	110,523	19,483	9,850	—	**216,647**
Other	15,341	85,905	8,692	24,220	—	**134,158**
Total assets	**1,167,041**	**1,005,384**	**172,755**	**1,033,572**	**(1,254,935)**	**2,123,817**
Equity	646,851	206,781	58,294	(27,554)	—	**884,372**
Provisions	29,644	71,163	7,889	7,661	—	**116,357**
Bank borrowings	—	6,914	—	134,098	—	**141,012**
Obligations under finance leases	1,466	—	—	65,005	—	**66,471**
Debt instruments	—	—	—	352,594	—	**352,594**
Other financial liabilities	—	3,841	—	81,471	—	**85,312**
Trade and other payables (***)	414,022	662,667	93,970	379,468	(1,282,176)	**267,951**
Other	75,058	54,018	12,602	40,829	27,241	**209,748**
Total equity and liabilities	**1,167,041**	**1,005,384**	**172,755**	**1,033,572**	**(1,254,935)**	**2,123,817**

	2017					
	Electrometallurgy - North America US$'000	Electrometallurgy - Europe US$'000	Electrometallurgy - South Africa US$'000	Other segments US$'000	Consolidation Adjustments/ Eliminations (*) US$'000	Total US$'000
Goodwill	205,287	—	—	—	—	**205,287**
Other intangible assets	26,724	20,381	1,505	10,048	—	**58,658**
Property, plant and equipment	512,003	167,314	64,331	174,326	—	**917,974**
Inventories	100,856	204,240	42,478	13,657	—	**361,231**
Trade and other receivables (**)	165,006	260,612	35,330	833,243	(1,175,756)	**118,435**
Cash and cash equivalents	10,886	153,967	6,912	12,707	—	**184,472**
Other	36,554	92,322	41,008	29,528	(45,212)	**154,200**
Total assets	**1,057,316**	**898,836**	**191,564**	**1,073,509**	**(1,220,968)**	**2,000,257**
Equity	521,819	198,059	62,933	154,947	—	**937,758**
Provisions	28,602	56,654	11,080	19,156	—	**115,492**
Bank borrowings	—	—	—	1,003	—	**1,003**
Obligations under finance leases	1,994	—	—	80,639	—	**82,633**
Debt instruments	—	—	—	350,270	—	**350,270**
Other financial liabilities	—	4,918	—	132,513	—	**137,431**
Trade and other payables (***)	321,710	584,542	95,082	380,834	(1,176,336)	**205,832**
Other	183,191	54,663	22,469	(45,853)	(44,632)	**169,838**
Total equity and liabilities	**1,057,316**	**898,836**	**191,564**	**1,073,509**	**(1,220,968)**	**2,000,257**

(*) These amounts correspond to balances between segments that are eliminated at consolidation.
(**) Trade and other receivables includes non-current and current receivables from group and related parties.
(***) Trade and other payables includes non-current and current payables from group and related parties.

Other disclosures

Sales by product line

Sales by product line are as follows:

	2018 US$'000	2017 US$'000	2016 US$'000
Silicon metal	933,366	739,618	751,508
Manganese-based alloys	527,757	363,644	223,451
Ferrosilicon	359,374	266,862	242,788
Other silicon-based alloys	215,697	188,183	173,901
Silica fume	37,061	36,338	37,480
Energy	44,185	16,661	20,380
Other	156,598	130,387	126,529
Total	**2,274,038**	**1,741,693**	**1,576,037**

Information about major customers

Total sales of $758,894 thousand, $820,897 thousand, and $656,907 thousand were attributable to the Company's top ten customers in 2018, 2017, and 2016 respectively. During 2018, there was no single customer representing greater than 10% of the Company's sales. During 2017 and 2016, sales corresponding to Dow Corning Corporation represented 12.2% and 13.7% of the Company's sales, respectively. Sales to Dow Corning Corporation are included partially in the Electrometallurgy - North America segment and partially in the Electrometallurgy - Europe segment.

7. Goodwill

Changes in the carrying amount of goodwill during the years ended December 31, are as follows:

	January 1, 2017 US$'000	Impairment (Note 25.5) US$'000	Exchange differences US$'000	December 31, 2017 US$'000	Impairment (Note 25.5) US$'000	Exchange differences US$'000	December 31, 2018 US$'000
Globe Specially Metals, Inc. (Globe)	230,210	(30,618)	5,695	205,287	—	(2,439)	202,848
Total	**230,210**	**(30,618)**	**5,695**	**205,287**	**—**	**(2,439)**	**202,848**

In accordance with the requirements of IAS 36, goodwill is tested for impairment annually and is tested for impairment between annual tests if a triggering event occurs that would indicate the carrying amount of a cash-generating unit may be impaired. Impairment testing for goodwill is done at a cash-generating unit level, and the Company performs its annual impairment test at the end of the annual reporting period (December 31). The estimate of the recoverable value of the cash-generating units requires significant judgment in evaluation of overall market conditions, estimated future cash flows, discount rates and other factors, and are calculated based on management's business plans.

On December 23, 2015, Ferroglobe PLC consummated the acquisition of 100% of the equity interests of Globe Specialty Metals, Inc. and subsidiaries and FerroAtlántica. This Business Combination was accounted for using the acquisition method of accounting for business combinations under IFRS 3 Business Combinations, with FerroAtlántica treated as the accounting acquirer and GSM as the acquiree. The aggregate of the fair values as of the closing date of the Business Combination of the assets acquired and liabilities assumed was recorded as goodwill.

During the year ended December 31, 2018, in connection with our annual goodwill impairment test, the Company did not recognize an impairment charge.

During the year ended December 31, 2017, in connection with our annual goodwill impairment test, the Company recognized an impairment charge of $30,618 thousand related to the partial impairment of goodwill in Canada,

resulting from a decline in future estimated sales prices and a decrease in our estimated long-term growth rate which caused the Company to revise its expected future cash flows from its Canadian business operations. The impairment charge is recorded within the Electrometallurgy – North America reportable segment.

Ferroglobe operates in a cyclical market, and silicon and silicon-based alloy index pricing and foreign import pressure into the U.S. and Canadian markets impact the future projected cash flows used in our impairment analysis. Recoverable value was estimated based on discounted cash flows. Estimates under the Company's discounted income based approach involve numerous variables including anticipated sales price and volumes, cost structure, discount rates and long term growth that are subject to change as business conditions change, and therefore could impact fair values in the future. As of December 31, 2018, the remaining goodwill for the U.S and Canadian cash-generating units is $172,913 thousand and $29,935 thousand, respectively.

Key assumptions used in the determination of recoverable value

In determining the asset recoverability through value in use, management makes estimates, judgments and assumptions on uncertain matters. For each cash-generating unit, the value in use is determined based on economic assumptions and forecasted operating conditions as follows:

	2018		2017	
	U.S.	Canada	U.S.	Canada
Weighted average cost of capital	11.0 %	10.5 %	10.5 %	10.5 %
Long-term growth rate	2.0 %	2.0 %	1.5 %	1.5 %
Normalized tax rate	22.0 %	26.5 %	27.1 %	26.5 %
Normalized cash free net working capital	21.0 %	21.0 %	21.0 %	21.0 %

The Company has defined a financial model which considers the revenues, expenditures, cash flows, net tax payments and capital expenditures on a five year period (2019-2023), and perpetuity beyond this tranche. The financial projections to determine the net present value of future cash flows are modeled considering the principal variables that determine the historic flows of each group of cash-generating unit.

Sensitivity to changes in assumptions

Changing management's assumptions, could significantly affect the evaluation of the value in use of our cash generating units and, therefore, the impairment result. The following changes to the assumptions used in the impairment test lead to the following:

			Sensitivity on discount rate		Sensitivity on long-term growth rate		Sensitivity on cash flows	
	Goodwill	Excess of recoverable value over carrying value	Decrease by 10%	Increase by 10%	Decrease by 10%	Increase by 10%	Decrease by 10%	Increase by 10%
	(in millions of US$)							
Electrometallurgy - U.S.	172.9	43.2	94.4	(73.7)	(11.0)	11.5	(59.7)	59.7
Electrometallurgy - Canada	29.9	4.8	17.7	(13.8)	(2.2)	2.3	(12.1)	12.1
Total	**202.8**							

8. Other intangible assets

Changes in the carrying amount of other intangible assets during the years ended December 31 are as follows:

	Development Expenditure US$'000	Power Supply Agreements US$'000	Rights of Use US$'000	Computer Software US$'000	Other Intangible Assets US$'000	Accumulated Depreciation (Note 25.3) US$'000	Impairment (Note 25.5) US$'000	Total US$'000
Balance at January 1, 2017	**40,354**	**37,836**	**20,345**	**5,815**	**21,784**	**(54,629)**	**(8,666)**	**62,839**
Additions	260	—	55	—	14,472	(8,440)	(443)	5,904
Disposals	—	—	—	(10)	(14,294)	565	—	(13,739)
Transfers from/(to) other accounts	4,044	—	—	—	(150)	(3,894)	—	—
Exchange differences	5,824	—	2,639	242	2,451	(6,353)	(1,149)	3,654
Balance at December 31, 2017	**50,482**	**37,836**	**23,039**	**6,047**	**24,263**	**(72,751)**	**(10,258)**	**58,658**
Additions	992	—	—	—	26,385	(9,312)	(16,073)	1,992
Disposals	—	—	—	(64)	(7,260)	—	—	(7,324)
Business combinations (Note 5)	—	—	—	45	—	—	—	45
Transfers from/(to) other accounts	1,919	—	—	—	(1,919)	—	—	—
Exchange differences	(2,408)	—	(648)	(101)	(1,656)	2,546	718	(1,549)
Balance at December 31, 2018	**50,985**	**37,836**	**22,391**	**5,927**	**39,813**	**(79,517)**	**(25,613)**	**51,822**

Additions and disposals in other intangible asset in 2018 and 2017 primarily relate to the acquisition, use and expiration of rights held to emit greenhouse gasses by certain Spanish, French and Canadian subsidiaries (see Note 4.20).

As a result of the Business Combination, the Company acquired a power supply agreement which provides favorable below-market power rates to the Alloy, West Virginia facility, which terminates in December 2021.

During 2018 the Company recognised an impairment of $13,947 thousand of development expenditures in relation to our solar-grade silicon metal project based in Puertollano, Spain. Refer to Note 9 for further details.

At December 31, 2018, the Company has other intangible assets of $26,948 thousand, pledged as security for outstanding bank loans and other payables.

9. Property, plant and equipment

The detail of property, plant and equipment, net of the related accumulated depreciation and impairment in 2018 and 2017 is as follows:

	Land and Buildings	Plant and Machinery	Other Fixtures, Tools and Furniture	Advances and Property, Plant and Equipment in the Course of Construction	Mineral Reserves	Other Items of Property, Plant and Equipment	Accumulated Depreciation (Note 25.3)	Impairment (Note 25.5)	Total
	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000
Balance at January 1, 2017	**191,058**	**1,220,055**	**5,972**	**49,865**	**59,989**	**32,203**	**(665,507)**	**(112,029)**	**781,606**
Additions	1,665	1,849	2,262	71,204	—	1,455	(94,051)	104	(15,512)
Disposals and other	(202)	(56,475)	(607)	(1,029)	—	(164)	49,403	—	(9,074)
Transfers from/(to) other accounts	5,228	49,892	377	(58,480)	(90)	(58)	3,131	—	—
Exchange differences	16,843	96,709	450	9,225	460	(1,072)	(73,575)	(5,058)	43,982
Additions to the scope of consolidation	1,648	97	—	16,985	—	—	—	—	18,730
Transfer from assets and disposal groups classified as held for sale (see Note 29)	35,058	178,677	79	40,814	—	—	(155,726)	(660)	98,242
Balance at December 31, 2017	**251,298**	**1,490,804**	**8,533**	**128,584**	**60,359**	**32,364**	**(936,325)**	**(117,643)**	**917,974**
Additions	2,983	9,104	12	99,016	—	4,293	(109,832)	(42,846)	(37,270)
Disposals and other	(4,687)	(34,612)	(1,084)	(2,657)	—	(587)	35,921	—	(7,706)
Transfers from/(to) other accounts	24,823	69,439	4,850	(97,086)	—	222	(2,248)	—	—
Exchange differences	(10,743)	(74,554)	(405)	(5,941)	(951)	(383)	48,455	3,292	(41,230)
Business combinations (Note 5)	6,846	53,337	82	1,790	—	432	—	—	62,487
Business disposals	(35,211)	(26,471)	(43)	(342)	—	—	56,674	—	(5,393)
Balance at December 31, 2018	**235,309**	**1,487,047**	**11,945**	**123,364**	**59,408**	**36,341**	**(907,355)**	**(157,197)**	**888,862**

Additions to the scope of consolidation in 2017 represents the contribution by the non-controlling interest partner, Blue Power Corporation, S.L. ("Blue Power") to the solar production facility located in Puertollano, Spain.

Business combinations in 2018 relates to the assets acquired as part of the acquisition of the Glencore plants in France and Norway, see Note 5.

During 2018 the Company disposed of Hidro Nitro Española S.A. which resulted in a net reduction of property, plant and equipment of $5,393 thousand. The net gain on the disposal of the business is disclosed in Note 25.6.

During 2018 the Company recognised an impairment of $40,537 thousand in Impairment losses (Electrometallurgy – Other segment) in relation to our solar-grade silicon metal project based in Puertollano, Spain. At the end of 2018 the Company has decided to temporarily suspend investment in the project due to deterioration in the market environment for solar grade silicon (or polysilicon) worldwide. The Company is preserving the technology and know-how in order to be able to finalize the construction of the factory as soon as market circumstances change. The Company continues to recognize these project assets as $39,101 thousand based on the higher of fair value less costs of disposal and value in use. Fair value less costs of disposal related to land and buildings was determined based on recent sales of comparable industrial properties located near the project. Fair value less costs of disposal related to machinery and equipment was determined by assessing the recoverability of the assets to a market participant.

At December 31, 2018 and 2017, the Company has property, plant and equipment of $514,625 thousand and $660,960 thousand, respectively, pledged as security for outstanding bank loans and other payables.

Finance leases

Finance leases held by the Company included in Plant and Machinery at December 31 are as follows:

	Life (Years)	Time Elapsed (Years)	Historical Cost EUR €'000	Cost US $'000	Accumulated Depreciation US $'000	Carrying Amount US $'000	Interest Payable US $'000	Lease Payments Outstanding US $'000
December 31, 2018 Hydroelectrical installations	10	6.6	109,047	124,859	(82,940)	41,918	—	65,005
December 31, 2017 Hydroelectrical installations	10	5.6	109,047	130,780	(84,000)	46,780	—	80,639

These assets will revert back to the Spanish State, free of charges, between 2038 and 2060. The costs incurred at the time of the reversal are not deemed to be significant.

Commitments

At December 31, 2018 and 2017, the Company has capital expenditure commitments totaling $26,935 thousand and $4,598 thousand, respectively, primarily related to maintenance and improvement works at plants.

10. Financial assets and other receivables

The company's financial assets and their classification under IFRS 9 are as follows:

		2018 classification			
	Note	Amortised cost US$'000	Fair value through profit or loss - mandatorily measured US$'000	Fair value through other comprehensive income - designated US$'000	Total US$'000
Other financial assets	10.1	3,264	69,602	—	72,866
Receivables from related parties	23	16,514	—	—	16,514
Trade receivables	10.2	70,755	—	—	70,755
Other receivables	10.2	7,784	—	—	7,784
Cash and cash equivalents		216,647	—	—	216,647
Total financial assets		**314,964**	**69,602**	**—**	**384,566**

10.1 Other financial assets

At December 31, 2018, other financial assets comprise the following:

	2018		
	Non-Current US$'000	Current US$'000	Total US$'000
Other financial assets held with third parties:			
Other financial assets at amortised cost	3,264	—	3,264
Listed equity securities	—	2,523	2,523
Debt investments at fair value through profit or loss	67,079	—	67,079
Total	**70,343**	**2,523**	**72,866**

Debt investments at fair value through profit or loss comprise an investment in subordinated loan notes issued by a special purpose entity that has purchased accounts receivable from the Company pursuant to a securitization program (see 'Securitization of trade receivables' below). The planned maturity of this amount is July 31, 2020 when the program term ends.

At December 31, 2017, other financial assets comprise the following:

	2017		
	Non-Current US$'000	Current US$'000	Total US$'000
Other financial assets held with third parties:			
Loans and receivables	3,081	—	3,081
Other	86,234	2,469	88,703
Total	**89,315**	**2,469**	**91,784**

Loans and receivables are stated net of provision for impairment of $4,462 thousand.

Other includes an amount of $82,638 thousand corresponding to an investment in subordinated loan notes issued by a special purpose entity that has purchased accounts receivable from the Company pursuant to a securitization program (see 'Securitization of trade receivables' below). The planned maturity of this amount is July 31, 2020 when the program term ends.

Securitization of trade receivables

On July 31, 2017, the Company entered into an accounts receivable securitization program (the "Program") where trade receivables held by the Company's subsidiaries in the United States, Canada, Spain and France are sold to Ferrous Receivables DAC, a special purpose entity domiciled and incorporated in Ireland (the "SPE"). Eligible receivables are sold to the SPE on an on-going basis at an agreed upon purchase price. Part of the consideration is received upfront in cash and part is deferred in the form of senior subordinated and junior subordinated loans notes issued by the SPE to the selling entities. Up to $303,000 thousand of upfront cash consideration can be provided by the SPE under the Program, financed by ING Bank N.V., as senior lender and Finacity Capital Management Inc., as intermediate subordinated lender and control party (2017: $248,000 thousand). In respect of trade receivables outstanding at December 31, 2018, the SPE had provided upfront cash consideration of approximately $227,360 thousand (2017: $166,525 thousand). The Program has a three-year term until July 31, 2020.

During the year ended December 31, 2018, the Company sold $2,059 million of trade receivables to the SPE (2017: approximately $850 million). The loss on transfer of the receivables, or purchase discount, which equates to difference between the carrying amount of the receivable and the purchase consideration, was $22,647 thousand and has been recognized within finance costs in the consolidated income statement (2017: $7,256 thousand).

As a lender to the SPE, the Company earns interest on its senior subordinated and junior subordinated loan receivables. During the year ended December 31, 2018, the Company earned interest of $3,403 thousand in respect of these loan receivables, recognized within finance income in the consolidated income statement (2017: $1,313 thousand).

The Company is engaged as master servicer to the SPE whereby the Company is responsible for the cash collection, reporting and cash application of the sold receivables. As master servicer, the Company earns a fixed-rate management fee and an additional servicing fee which entitles the Company to substantially all of the residual net profit of the SPE. This results in the Company being exposed to variable returns. The additional servicing fee is paid out monthly by the SPE and is settled last in the priority of payments after the settlement of all other amounts due. During the year ended

December 31, 2018, the Company earned fixed-rate servicing fees of $2,961 thousand (2017: $622 thousand) and additional servicing fees of $11,174 thousand.

Judgements relating to the consolidation of the SPE

The Company does not own shares in the SPE or have the ability to appoint its directors. In determining whether to consolidate the SPE, the Company has evaluated whether it has control over the SPE, in particular, whether it is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee.

Receivables are sold to the SPE under a true sale opinion with legal interest transferred from the Company to the SPE. While the sale of receivables to the SPE is without credit recourse, the Company continues to be exposed to the variability of risks and rewards associated with ownership as it is exposed to credit risk as senior subordinated and junior subordinated lender and it has rights to variable returns in respect of its remuneration as master servicer.

The Company considers that the returns of the investees in the SPE are affected by the management of the receivables portfolio. In particular, it is the management of any impaired receivables that significantly impacts the variability of the returns of the SPE. The act of servicing receivables on a day-to-day basis does not constitute a relevant activity, as this does not significantly impact the returns of the SPE. The intermediate subordinated lender, has the unabated ability to remove the Company as servicer of impaired receivables and take the decision to sell such receivables, giving it the unilateral power to affect the relevant activities of these receivables and thereby influence the variable returns. Accordingly, the Company has concluded that it does not control the SPE and therefore does not include the SPE in the Company’s consolidation.

Derecognition of transferred financial assets

The Company considers that when receivables are sold to the SPE, it has neither substantially transferred or substantially retained all the variability of risks and rewards associated with ownership of the receivables. The assets are pledged as security under the Senior Loans, therefore the SPV is restricted from selling them. According to that, the Company concludes that control of the assets has not been transferred and it should recognize the assets to the extent of its continuing involvement. This continuing involvement has been considered to equate to the investment in the junior subordinated loan, and therefore has been deemed immaterial. At December 31, 2018, the sale of trade receivables has resulted in the recognition of loans to the SPE and receivables from the SPE totaling $67,079 thousand in aggregate, presented within other non-current financial assets. These carrying value of these financial assets represent the Company’s maximum exposure to loss from the SPE. As senior subordinated and junior subordinated lender to the SPE, the Company’s has a security interest in the sold receivables. This interest is junior to that of the senior lender, ING Bank N.V. The Company’s expected credit loss in respect of these loans is not material.

The investment in the senior subordinated and junior subordinated loans is carried at fair value with changes in fair value recognized in profit and loss. As of December 31, 2018, the fair value did not differ significantly from the face value of the loans, and the valuation has been considered as level III in the IFRS fair value hierarchy since it is not primarily based on observable inputs. The main characteristics of the senior subordinated and junior subordinated loans at December 31, 2018, are as follows:

	Amount US$'000	**Interest Rate**	**Currency**
Senior Subordinated Loan	59,474	4%	U.S. Dollars
Junior Subordinated Loan	277	30%	U.S. Dollars

The junior subordinated loan ranks fourth in the order of priority of payments, whereas the senior subordinated loan ranks second in the priority of payments after the senior lender. Finacity Capital Management Inc. investment in the

intermediate subordinated loan ranks third in the order of priority of payments and the maximum investment committed by Finacity Capital Management Inc. amounts to $3,000 thousand.

10.2 Trade and other receivables

Trade and other receivables comprise the following at December 31:

	2018 US$'000	2017 US$'000
Trade receivables	75,719	85,293
Less – allowance for doubtful debts	(4,964)	(17,346)
	70,755	67,947
Tax receivables[1]	60,851	27,118
Government grant receivables	16,606	7,904
Other receivables	7,784	8,494
Total	**155,996**	**111,463**

(1) "Tax receivables" is primarily related to VAT receivables, which are recovered either by offsetting against VAT payables or are expected to be refunded by the tax authorities in the relevant jurisdictions.

The trade and other receivables disclosed above are short-term in nature and therefore their carrying amount is considered to approximate their fair value.

The changes in the allowance for doubtful debts during 2018 and 2017 were as follows:

	Allowance US$'000
Balance at January 1, 2017	**14,671**
Impairment losses recognized	1,784
Amounts written off as uncollectible	(643)
Exchange differences	1,534
Balance at December 31, 2017	**17,346**
Impairment losses recognized	3,190
Amounts written off as uncollectible	(15,118)
Exchange differences	(454)
Balance at December 31, 2018	**4,964**

Government grants

The Company has been awarded government grants in relation to its operations in France, Spain and Norway, including grants in relation to the compensation of costs associated with the emission of CO_2.

During the year ended December 31, 2018, the Company recognized $26,369 thousand of income related to government grants, of which $18,923 thousand was deducted against the related expense in cost of sales and $7,446 thousand was recognized as other operating income (2017: $15,716 thousand of income, of which $9,234 thousand was deducted against the related expense in cost of sales and $6,482 thousand was recognized as other operating income). The Company has no unfulfilled conditions in relation to government grants, but certain grants would be repayable if the Company were to substantially curtail production or employment at certain plants.

The carrying amounts of the government grant receivables include receivables which are subject to a factoring arrangement. Under this arrangement, the Company has transferred receivables to the factor in exchange for cash and is prevented from selling or pledging the receivables. However, the Company has retained late payment and credit risk. The Company therefore continues to recognise the transferred assets in their entirety in its balance sheet. The amount repayable under the factoring agreement is presented as secured borrowing. At December 31, 2018, the carrying amount of both the factored receivables and the secured borrowings is $6,913 thousand.

Factoring of other receivables

The Company enters into certain factoring without recourse arrangements for other receivables. There were $6,102 thousand and $3,801 thousand of factored receivables outstanding as of December 31, 2018 and 2017, respectively. These factoring arrangements transfer substantially all the economic risks and rewards associated with the ownership of accounts receivable to a third party and therefore are accounted for by derecognizing the accounts receivable upon receiving the cash proceeds of the factoring arrangement.

11. Inventories

Inventories comprise the following at December 31:

	2018 US$'000	2017 US$'000
Finished goods	197,982	158,431
Raw materials in progress and industrial supplies	222,912	177,728
Other inventories	34,887	24,902
Advances to suppliers	1,189	170
Total	**456,970**	**361,231**

During 2018 the Company recognised an expense of $11,376 thousand (2017: $405 thousand) in respect of write-downs of inventory to net realisable value. The Company records expense for the write-down of inventories to Cost of sales in the consolidated income statement.

At December 31, 2018, approximately $314,067 thousand of inventories are secured as collateral for several outstanding loan agreements.

12. Other assets

Other assets comprise the following at December 31:

	2018			2017		
	Non-Current US$'000	Current US$'000	Total US$'000	Non-Current US$'000	Current US$'000	Total US$'000
Guarantees and deposits given	2,208	11	2,219	2,022	8	2,030
Prepayments and accrued income	16	3,672	3,688	—	2,977	2,977
Biological assets	7,790	—	7,790	27,279	—	27,279
Other assets	472	5,130	5,602	758	6,941	7,699
Total	**10,486**	**8,813**	**19,299**	**30,059**	**9,926**	**39,985**

Biological assets comprise timber farms in South Africa, which are a source of raw materials used for the production of silicon metal. The biological assets are measured at fair value (see Note 28).

13. Equity

Share capital

Ferroglobe PLC was incorporated on February 5, 2015 and issued one ordinary share with a face value of $1.00. The share was issued but uncalled. On October 13, 2015, the Company increased its share capital by £50,000 by issuing 50,000 sterling non-voting redeemable preference shares (the “Non-voting Shares”) as well as 14 ordinary shares with a par value of $1.00. Subsequently on October 13, 2015, the Company consolidated the 15 ordinary shares at a par value of $1.00 to two ordinary shares with a par value of $7.50, for a total amount of $15.00.

On December 23, 2015, the Company acquired all of the issued and outstanding ordinary shares from Grupo Villar Mir, S.A.U., par value €1,000 per share, of Grupo FerroAtlántica, S.A.U. in exchange for 98,078,161 newly-issued Ferroglobe Class A ordinary shares, nominal value $7.50 per share, making Grupo FerroAtlántica, S.A.U. a wholly-owned subsidiary of the Company. The company subsequently redeemed all Non-voting Shares.

Subsequently on December 23, 2015, Gordon Merger Sub, Inc., a wholly owned subsidiary of the Company, merged with Globe Specialty Metals, Inc., and all outstanding shares of GSM common stock, par value $0.0001 per share were converted to the right to receive one newly-issued Ferroglobe ordinary share, nominal value $7.50 per share. The ordinary shares were registered by the Company pursuant to a registration statement on Form F-4, which was declared effective by the SEC on August 11, 2015, and trade on the NASDAQ Global Select Market under the ticker symbol “GSM.”

On June 22, 2016 the Company completed a reduction of the share capital and as such the nominal value of each share has been reduced from $7.50 to $0.01, with the amount of the capital reduction being credited to a distributable reserve.

On November 18, 2016, Class A Ordinary Shares were converted into ordinary shares of Ferroglobe as a result of the distribution of beneficial interest units in the Ferroglobe Representation and Warranty Insurance Trust to certain Ferroglobe shareholders.

During the year ended December 31, 2017, the Company issued 138,578 new ordinary shares, comprising: 108,578 shares issued upon vesting of restricted stock units; and 30,000 shares issued upon exercise of stock options.

During the year ended December 31, 2018, the Company issued 40,000 new ordinary share upon exercise of stock options and cancelled 1,152,958 ordinary shares pursuant to a share repurchase program (see below).

At December 31, 2018, there were 170,863,773 ordinary shares in issue with a par value of $0.01, for a total issued share capital of $1,784 thousand, (2017: 171,976,731 ordinary shares in issue with a par value of $0.01, for a total issued share capital of $1,796 thousand).

At December 31, 2018, the Company's largest shareholder is as follows:

Name	Number of Shares Beneficially Owned	Percentage of Outstanding Shares (*)
Grupo Villar Mir, S.A.U.	91,125,521	53.9 %

(*) 169,122,682 ordinary shares were outstanding at 31 December 2018, comprising 170,863,773 shares in issue less 1,174,091 shares held in treasury

Valuation adjustments

Valuation adjustments comprise the following at December 31:

	2018 US$'000	2017 US$'000
Actuarial gains and losses	(390)	(2,998)
Hedging instruments and other	(11,169)	(13,801)
Total	**(11,559)**	**(16,799)**

Capital management

The Company's primary objective is to maintain a balanced and sustainable capital structure through the industry's economic cycles, while keeping the cost of capital at competitive levels so as to fund the Company's growth. The main sources of financing are as follows:

1. cash flow from operations;
2. bank borrowings, including revolving credit facilities;
3. debt instruments, including the senior notes due 2022; and
4. finance leases, predominantly in relation to hydroelectrical installations.

The Company also focuses on optimizing its working capital, which has included the sale of trade receivables pursuant to a securitization program (see Note 10).

The Company manages its capital structure and makes adjustments in light of changes in economic conditions and the requirements of financial covenants. To maintain or adjust the capital structure, the Company may restructure or issue new borrowings or debt, make dividend payments, return capital to shareholders or issue new shares. Management's review of the Company's capital structure includes monitoring of the leverage ratio, which was as follows at December 31:

	2018 US$'000	2017 US$'000	2016 (***) US$'000
Gross financial debt (*)	645,389	571,337	514,587
Cash and cash equivalents	(216,647)	(184,472)	(196,931)
Total net financial debt	**428,742**	**386,865**	**317,656**
Total equity (**)	**884,372**	**937,758**	**892,042**
Total net financial debt / total equity	**48.48 %**	**41.25 %**	**35.61 %**

(*) Gross financial debt comprises bank borrowings, obligations under finance leases, debt instruments and other financial liabilities.
(**) Total equity comprises all capital and reserves of Company as stated in the consolidated statement of financial position.
(***) At December 31, 2016, net financial debt excludes gross financial debt of $86,959 thousand and cash and cash equivalents of $51 thousand related to the Spanish energy business as these balances were classified as held for sale as at that date (see Note 29). If these balances had been included, net financial debt would have been $404,564 thousand and the net financial debt / equity ratio would have been 45.4%.

The classification of the Company's gross financial debt between non-current and current at December 31 is as follows:

	2018		2017		2016 (*)	
	Balance US$'000	%	Balance US$'000	%	Balance US$'000	%
Non-current gross financial debt	560,738	86.88 %	458,056	80.17 %	269,325	52.34 %
Current gross financial debt	84,651	13.12 %	113,281	19.83 %	245,262	47.66 %
Total gross financial debt	**645,389**	**100.00 %**	**571,337**	**100.00 %**	**514,587**	**100.00 %**

(*) At December 31, 2016, gross financial debt excluded $86,959 thousand related to the Spanish energy business, of which $76,452 thousand would have been presented as non-current and $10,507 thousand would have been presented as current had the business not been classified as held for sale (see Note 29). Had these balances been included, gross financial debt would have been $601,546 thousand.

Share Repurchase Program

At a general meeting of its shareholders held on August 3, 2018, shareholders granted authority to the Company to effect share repurchases. The Company is accordingly authorised for a period of five years to enter into contracts with appointed brokers under which the Company may undertake purchases of its ordinary shares – acquired by the brokers on the NASDAQ and through other permitted channels – of up to approximately 10% of its issued ordinary share capital, at a minimum price of $0.01 per share, at a maximum price for such shares of 5% above the average volume-weighted average price of the Company's shares over the five business days prior to purchase and subject to additional restrictions (including as to pricing, volume, timing and the use of brokers or dealers) under applicable U.S. securities laws.

Subsequently, the Company's Board of Directors authorised the repurchase of up to $20,000 thousand of the Company's ordinary shares in the period ending December 31, 2018. On November 7, 2018, the Company completed this repurchase program, resulting in the acquisition of a total of 2,894,049 ordinary shares for total consideration of $20,100 thousand, including applicable stamp duty of $100 thousand. The average price paid per share was $6.89.

The share repurchase program resulted in 1,152,958 ordinary shares purchased and cancelled and 1,741,091 ordinary shares purchased into treasury, all of which remained held in treasury at December 31, 2018.

Dividends

On May 21, 2018, our Board of Directors approved an interim dividend per ordinary share of $0.06. The dividend totaling $10,321 thousand, was paid on June 29, 2018 to shareholders of record at the close of business on June 8, 2018.

On August 20, 2018, our Board of Directors approved an interim dividend per ordinary share of $0.06. The dividend totaling $10,321 thousand, was paid on September 20, 2018 to shareholders of record at the close of business on September 5, 2018.

There were no dividends paid or proposed by the Company during the year ended December 31, 2017.

During the year ended December 31, 2016, the Company declared four interim dividend payments of $0.08 per share, paid on March 14, August 12, September 28, and December 29, and each totaling $13,747 thousand, respectively, distributed as cash payments through reserves. As of December 31, 2016, all dividends declared were paid.

Non-controlling interests

The changes in non-controlling interests in the consolidated statements of financial position in 2018 and 2017 were as follows:

	Balance US$'000
Balance at January 1, 2017	**125,556**
Loss for the year	(5,144)
Dividends paid to joint venture partner	(7,350)
Non-controlling interest arising on the acquisition of FerroSolar Opco Group S.L.	6,750
Translation differences and other	1,922
Balance at December 31, 2017	**121,734**
Loss for the year	(19,088)
Increase of Parent's ownership interest in FerroAtlántica de Venezuela S.A.	14,389
Translation differences and other	(890)
Balance at December 31, 2018	**116,145**

The stand-alone statutory information regarding the largest non-controlling interests, in accordance with IFRS 12 Disclosure of Interests in Other Entities, is as follows:

WVA Manufacturing, LLC (WVA) was formed on October 28, 2009 as a wholly-owned subsidiary of Globe. On November 5, 2009, Globe sold a 49% membership interest in WVA to Dow Corning Corporation (currently named “Dow”), an unrelated third party. As part of the sale of the 49% membership interest to Dow, an operating agreement and an output and supply agreement were established. The output and supply agreement states that of the silicon metal produced by WVA, 49% will be sold to Dow and 51% to Globe, which represents each member’s ownership interest, at a price equal to WVA’s actual production cost plus $100 per metric ton. The agreement will automatically terminate upon the dissolution or liquidation of WVA in accordance with the joint venture agreement between Globe and Dow. As of December 31, 2018 and 2017, the balance of Non-controlling interest related to WVA was $77,343 thousand and $80,868 thousand, respectively.

Quebec Silicon Limited Partnership (QSLP), formed under the laws of the Province of Québec on August 20, 2010 is managed by its general partner, Quebec Silicon General Partner Inc., which is a wholly-owned subsidiary of Globe. QSLP owns and operates the silicon metal operations in Bécancour, Québec. QSLP’s production output is subject to

a supply agreement, which sells 51% of the production output to Globe and 49% to Dow, which represents each member's ownership interest, at a price equal to QSLP's actual production cost plus 31 Canadian dollars per metric ton. As of December 31, 2018 and 2017, the balance of non-controlling interest related to QSLP was $44,796 thousand and $46,830 thousand, respectively.

	2018		2017	
	WVA US$'000	QSLP US$'000	WVA US$'000	QSLP US$'000
Statement of Financial Position				
Non-current assets	84,864	62,725	88,532	68,521
Current assets	59,957	42,125	45,269	33,076
Non-current liabilities	14,677	15,406	14,678	14,213
Current liabilities	38,060	24,356	36,359	18,346
Income Statement				
Sales	168,041	108,764	161,014	97,697
Operating profit	6,319	2,284	5,947	467
Profit before taxes	6,319	979	5,947	122
Net (loss) income	(6,458)	478	14,678	42
Cash Flow Statement				
Cash flows from operating activities	10,025	4,317	16,017	7,076
Cash flows from investing activities	(3,830)	(4,980)	(2,193)	(5,422)
Cash flows from financing activities	—	—	(15,000)	(2)
Exchange differences on cash and cash equivalents in foreign currencies	—	(32)	—	68
Beginning balance of cash and cash equivalents	340	2,462	1,516	742
Ending balance of cash and cash equivalents	**6,535**	**1,767**	**340**	**2,462**

14. Earnings (loss) per ordinary share

Basic earnings (loss) per ordinary share are calculated by dividing the consolidated profit (loss) for the year attributable to the Parent by the weighted average number of ordinary shares outstanding during the year, excluding the average number of treasury shares held in the year, if any. Dilutive earnings (loss) per share assumes the exercise of stock options, provided that the effect is dilutive.

	2018	2017	2016
Basic earnings (loss) per ordinary share computation			
Numerator:			
Profit (loss) attributable to the Parent (US$'000)	43,661	(678)	(338,427)
Denominator:			
Weighted average basic shares outstanding	171,406,272	171,949,128	171,838,153
Basic earnings (loss) per ordinary share (US$)	**0.25**	**—**	**(1.97)**
Diluted earnings (loss) per ordinary share computation			
Numerator:			
Profit (loss) attributable to the Parent (US$'000)	43,661	(678)	(338,427)
Denominator:			
Weighted average basic shares outstanding	171,406,272	171,949,128	171,838,153
Effect of dilutive securities	123,340	—	—
Weighted average dilutive shares outstanding	171,529,612	171,949,128	171,838,153
Diluted earnings (loss) per ordinary share (US$)	**0.25**	**—**	**(1.97)**

Potential ordinary shares of 269,116, of 70,673, and of 96,236 were excluded from the calculation of diluted earnings (loss) per ordinary share in 2018, 2017, and 2016 respectively because their effect would be anti-dilutive.

15. Provisions

Provisions comprise the following at December 31:

	2018			2017		
	Non- Current US$'000	Current US$'000	Total US$'000	Non- Current US$'000	Current US$'000	Total US$'000
Provision for pensions	52,529	197	52,726	59,195	—	59,195
Environmental provision	2,880	331	3,211	3,121	346	3,467
Provisions for litigation	—	2,399	2,399	—	11,732	11,732
Provisions for third-party liability	7,270	—	7,270	7,639	—	7,639
Provisions for C02 emissions allowances	2,859	25,111	27,970	—	7,281	7,281
Other provisions	10,249	12,532	22,781	12,442	13,736	26,178
Total	**75,787**	**40,570**	**116,357**	**82,397**	**33,095**	**115,492**

The changes in the various line items of provisions in 2018 and 2017 were as follows:

	Provision for Pensions US$'000	Environmental Provision US$'000	Provisions for Litigation in Progress US$'000	Provisions for Third Party Liability US$'000	Provisions for CO2 Emissions Allowances US$'000	Other Provisions US$'000	Total US$'000
Balance at January 1, 2017	**60,876**	**3,083**	**—**	**5,835**	**5,512**	**26,278**	**101,584**
Charges for the year	5,082	133	10,807	2,451	6,946	1,494	26,913
Provisions reversed with a credit to income	(1,321)	—	(237)	(181)	—	(545)	(2,284)
Amounts used	(2,304)	(93)	—	—	(5,907)	(2,911)	(11,215)
Provision against equity	(4,511)	—	—	—	—	—	(4,511)
Transfers from/(to) other accounts	—	—	931	(12)	—	(612)	307
Exchange differences and others	1,373	344	231	(454)	730	1,009	3,233
Transfer from liabilities associated with assets held for sale (see Note 29)	—	—	—	—	—	1,465	1,465
Balance at December 31, 2017	**59,195**	**3,467**	**11,732**	**7,639**	**7,281**	**26,178**	**115,492**
Charges for the year	4,611	103	392	229	26,348	2,483	34,166
Provisions reversed with a credit to income	(36)	—	—	(9)	—	(1,524)	(1,569)
Amounts used	(2,076)	—	(9,595)	(239)	(5,470)	(3,039)	(20,419)
Provision against equity	(3,568)	—	—	—	—	—	(3,568)
Transfers from/(to) other accounts	277	—	—	—	—	—	277
Exchange differences and others	(5,677)	(359)	(130)	(350)	(189)	(2,035)	(8,740)
Additions from business combinations (see Note 5)	—	—	—	—	—	735	735
Disposals from business divestitures	—	—	—	—	—	(17)	(17)
Balance at December 31, 2018	**52,726**	**3,211**	**2,399**	**7,270**	**27,970**	**22,781**	**116,357**

The main provisions relating to employee obligations are as follows:

France

These relate to various obligations assumed by FerroPem, S.A.S. with various groups of employees relate to long-service benefits, medical insurance supplements and retirement obligations, all of which are defined benefit obligations, whose changes in 2018 and 2017 were as follows:

	2018 US$'000	2017 US$'000
Obligations at the beginning of year	**29,768**	**29,733**
Current service cost	1,678	1,834
Borrowing costs	470	383
Actuarial differences	(700)	(4,570)
Benefits paid	(1,818)	(1,471)
Exchange differences	(1,349)	3,859
Obligations at the end of year	**28,049**	**29,768**

At December 31, 2018 and 2017, the effect of a 1% change in the cost of this provision would have resulted in a change to the provision of approximately $3,664 thousand and $3,970 thousand, respectively.

The following table reflects the gross benefit payments that are expected to be paid for the benefit plans for the year ended December 31, 2018:

	2018 US$'000
2019	1,597
2020	977
2021	1,179
2022	1,329
2023	2,007
Years 2024-2028	8,628

The subsidiary recognized provisions in this connection based on an actuarial study performed by an independent expert.

South Africa

Defined benefit plans relate to Retirement medical aid obligations and Retirement benefits. Actuarial valuations are performed periodically by independent third parties and in the actuary's opinion the fund was in a sound financial position. The valuation was based upon the amounts as per the latest valuation report received from third party experts.

Retirement medical aid obligations

The Company provides post-retirement benefits by way of medical aid contributions for employees and dependents.

Retirement benefits

It is the policy of the Company to provide retirement benefits to all its employees and therefore membership of the retirement fund is compulsory. The Company has both defined contribution and defined benefit plans. The pension fund obligation is recognized in current provisions as the Company will contribute the difference to the plan assets within the next 12 months.

In this regard, the changes of this provision in 2018 and 2017 were as follows:

	2018 US$'000	2017 US$'000
Obligations at beginning of year	**7,872**	**8,760**
Current service cost	139	310
Borrowing costs	740	932
Actuarial differences	(2,000)	(2,226)
Benefits paid	(226)	(740)
Exchange differences	(1,096)	836
Obligations at end of year	**5,429**	**7,872**

At December 31, 2018 and 2017, the effect of a 1% change in the cost of the medical aid would have resulted in a change to the provision of approximately $216 thousand and $297 thousand, respectively.

The breakdown, in percentage, of the plan assets are as follows:

	2018	2017
Cash	1.72 %	47.45 %
Equity	47.42 %	24.79 %
Bond	13.62 %	7.66 %
Property	2.67 %	1.41 %
International	30.27 %	15.74 %
Others	4.30 %	2.95 %
Total	**100.00 %**	**100.00 %**

As of December 31, 2018 and 2017 the Plan assets amounted to $1,906 thousand and $2,248 thousand, respectively. Changes in the fair value of plan assets linked to the defined benefit plans in South Africa were as set forth in the following table:

	2018 US$'000	2017 US$'000
Fair value of plan assets at the beginning of the year	**2,248**	**3,532**
Interest income on assets	216	255
Benefits paid	(50)	(2,609)
Actuarial differences	(228)	270
Other	(280)	800
Fair value of plan assets at the end of the year	**1,906**	**2,248**
Actual return on assets	**(11)**	**525**

Venezuela

Benefit Plan

The company FerroVen has pension obligations to all of its employees who, once reaching retirement age, have accumulated at least 15 years of service to the company and receive a Venezuelan Social Security Institute (IVSS) pension. In addition to the pension paid by the IVSS, 80% of the basic salary accrued when the pension benefit is awarded is guaranteed and paid by means of a lifelong monthly pension.

The most recent of the present value of the defined benefit obligation actuarial valuation was determined at December 31, 2018 by independent actuaries. The present value of the obligation for defined benefit cost, the current service cost and past service cost were determined using the projected unit credit method.

In this regards, the changes of this provision in 2018 and 2017 were as follows:

	2018 US$'000	2017 US$'000
Obligations at the beginning of year	**1,883**	**2,955**
Current service cost	775	158
Borrowing costs	—	2,255
Benefits paid	(35)	(93)
Exchange differences	(2,089)	(3,392)
Obligations at the end of year	**534**	**1,883**

The summary of the main actuarial assumptions used to calculate the aforementioned obligations is as follows:

	France		South Africa		Venezuela	
	2018	2017	2018	2017	2018	2017
Salary increase	1.60%-6.10%	1.60%-6.10%	7.2 %	8.1 %	400000 %	207.25 %
Discount rate	2%	2%	9.9 %	10.3 %	520004 %	219.54 %
Expected inflation rate	1.60%	1.60%	6.2 %	7.10 %	500000 %	207 %
Mortality	TGH05/TGF05	TGH05/TGF05	SA 85-90 / PA (90)	SA 85-90 / PA (90)	UP94	UP94
Retirement age	65	65	63	63	64	63

North America

a. Defined Benefit Retirement and Post-retirement Plans

Globe Metallurgical Inc. (“GMI”) sponsors three non-contributory defined benefit pension plans covering certain employees, which were all frozen in 2003. Core Metals sponsors a non-contributory defined benefit pension plan covering certain employees, which was closed to new participants in April 2009.

Quebec Silicon Limited partnership (“QSLP”) sponsors a contributory defined benefit pension plan and postretirement benefit plan for certain employees, based on length of service and remuneration. Post-retirement benefits consist of a group insurance plan covering plan members for life insurance, disability, hospital, medical, and dental benefits. The contributory defined benefit pension plan was closed to new participants in December 2013. On December 27, 2013, the Communications, Energy and Paper Workers Union of Canada (“CEP”) ratified a new collective bargaining agreement, which resulted in a curtailment pertaining to the closure of the postretirement benefit plan for union employees retiring after January 31, 2016. The Company’s funding policy has been to contribute, as necessary, an amount in excess of the minimum requirements in order to achieve the Company’s long-term funding targets.

Benefit Obligations and Funded Status – The following provides a reconciliation of the benefit obligations, plan assets and funded status of the North American plans as of December 31, 2018 and 2017:

	2018				2017			
	USA	Canada			USA	Canada		
	Pension Plans US$'000	Pension Plans US$'000	Post-retirement Plans US$'000	Total US$'000	Pension Plans US$'000	Pension Plans US$'000	Post-retirement Plans US$'000	Total US$'000
Benefit obligation	35,062	22,393	7,377	64,832	38,195	24,788	8,837	71,820
Fair value of plan assets	(29,038)	(17,076)	—	(46,114)	(32,869)	(19,283)	—	(52,152)
Provision for pensions	**6,024**	**5,317**	**7,377**	**18,718**	**5,326**	**5,505**	**8,837**	**19,668**

All North American pension and post-retirement plans are underfunded. At December 31, 2018 and 2017, the accumulated benefit obligation was $57,455 thousand and $62,983 thousand for the defined pension plan and $7,377 thousand and $8,837 thousand for the post-retirement plans, respectively.

The assumptions used to determine benefit obligations at December 31, 2018 and 2017 for the North American plans are as follows:

	North America – 2018			North America – 2017		
	USA	Canada		USA	Canada	
	Pension Plan	Pension Plan	Postretirement Plan	Pension Plan	Pension Plan	Postretirement Plan
Salary increase	N/A	2.75% - 3.00%	N/A	N/A	2.75% - 3.00%	N/A
Discount rate	4.00%	3.80%	3.90%	3.50%	3.60%	3.65%
Expected inflation rate	N/A	N/A	N/A	N/A	N/A	N/A
Mortality	SOA RP-2014 Blue Collar Mortality	CPM2014-Private	CPM2014-Private	SOA RP-2014 Total Dataset Mortality	CPM2014-Private	CPM2014-Private
Retirement age	65	62	62	65	62	62

The discount rate used in calculating the present value of our pension plan obligations is developed based on the BPS&M Pension Discount Curve for 2018 and 2017 and the Mercer Proprietary Yield Curve for 2018 and 2017. QSLP Pension and post-retirement benefit plans and the expected cash flows of the benefit payments.

The Company expects to make discretionary contributions of approximately $1,037 thousand to the defined benefit pension and post-retirement plans for the year ending December 31, 2019.

The following reflects the gross benefit payments that are expected to be paid in future years for the benefit plans for the year ended December 31:

	Pension Plans US$'000	Non-pension Postretirement Plans US$'000
2019	3,175	197
2020	3,205	197
2021	3,241	203
2022	3,247	203
2023	3,311	222
Years 2024-2028	17,178	1,393

The accumulated non-pension postretirement benefit obligation has been determined by application of the provisions of the Company's health care and life insurance plans including established maximums, relevant actuarial assumptions and health care cost trend rates projected at 5.3% for 2018 and decreasing to an ultimate rate of 4.0% in fiscal 2040. At December, 31 2018 and 2017, the effect of a 1% increase in health care cost trend rate on the non-pension postretirement benefit obligation is $1,535 thousand and $1,862 thousand, respectively. At December, 31 2018 and 2017 the effect of a 1% decrease in health care cost trend rate on the non-pension postretirement benefit obligation is ($1,194) thousand and ($1,442) thousand.

The changes to these obligations in the current year ended December 31, 2018 were as follows:

	2018			
	USA	Canada		
	Pension Plans US$'000	Pension Plans US$'000	Post-retirement Plans US$'000	Total US$'000
Obligations at the beginning of year	**38,195**	**24,788**	**8,837**	**71,820**
Service cost	185	123	334	**642**
Borrowing cost	1,300	816	297	**2,413**
Actuarial differences	(2,849)	(416)	(1,240)	**(4,505)**
Benefits paid	(1,874)	(978)	(161)	**(3,013)**
Exchange differences	—	(1,940)	(690)	**(2,630)**
Expenses	(70)	—	—	**(70)**
Plan amendments	175	—	—	**175**
Obligations at the end of year	**35,062**	**22,393**	**7,377**	**64,832**

The plan assets of the defined benefit and retirement and post-retirement plans in North America are comprised of assets that have quoted market prices in an active market. The breakdown as of December 31, 2018 and 2017 of the assets by class are:

	2018	2017
Cash	1 %	2 %
Equity Mutual Funds	40 %	45 %
Fixed Income Securities	59 %	51 %
Real Estate Mutual Funds	— %	2 %
Total	**100 %**	**100 %**

For the year ended December 31, 2018, the changes in plan assets were as follows:

	2018		
	USA	Canada	
	Pension Plans US$'000	Pension Plans US$'000	Total US$'000
Fair value of plan assets at the beginning of the year	**32,869**	**19,283**	**52,152**
Interest income on assets	1,110	643	1,753
Benefits paid	(1,874)	(978)	(2,852)
Actuarial return on plan assets	(3,044)	(1,154)	(4,198)
Other	(23)	(718)	(741)
Fair value of plan assets at the end of the year	**29,038**	**17,076**	**46,114**

b. Other Benefit Plans

The Company administers healthcare benefits for certain retired employees through a separate welfare plan requiring reimbursement from the retirees.

The Company's subsidiary, GMI, provides two defined contribution plans (401(k) plans) that allow for employee contributions on a pretax basis. The Company agrees to match 25% of participants' contributions up to a maximum of 6% of compensation. Additionally, the Company sponsors a defined contribution plan for employees of Core Metals. Under the plan, the Company may make discretionary payments to salaried and non-union participants in the form of profit sharing and matching funds.

Other benefit plans offered by the Company include a Section 125 cafeteria plan for the pretax payment of healthcare costs and flexible spending arrangements.

Environmental provision

Environmental provisions relate to $2,880 thousand of non-current environmental rehabilitation obligations (2017: $3,121 thousand) and $331 thousand of current environmental rehabilitation obligations (2017: $346 thousand).

Provisions for litigation

Certain employees of FerroPem, S.A.S., then known as Pechiney Electrometallurgie, S.A., may have been exposed to asbestos at its plants in France in the decades prior to FerroAtlántica's purchase of that business in December 2004. The Company has recognized a provision of $1,775 thousand during the year ended December 31, 2018 as part of the current portion of Provisions for litigation (2017: $2,339 thousand). The associated expense has been recorded to Staff costs in the Consolidated Income Statement. See Note 24 for further information.

The outcome of this dispute, including the amount and timing of any potential settlements, remains uncertain. The provision reflects the Company's best estimate of the expenditure required to settle its present obligations.

The company received in March 2017 a demand for mediation from our North American joint venture partner regarding a dispute in relation to the price of coal charged by our subsidiary, Alden, to our North American joint ventures. During 2017, the parties engaged in a non-binding mediation process and the Company recognized a provision of $8,900 thousand during the year ended December 31, 2017. During 2018, the Company reached an agreement with the joint venture partner, and paid $4,450 thousand, and recognized the remaining $4,450 thousand in other current liabilities.

Provisions for third-party liability

Provisions for third-party liability relate to current obligations ($7,270 thousand) relating to health costs for retired employees (2017: $7,639 thousand).

Other provisions

Included in other provisions are current obligations arising from past actions that involve a probable outflow of resources that can be reliably estimated. Other provisions provision for taxes of $7,323 thousand (2017: $8,136 thousand) and other provisions of $15,458 thousand (2017: $18,042 thousand).

16. Bank borrowings

Bank borrowings comprise the following at December 31:

	2018			
	Limit US$'000	Non-Current Amount US$'000	Current Amount US$'000	Total US$'000
Borrowings carried at amortised cost:				
Credit facilities	250,000	132,821	493	133,314
Other loans		—	7,698	7,698
Total		**132,821**	**8,191**	**141,012**

	2017			
	Limit US$'000	Non-Current Amount US$'000	Current Amount US$'000	Total US$'000
Borrowings carried at amortised cost:				
Credit facilities	200,000	—	—	—
Other loans		—	1,003	1,003
Total		**—**	**1,003**	**1,003**

Credit facilities

Credit facilities comprise the following at December 31:

	2018 US$'000	2017 US$'000
Secured loans carried at amortised cost		
Principal amount	135,919	—
Unamortised issuance costs	(3,098)	—
Accrued interest	493	—
Total	**133,314**	**—**
Amount due for settlement within 12 months	493	—
Amount due for settlement after 12 months	132,821	—
Total	**133,314**	**—**

On February 27, 2018, Ferroglobe entered into a revolving credit facility that provided for borrowings up to an aggregate principal amount of $250,000 thousand (the “Revolving Credit Facility”). The Revolving Credit Facility was amended on February 22, 2019, which included a reduction in the size of the facility from $250,000 thousand to $200,000 thousand (see Note 30). In addition to loans in US dollars, multicurrency borrowings under the Revolving Credit Facility are available in Euros, Pound Sterling and any other currency approved by the administrative agent and lenders. Subject to certain exceptions, loans under the Revolving Credit Facility may be borrowed, repaid and reborrowed at any time until the facility’s expiration date in February 27, 2021.

Interest Rates

At the Company’s option, loans under the Revolving Credit Facility bear interest based on the Base Rate or the Euro-Rate (each as defined below), plus an applicable margin. The applicable margin varies based on financial ratios, and is currently 2.25% for Base Rate loans or 3.25% for Euro-Rate loans. The average interest rate during the twelve months ended December 31, 2018 was 5.2%.

Base Rate shall mean, for any day, a fluctuating per annum rate of interest equal to the highest of (a) the Fed Overnight Bank Funding Rate, plus fifty basis points (0.50%), (b) the Prime Rate, and (c) the Daily LIBOR Rate, plus 100 basis points (1.00%). Any change in the Base Rate (or any component thereof) shall take effect at the opening of business on the day such change occurs. Notwithstanding the foregoing, if the Base Rate as determined in the manner provided for above would be less than zero percent (0.00%) per annum, such rate shall be deemed to be zero percent (0.00%) per annum for purposes of the Revolving Credit Facility Agreement.

Euro-Rate shall mean the following: (a) with respect to the U.S. Dollar Loans comprising any Borrowing Tranche to which the Euro-Rate Option applies for any Interest Period, the interest rate per annum determined by the Administrative Agent as the rate at which U.S. Dollar deposits are offered by leading banks in the London interbank deposit market; (b) with respect to Optional Currency Loans in Euros or British Pounds Sterling comprising any Borrowing Tranche for any Interest Period, the interest rate per annum determined by the Administrative Agent as the rate at which such currencies are offered by leading banks in the London interbank deposit market.

Guarantees and security

The obligations of Ferroglobe PLC (Borrower) under the Revolving Credit Facility, are guaranteed by certain of its subsidiaries (the Guarantors). The obligations of the Borrower and the Guarantors (together, the Loan Parties), together with each secured bank product accepted or executed by a Loan Party, are or will be secured by particular security interests in certain equity interests of subsidiaries of the Loan Parties and certain assets of the Loan Parties.

Covenants

In addition to certain affirmative and negative covenants, the Revolving Credit Facility contains certain maintenance financial covenants, including a maximum net total leverage ratio and a minimum interest coverage ratio. The Company was in compliance with all covenants as of December 31, 2018. Subsequent to December 31, 2018 the Company entered in to an amendment to the Revolving Credit facility that modified the financial maintenance covenants for an interim period (see Note 30).

Foreign currency exposure of bank borrowings

The breakdown by currency of bank borrowings at December 31, is as follows:

	2018		
	Non-Current Principal Amount US$'000	Current Principal Amount US$'000	Total US$'000
Borrowings in US Dollars	78,664	785	79,449
Borrowings in Euros	57,255	6,913	64,168
Total	**135,919**	**7,698**	**143,617**

	2017		
	Non-Current Principal Amount US$'000	Current Principal Amount US$'000	Total US$'000
Borrowings in US Dollars	—	992	992
Borrowings in other currencies	—	11	11
Total	**—**	**1,003**	**1,003**

Contractual maturity of non-current bank borrowings

The contractual maturity of non-current bank borrowings at December 31, 2018, was as follows:

	2018	
	2021 US$'000	Total US$'000
Credit facilities	132,821	132,821
Other loans	—	—
Total	**132,821**	**132,821**

There were no non-current bank borrowings outstanding at December 31, 2017.

17. Leases

Obligations under finance leases

Obligations under finance leases comprise the following at December 31:

	2018			2017		
	Non-Current US$'000	Current US$'000	Total US$'000	Non-Current US$'000	Current US$'000	Total US$'000
Hydroelectrical installations (including power lines and concessions)	52,428	12,577	65,005	68,088	12,551	80,639
Other finance leases	1,044	422	1,466	1,625	369	1,994
Total	**53,472**	**12,999**	**66,471**	**69,713**	**12,920**	**82,633**

On May 25, 2012, FerroAtlàntica, S.A., as financial lessee, entered into a sale and leaseback agreement (the ''Hydroelectric Finance Lease'') with respect to certain hydro-electric assets in Spain. The financial lessee's obligations under the Hydroelectric Finance Lease are secured by such hydro-electric assets. Payments in respect of the Hydro-electric Finance Lease are to be made in 120 installments, which commenced on May 25, 2012 and continue until maturity on May 25, 2022. The outstanding amounts under this loan accrue interest at a rate equal to six-month EURIBOR plus 3.5%.

The detail, by maturity, of the non-current payment obligations under finance leases as of December 31, 2018 is as follows:

	2020 US$'000	2021 US$'000	2022 US$'000	Total US$'000
Hydroelectrical installations (including power lines and concessions)	13,199	13,849	25,380	52,428
Other finance leases	618	426	—	1,044
Total	**13,817**	**14,275**	**25,380**	**53,472**

Future net minimum lease payments under finance leases together with the future finance charges are as follows:

	Undiscounted minimum lease payments		Present value of minimum lease payments	
	2018 US$'000	2017 US$'000	2018 US$'000	2017 US$'000
Within 1 year	13,362	13,281	12,999	12,920
Between 1 and 5 years	61,556	82,683	53,472	69,713
After 5 years	—	—	—	—
Total minimum lease payments	**74,918**	**95,964**	**66,471**	**82,633**
Less: amounts representing finance lease charges	8,447	13,331	—	—
Present value of minimum lease payments	**66,471**	**82,633**	**66,471**	**82,633**

Operating leases

The Company also enters into operating leases, the most significant of which relates to the Company's office leases. Expenses associated with operating leases are recorded in Other Operating Expenses in the consolidated income statement, and the minimum lease payments on operating leases at December 31, are as follows:

	2018 US$'000	2017 US$'000
Within one year	9,684	12,105
Between one and five years	20,847	27,277
After five years	732	3,347
Total	**31,263**	**42,729**

18. Debt instruments

Debt instruments comprise the following at December 31:

	2018 US$'000	2017 US$'000
Unsecured notes carried at amortised cost		
Principal amount	350,000	350,000
Unamortised issuance costs	(8,343)	(10,668)
Accrued coupon interest	10,937	10,938
Total	**352,594**	**350,270**
Amount due for settlement within 12 months	10,937	10,938
Amount due for settlement after 12 months	341,657	339,332
Total	**352,594**	**350,270**

On February 15, 2017, Ferroglobe and Globe (together, the "Issuers") issued $350,000 thousand aggregate principal amount of 9.375% Senior Notes due March 1, 2022 (the "Notes"). The proceeds were used primarily to repay existing indebtedness, including borrowings, certain credit facilities and other loans. Issuance costs of $12,116 thousand were incurred. The principal amounts of the Notes issued by Ferroglobe and Globe were $150,000 thousand and $200,000 thousand, respectively. Interest on the Notes is payable semi-annually on March 1 and September 1 of each year, commencing on September 1, 2017.

At any time prior to March 1, 2019, the Issuers may redeem all or a portion of the Notes at a redemption price based on a "make-whole" premium. At any time on or after March 1, 2019, the Issuers may redeem all or a portion of the Notes at redemption prices varying based on the period during which the redemption occurs. In addition, at any time

prior to March 1, 2019, the Issuers may redeem up to 35% of the aggregate principal amount of the Notes with the net proceeds from certain equity offerings at a redemption price of 109.375% of the principal amount of the Notes, plus accrued and unpaid interest.

The Notes are senior unsecured obligations of the Issuers and are guaranteed on a senior basis by certain subsidiaries of Ferroglobe. The Notes are listed on the Irish Stock Exchange. The associated indenture of the notes contains certain negative covenants. Additionally, if the Issuers experience a change of control the indenture requires the Issuers to offer to redeem the Notes at 101% of their principal amount. Grupo Villar Mir S.A.U. owns 53.9% of the Company's outstanding shares and has pledged them to secure its obligations to certain banks. The Company would experience a change in control and would be required to offer redemption of bonds in accordance with the indenture if Grupo Villar Mir S.A.U. defaults on the underlying loan. See Note 27 for further information.

The fair value of the Notes, determined by reference to the closing market price on the last trading day of the year, was $288,022 thousand as at December 31, 2018 (December 31, 2017: $378,000 thousand).

19. Other financial liabilities

Other financial liabilities comprise the following at December 31:

	2018			2017		
	Non-Current US$'000	Current US$'000	Total US$'000	Non-Current US$'000	Current US$'000	Total US$'000
Financial loans from government agencies	9,325	52,524	61,849	10,971	88,420	99,391
Derivative financial instruments	23,463	—	23,463	38,040	—	38,040
Total	**32,788**	**52,524**	**85,312**	**49,011**	**88,420**	**137,431**

Financial loans from government agencies

On September 8, 2016, FerroAtlántica, S.A., as borrower, and the Spanish Ministry of Industry, Tourism and Commerce (the “Ministry”), as lender, entered into two loan agreements under which the Ministry made available to the borrower loans in aggregate principal amount of €44,999 thousand and €26,909 thousand, respectively, in connection with industrial development projects relating to the Company’s solar grade silicon project. The loan of €44,999 thousand is contractually due to be repaid in 7 installments over a 10-year period with the first three years as a grace period. The loan of €26,909 thousand was repaid in April 2018. Interest on outstanding amounts under each loan accrues at an annual rate of 2.29%. As of December 31, 2018, the amortized cost of these loans was €44,706 thousand (equivalent to $51,189 thousand) (2017: €72,517 thousand and $86,969 thousand).

The agreements governing the loans contain the following limitations on the use of the proceeds of the outstanding loan: (1) the investment of the proceeds must occur between January 1, 2016 and February 24, 2019; (2) the allocation of the proceeds must adhere to certain approved budget categories; (3) if the final investment cost is lower than the budgeted amount, the borrower must reimburse the Ministry proportionally; and (4) the borrower must comply with certain statutory restrictions regarding related party transactions and the procurement of goods and services. As of December 31, 2018, the balance of these loans have been presented within current liabilities due to non-compliance with the loan conditions.

The remaining non-current and current balances are related to loans granted mainly by French and Spanish government agencies.

Derivative financial instruments

Derivative financial instruments comprise the following at December 31:

	2018 US$'000	2017 US$'000
Derivatives designated as hedging instruments		
Cross currency swap	15,883	26,219
Derivatives not designated as hedging instruments		
Cross currency swap	4,501	7,429
Interest rate swaps	3,079	4,392
	23,463	**38,040**

Cross currency swap

The Company's operations generate cash flows predominantly in Euros and US dollars. The Company is exposed to exchange rate fluctuations between these currencies as it expects to convert Euros into US dollars to settle a proportion of the interest and principal of the Notes (see Note 18). To manage this currency risk, the Parent Company entered a cross-currency swap (the “CCS”) on May 12, 2017 where on a semi-annual basis it will receive interest of 9.375% on a notional of $192,500 thousand and pay interest of 8.062% on a notional of €176,638 thousand and it will exchange these Euro and US dollar notional amounts at maturity of the Notes in 2022. The timing of payments of interest and principal under the CCS coincide exactly with those of the Notes.

The fair value of the CCS at December 31, 2018 was $20,384 thousand (2017: $33,648 thousand) (see Note 28).

The Parent Company, which has a Euro functional currency, has designated $150,000 thousand of the notional amount of the CCS as a cash flow hedge of the variability of the Euro functional currency equivalents of the future US dollar cash flows of $150,000 thousand of the principal amount of the Notes. During the year ended December 31, 2018, the change in fair value of the CCS has resulted in a gain of $10,006 thousand recognized through other comprehensive income in the valuation adjustments reserve (2017: $24,171 thousand loss). During the year ended December 31, 2018, the change in value of the hedged item used as the basis for recognizing hedge ineffectiveness for the period was a gain of $10,333 thousand. This cash flow hedge was assessed to be highly effective at December 31, 2018 and therefore no ineffectiveness was recognized in the income statement. Amounts transferred from the valuation adjustments reserve to the income statement comprise a gain of $7,024 thousand transferred to exchange differences (2017: $14,791 thousand loss) and a gain of $951 thousand transferred to finance costs (2017: $1,216 thousand). At December 31, 2018, a balance of $8,567 thousand in respect of the cash flow hedge of the CCS remained in the valuation adjustment reserve and will be reclassified to the income statement as the hedged item affects profit or loss over the period to maturity of the Notes (2017: $10,596 thousand).

The remaining $42,500 thousand of the notional amount of the CCS is not designated as a cash flow hedge and is accounted for at fair value through profit or loss, resulting in a gain of $2,838 thousand for the year ended December 31, 2018, which is recorded in financial derivative gain in the consolidated income statement (2017: $6,850 thousand loss).

Interest rate swaps

The Company enters into interest rate swaps to manage the risk of changes in interest rates on certain non-current and current obligations. Since June 30, 2015, the interest rate swaps have been considered as ineffective hedges and as a result the changes in fair value of these derivatives are recognized through profit or loss. At December 31, 2018,

valuation adjustments reserve includes $2,602 thousand that relates to hedging relationships for which hedge accounting is no longer applied.

The following interest rate swaps were outstanding at December 31:

	2018				
	Nominal Amount US$'000	**Maturity**	**Fixed Interest Rate**	**Reference Floating Interest Rate**	**Fair Value US$'000**
Lease of hydroelectrical installations	137,400	2022	2.05	6-month Euribor	(3,079)
Total					**(3,079)**

	2017				
	Nominal Amount US$'000	**Maturity**	**Fixed Interest Rate**	**Reference Floating Interest Rate**	**Fair Value US$'000**
Lease of hydroelectrical installations	143,916	2022	2.05	6-month Euribor	(4,392)
Total					**(4,392)**

20. Trade and other payables

Trade and other payables compose the following at December 31:

	2018 US$'000	2017 US$'000
Payable to suppliers	241,936	172,566
Trade notes and bills payable	14,887	20,293
Total	**256,823**	**192,859**

21. Other liabilities

Other liabilities comprise the following at December 31:

	2018			2017		
	Non-Current US$'000	Current US$'000	Total US$'000	Non-Current US$'000	Current US$'000	Total US$'000
Payable to non-current asset suppliers	99	11,648	11,747	—	5,411	5,411
Guarantees and deposits	16	—	16	32	2	34
Remuneration payable	55	45,705	45,760	—	46,667	46,667
Tax payables	—	20,799	20,799	1,574	17,785	19,359
Contingent consideration	23,119	3,103	26,222	—	—	—
Other liabilities	1,741	22,315	24,056	1,930	20,704	22,634
Total	**25,030**	**103,570**	**128,600**	**3,536**	**90,569**	**94,105**

Tax payables

Tax payables comprise the following at December 31:

	2018			2017		
	Non-Current US$'000	Current US$'000	Total US$'000	Non-Current US$'000	Current US$'000	Total US$'000
VAT	—	6,491	6,491	—	1,784	1,784
Accrued social security taxes payable	—	5,001	5,001	—	5,095	5,095
Personal income tax withholding payable	—	1,436	1,436	—	1,049	1,049
Other	—	7,871	7,871	1,574	9,857	11,431
Total	**—**	**20,799**	**20,799**	**1,574**	**17,785**	**19,359**

Share-based compensation

a. Equity Incentive Plan

On May 29, 2016, the board of Ferroglobe PLC adopted the Ferroglobe PLC Equity Incentive Plan (the “Plan”) and on June 29, 2016 the Plan was approved by the shareholders of the Company. The Plan is a discretionary benefit offered by Ferroglobe PLC for the benefit of selected senior employees of Ferroglobe PLC and its subsidiaries. The Plan’s main purpose is to reward and foster performance through share ownership. Awards under the plan may be structured either as conditional share awards or options with a $nil exercise price (nil cost options). The awards are subject to a service condition of three years from the date of grant.

Details of the Plan awards during the current and prior years are as follows:

	Number of awards
Outstanding as of December 31, 2016	**264,933**
Granted during the period	492,432
Exercised during the period	—
Expired/forfeited during the period	—
Outstanding as of December 31, 2017	**757,365**
Granted during the period	485,860
Exercised during the period	—
Expired/forfeited during the period	(218,183)
Outstanding as of December 31, 2018	**1,025,042**
Exercisable as of December 31, 2018 and December 31, 2017	—

The awards outstanding under the Plan at December 31, 2018 and December 31, 2017 were as follows:

Grant Date	Performance Period (three years ended)	Expiration Date	Exercise Price	Fair Value at Grant Date	2018	2017
June 14, 2018	N/A	June 13, 2028	nil	$ 9.34	129,930	—
March 21, 2018	December 31, 2021	March 20, 2028	nil	$ 22.56	287,080	—
June 20, 2017	December 31, 2020	June 20, 2027	nil	$ 15.90	17,342	17,342
June 1, 2017	N/A	June 1, 2027	nil	$ 10.96	19,463	19,463
June 1, 2017	December 31, 2020	June 1, 2027	nil	$ 16.77	382,002	455,627
November 24, 2016	December 31, 2019	November 24, 2026	nil	$ 16.66	189,225	264,933
					1,025,042	**757,365**

The awards outstanding as of December 31, 2018 had a weighted average remaining contractual life of 6.18 years.

At December 31, 2018, 875,649 of the outstanding awards were subject to performance conditions (2017: 737,902 awards). For those awards subject to performance conditions, upon completion of the three year service period, the recipient will receive a number of shares or nil cost options of between 0% and 200% of the above award numbers, depending on the financial performance of the Company during the performance period. The performance conditions can be summarized as follows:

Vesting Conditions
30% total shareholder return (“TSR”) relative to a comparator group
30% TSR relative to S&P Global 1200 Metals and Mining Index
20% return on invested capital (“ROIC”) relative to a comparator group
20% net operating profit after tax (“NOPAT”) relative to a comparator group

There were no performance obligations linked to 149,393 of the awards outstanding at December 31, 2018 (2017: 19,463 awards). These awards were issued as deferred bonus awards and vest subject to remaining in employment for three years.

Fair Value

The weighted average fair value of the awards granted during the year ended December 31, 2018 was $18.62 (2017: $16.51). The Company estimates the fair value of the awards using Stochastic and Black-Scholes option pricing models. Where relevant, the expected life used in the model has been adjusted for the remaining time from the date of valuation until options are expected to be received, exercise restrictions (including the probability of meeting market conditions attached to the option), and performance considerations. Expected volatility is calculated over the period commensurate with the remainder of the performance period immediately prior to the date of grant.

The following assumptions were used to estimate the fair value of the awards:

	Grant date			
	March 21, 2018	June 20, 2017	June 01, 2017	November 24, 2016
Fair value at grant date	$ 22.56	$ 15.90	$ 16.77	$ 16.66
Grant date share price	$ 15.19	$ 10.50	$ 10.96	$ 11.81
Exercise price	Nil	Nil	Nil	Nil
Expected volatility	49.86 %	43.15 %	43.09 %	44.83 %
Option life	3.00 years	3.00 years	3.00 years	3.00 years
Dividend yield	— %	— %	— %	— %
Risk-free interest rate	2.48 %	1.52 %	1.44 %	1.39 %
Remaining performance period at grant date	2.78	2.53	2.58	2.1
Company TSR at grant date	2.1 %	(0.3)%	4.0 %	40.0 %
Median comparator group TSR at grant date	(6.2)%	(7.2)%	(3.7)%	56.4 %
Median index TSR at grant date	(8.4)%	0.6 %	4.8 %	45.7 %

At the date of grant for these awards, all of the opening averaging period and some of the performance period had elapsed. The Company's TSR relative to the median comparator group TSR and median index TSR at grant date may impact the grant date fair value; starting from an advantaged position increases the fair value and starting from a disadvantaged position decreases the fair value.

To model the impact of the TSR performance conditions, we have calculated the volatility of the comparator group using the same method used to calculate the Company's volatility, using historical data, where available, which matches the length of the remaining performance period grant date.

The Company's correlation with its comparator group was assessed on the basis of correlations above 20% being considered significant and incorporated into the valuation model (100% represents perfect positive correlation and 0% represents no correlation).

For the year ended December 31, 2018, share-based compensation expense related to this stock plan amounted to $2,798 thousand, which is recorded in staff costs (2017: $2,405 thousand).

b. Options assumed under business combination with Globe

Prior to the business combination, shares of Globe Specialty Metals common stock were registered pursuant to Section 12(b) of the Exchange Act and listed on NASDAQ. As a result of the business combination between Ferroglobe and Globe, each share of Globe common stock was converted into the right to receive one Ferroglobe ordinary share. The shares of Globe common stock were suspended from trading on NASDAQ effective as of the opening of trading on December 24, 2015. Ferroglobe ordinary shares were approved for listing on The NASDAQ Global Market. At the effective time of the business combination, GSM stock and stock-based awards were replaced with stock and stock-based awards of Ferroglobe in a one to one exchange.

There were 59,980 options that were exercised and 167,990 share options that expired during the year ended December 31, 2018 (2017: 34,990 options were exercised and 71,027 share options expired).

A summary of options outstanding is as follows:

	Number of Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term in Years	Aggregate Intrinsic Value
Outstanding as of December 31, 2016	629,378	$ 14.59	1.75	580
Exercised during the period	(34,990)	6.77		
Expired/forfeited during the period	(71,027)	14.54		
Outstanding as of December 31, 2017	523,361	$ 15.12	0.89	$ 1,774
Exercised during the period	(59,980)	5.89		
Expired/forfeited during the period	(167,990)	17.99		
Cancelled in lieu of cash settlement	(191,761)	12.54		
Outstanding as of December 31, 2018	103,630	$ 19.40	0.44	$ —
Exercisable as of December 31, 2018	103,630	$ 19.40	0.44	$ —

As of December 31, 2018 there are total vested options of 103,630 and no unvested options outstanding (2017: vested options of 515,028 and 8,333 unvested options).

For the year ended December 31, 2018, share based compensation income related to stock options under this plan was $287 thousand (2017: $4 thousand expense). The expense is reported within staff costs in the consolidated income statement.

For the year ended December 31, 2018, the Company settled 191,761 of the above options for cash resulting in a payment of $680 thousand.

c. Executive bonus plan assumed under business combination with Globe

Prior to the business combination, the Globe also issued restricted stock units under the Company's Executive Bonus Plan. The fair value of restricted stock units is based on quoted market prices of the Company's stock at the end of each reporting period. These restricted stock units proportionally vest over three years, but are not delivered until the end of the third year. The Company will settle these awards by cash transfer, based on the Company's stock price on the date of transfer. For the year ended December 31, 2018, 7,031 restricted options were exercised and for the year ended December 31, 2017, 371,570 restricted options were exercised. As of December 31, 2018, and 2017 year end, restricted stock units of nil and 13,340, respectively, were outstanding.

For the year ended December, 31 2018, share based compensation income for these restricted stock units was $584 thousand before tax and $376 thousand after tax (2017: $343 thousand expense before tax and $202 thousand expense after tax). The expense is reported within staff costs in the consolidated income statement. At December 31, 2018 and 2017, the liability associated with the restricted stock option was $41 thousand and $626 thousand, respectively included in other current liabilities.

d. Stock appreciation rights assumed under business combination with Globe

Globe issued cash-settled stock appreciation rights as an additional form of incentivized bonus. Stock appreciation rights vest and become exercisable in one-third increments over three years. The Company settles all awards by cash transfer, based on the difference between the Company's stock price on the date of exercise and the date of grant. The Company estimates the fair value of stock appreciation rights using the Black-Scholes option pricing model. There were 74,373 stock appreciation rights cancelled and 498,476 stock appreciation rights exercised during the year ended December 31, 2018 (2017: 209,451 stock appreciation rights cancelled and 168,135 stock appreciation rights

exercised). As of December 31, 2018, and 2017, there were 610,021 and 1,182,871 stock appreciation rights outstanding, respectively.

For the year ended December 31, 2018 compensation income for these stock appreciation rights was $5,848 thousand before tax and $3,762 thousand after tax (2017: $3,429 thousand expense before tax and $2,023 thousand expense after tax). As of December 31, 2018, the liability associated with the stock appreciation rights is $62 thousand and is included in other current liabilities (2017: liability of $5,911 thousand included within other liabilities, of which $111 thousand was presented as non-current).

22. Tax matters

The components of current and deferred income tax expense (benefit) are as follows:

	2018 US$'000	2017 US$'000	2016 US$'000
Consolidated income statement			
Current income tax			
Current income tax charge/(credit)	22,795	30,491	(14,885)
Adjustments in current income tax in respect of prior years	(865)	753	1,220
Total	**21,930**	**31,244**	**(13,665)**
Deferred tax			
Origination and reversal of temporary differences	2,500	(14,857)	(33,030)
Impact of tax rate changes	98	(31,688)	—
Adjustments in deferred tax in respect of prior years	(293)	480	—
Total	**2,305**	**(46,065)**	**(33,030)**
Income tax expense (benefit)	**24,235**	**(14,821)**	**(46,695)**

As the Company has significant business operations in Spain, France, South Africa and the United States, a weighted effective tax rate is considered to be appropriate in estimating the Company's expected tax rate. The following is a reconciliation of tax expense based on a weighted blended statutory income tax rate to our effective income tax expense for the years ended December 31, 2018, 2017, and 2016:

	2018 US$'000	2017 US$'000	2016 US$'000
Accounting profit/(loss) before income tax	48,808	(20,643)	(405,308)
At weighted effective tax rate of 36% (2017: 31% and 2016: 31%)	17,409	(6,399)	(125,645)
Non-taxable income/(expenses)	(14,856)	96	—
Non-deductible expenses	25,079	18,278	81,648
Movements in unprovided deferred tax	7,620	7,138	15,326
US Tax Reform - federal tax rate change	—	(31,257)	—
Differing territorial tax rates	(2,262)	2	(22,949)
Adjustments in respect of prior periods	(1,038)	1,233	—
Other items	(4,936)	(845)	890
Elimination of effect of interest in joint ventures	1,079	1,458	—
Other permanent differences	1,242	(1,685)	5,196
Incentives and deductions	(6,944)	(3,188)	(1,161)
US State taxes	1,235	348	—
Taxable capital gains	607	—	—
Income tax (expense)/benefit	**24,235**	**(14,821)**	**(46,695)**

The Tax Cuts and Jobs Act ("TCJA") was enacted into law on December 22, 2017. The material impact of the TCJA on the Company's 2017 position was a deferred tax credit of $31.2 million representing the remeasurement of the Company's U.S. net deferred tax liability as a consequence of the reduction of the U.S. federal corporate statutory tax rate from 35% to 21% with effect from January 1, 2018. A one-off tax charge of $1.7 million representing the Company's best estimate of its transition tax liability was recorded in 2017 and reversed in the current period following a comprehensive review of the foreign historic earnings and profits subject to tax under the new law.

Current tax assets and liabilities

	2018 US$'000	2017 US$'000
Current tax assets		
Income tax receivable	27,404	17,158
Current tax liabilities		
Income tax payable	2,335	7,419
Net tax assets	**25,069**	**9,739**

Deferred tax assets and liabilities

For the year ended December 31, 2018:

	Opening Balance US$'000	Prior Year Charge US$'000	Recognised in P&L US$'000	Recognised in Equity/ OCI US$'000	Acquisitions/ Disposals US$'000	Exchange Differences US$'000	Closing Balance US$'000
Intangible assets	(2,442)	1,787	236	—	—	—	(419)
Biological assets	(5,521)	—	2,233	—	—	448	(2,840)
Provisions	25,534	(3,388)	(1,353)	93	210	(1,146)	19,950
Property, plant & equipment	(79,758)	(3,409)	3,562	—	(1,682)	3,002	(78,285)
Inventories	(243)	(3)	(2,673)	256	42	(12)	(2,633)
Hedging Instruments	1,239	15	7	(197)	—	(54)	1,010
Tax losses, incentives & credits	20,723	343	(7,249)	(489)	1,179	(877)	13,630
Partnership interest	(13,373)	(349)	1,197	—	—	—	(12,525)
Other	(6,028)	4,514	770	—	—	66	(678)
Total	**(59,869)**	**(490)**	**(3,270)**	**(337)**	**(251)**	**1,427**	**(62,790)**

Presented in the statement of financial position as follows:

	2018 US$'000	2017 US$'000
Deferred tax assets	14,589	5,273
Deferred tax liabilities	77,379	65,142
Net Total Deferred Tax Asset / (Liability)	**(62,790)**	**(59,869)**

Unrecognised deductible temporary differences, unused tax losses and unused tax credits

	2018 US$'000	2017 US$'000
Unused tax losses	396,119	391,997
Unused tax credits	7,963	8,028
Unrecognised deductible temporary differences	79,377	65,638
Total	**483,459**	**465,663**

Management of tax risks

The Company is committed to conducting its tax affairs consistent with the following objectives:

(i) to comply with relevant laws, rules, regulations, and reporting and disclosure requirements in whichever jurisdiction it operates;
(ii) to maintain mutual trust, transparency and respect in its dealings with all tax authorities; and
(iii) to adhere with best practice and comply with the Company's internal corporate governance procedures, including but not limited to its Code of Conduct

In the jurisdictions in which the Company operates, tax returns cannot be deemed final until they have been audited by the tax authorities or until the statute-of-limitations has expired. The number of open tax years subject to examination varies depending on the tax jurisdiction. In general, the Company has the last four years open to review. The criteria that the tax authorities might adopt in relation to the years open for review could give rise to tax liabilities which cannot be quantified.

23. Related party transactions and balances

Balances with related parties at December 31 are as follows:

	2018			
	Receivables		Payables	
	Non-Current US$'000	Current US$'000	Non-Current US$'000	Current US$'000
Inmobiliaria Espacio, S.A.	—	2,953	—	7
Grupo Villar Mir, S.A.U.	—	79	—	—
Enérgya VM Generación, S.L	—	11,154	—	70
Villar Mir Energía, S.L.U.	2,288	38	—	8,941
Espacio Information Technology, S.A.U.	—	—	—	1,514
Blue Power Corporation, S.L.	—	—	—	134
Other related parties	—	2	—	462
Total	**2,288**	**14,226**	**—**	**11,128**

	2017			
	Receivables		Payables	
	Non-Current US$'000	Current US$'000	Non-Current US$'000	Current US$'000
Inmobiliaria Espacio, S.A.	—	3,033	—	4
Grupo Villar Mir, S.A.U.	—	83	—	—
Enérgya VM Generación, S.L	—	1,420	—	6
Villar Mir Energía, S.L.U.	2,398	35	—	12,065
Espacio Information Technology, S.A.U.	—	—	—	861
Blue Power Corporation, S.L.	—	—	—	29
Other related parties	2	1	—	8
Total	**2,400**	**4,572**	**—**	**12,973**

The loan granted to Inmobiliaria Espacio, S.A. accrues a market interest and has a maturity in the short-term that is renewed tacitly upon maturity, unless the parties agreed it's repaid until maturity, extended it automatically for one year.

The balance with the other related parties arose as a result of the commercial transactions performed with them (see explanation of main transactions below).

Transactions with related parties in 2018, 2017 and 2016 are as follows:

	2018				
	Sales and Operating Income US$'000	Cost of Sales US$'000	Staff costs US$'000	Other Operating Expenses US$'000	Finance Income (Note 25.4) US$'000
Inmobiliaria Espacio, S.A.	—	—	—	6	72
Villar Mir Energía, S.L.U.	—	99,939	—	1,467	—
Espacio Information Technology, S.A.U.	—	—	—	4,226	—
Enérgya VM Generación, S.L	43,772	—	—	272	—
Enérgya VM Gestión, S.L	—	42	—	119	—
Other related parties	20	—	—	119	—
Total	**43,792**	**99,981**	**—**	**6,209**	**72**

	2017				
	Sales and Operating Income US$'000	Cost of Sales US$'000	Staff costs US$'000	Other Operating Expenses US$'000	Finance Income (Note 25.4) US$'000
Inmobiliaria Espacio, S.A.	—	—	—	2	70
Villar Mir Energía, S.L.U.	—	94,049	—	3,362	—
Espacio Information Technology, S.A.U.	—	—	—	3,807	—
Enérgya VM Generación, S.L	17,222	—	—	226	—
Enérgya VM Gestión, S.L	—	—	—	22	—
Other related parties	—	—	—	1,440	154
Total	**17,222**	**94,049**	**—**	**8,859**	**224**

	2016				
	Sales and Operating Income US$'000	Cost of Sales US$'000	Staff costs US$'000	Other Operating Expenses US$'000	Finance Income (Note 25.4) US$'000
Inmobiliaria Espacio, S.A.	—	—	—	2	74
Grupo Villar Mir, S.A.U.	403	—	—	—	—
Villar Mir Energía, S.L.U.	45	69,083	—	3,626	—
Espacio Information Technology, S.A.U.	—	—	—	4,049	—
Enérgya VM Generación, S.L	20,553	—	—	503	—
Enérgya VM Gestión, S.L	—	253	—	—	—
Marco International Corporation	765	5,212	—	—	—
Key management personnel (Note 26)	—	—	10,080	—	—
Other related parties	—	—	—	92	—
Total	**21,766**	**74,548**	**10,080**	**8,272**	**74**

"Cost of sales" of the related parties vis-à-vis Villar Mir Energía, S.L.U. relates to the purchase of energy from the latter by the Company's Electrometallurgy – Europe segment. FerroAtlántica pays VM Energía a service charge in addition to paying for the cost of energy purchase from the market. For the fiscal years ended December 31, 2018, 2017 and 2016, FerroAtlántica's and Hidro Nitro Española's obligations to make payments to VM Energía under their respective agreements – for the purchase of energy plus the service charge – amounted to $99,939 thousand, $94,049

thousand and $69,083 thousand, respectively. These contracts are similar to contracts FerroAtlántica signs with other third-party brokers.

A former member of the board of directors until the end of 2016 is affiliated with Marco International Corporation, from which the Company purchases certain raw materials and to whom the Company sells silicon-based alloys.

“Other operating expenses” relates mainly to service fees paid to Espacio Information Technology, S.A.U. for managing and maintenance services rendered related, basically, to the enterprise resource planning (‘ERP’) that some Company entities use; and other IT development projects.

“Sales and operating income” relates mainly to sales from Hidro Nitro Española to Enérgya VM for the sales made by its hydroelectric plant of $11,874 thousand, $7,419 thousand and $5,155 thousand for the fiscal years ended December 31, 2018, 2017 and 2016. Hidro Nitro Española was sold out of the Company on December 31, 2018. FerroAtlántica sales to Enérgya VM for the sales made by its hydroelectric plant of $31,898 thousand, $9,803 thousand and $15,398 thousand for the fiscal years ended December 31, 2018, 2017 and 2016.

During 2018 and 2017, under the solar joint venture agreement FerroAtlántica and other subsidiaries have purchased property, plant and equipment of $4,252 and $3,611 thousand respectively, from Aurinka and Blue Power Corporation, S.L.

24. Guarantee commitments to third parties and contingent liabilities

Guarantee commitments to third parties

As of December 31, 2018 and 2017, the Company has provided bank guarantees commitments to third parties amounting $14,427 thousand and $18,943 thousand, respectively. Management believes that any unforeseen liabilities at December 31, 2018 and 2017 that might arise from the guarantees given would not be material.

Contingent liabilities

In the ordinary course of its business, Ferroglobe is subject to lawsuits, investigations, claims and proceedings, including, but not limited to, contractual disputes and employment, environmental, health and safety matters. Although we cannot predict with certainty the ultimate resolution of lawsuits, investigations, claims and proceedings asserted against it, we do not believe any currently pending legal proceeding to which it is a party will have a material adverse effect on its business, prospects, financial condition, cash flows, results of operations or liquidity.

Asbestos-related claims

Certain employees of FerroPem, S.A.S., then known as Pechiney Electrometallurgie, S.A. (“PEM”), may have been exposed to asbestos at its plants in France in the decades prior to FerroAtlántica Group’s purchase of that business in December 2004. During the period in question, PEM was wholly-owned by Pechiney Bâtiments, S.A., which had certain indemnification obligations to FerroAtlántica pursuant to the 2003 Share Sale and Purchase Agreement under which FerroAtlántica acquired PEM. As of the date of this annual report, approximately 93 such employees have “declared” asbestos-related injury to the French social security agencies, based either on the occurrence of work accidents (“accident du travail”) or on administrative recognition of an occupational disease (“maladie professionelle”). Of these, 61 cases are closed, approximately 32 are pending before the French social security agencies or courts and, of the latter, 13 include assertions of “inexcusable negligence” (“faute inexcusable”) which, if upheld, may lead to material liability on the part of FerroPem. Other employees may declare further asbestos-related injuries in the future, and may likewise assert inexcusable negligence. In 2016, FerroPem initiated an arbitration process seeking to enforce indemnification provisions in the Share Sale and Purchase Agreement against Río Tinto France as successor to Pechiney Bâtiments, S.A. with respect to pending asbestos claims. On July 11, 2017, however,

the claims in arbitration were denied in their entirety on various grounds, including that the claims were untimely, and Ferropem is without further recourse against Río Tinto. Litigation against, and material liability on the part of, FerroPem will not necessarily arise in each case, and to date a majority of such declared injuries have been minor and have not led to significant liability on Ferropem's part. Whether material liability will arise is determined case-by-case, often over a period of years, depending on, inter alia, the evolution of the claimant's asbestos-related condition, the possibility that the claimant was exposed while working for other employers and, where asserted, the claimant's ability to prove inexcusable negligence on PEM's part. Because of these and other uncertainties, no reliable estimate can be made at this time of FerroPem's eventual liability in these matters, with exception of three grave cases that were litigated through the appeal process and in which claimants' assertions of inexcusable negligence were upheld against FerroPem. Liabilities in respect to asbestos-related claims have been recorded at December 31, 2018 at an estimated amount of $1,775 thousand in Provisions for litigation in progress.

Environmental matters

On August 31, 2016, the U.S. Department of Justice (the "DOJ") requested a meeting with GMI to discuss potential resolution of a July 1, 2015 NOV/FOV that GMI received from the U.S. Environmental Protection Agency (the "EPA") alleging certain violations of the Prevention of Significant Deterioration ("PSD") and New Source Performance Standards provisions of the Clean Air Act associated with a 2013 project performed at GMI's Beverly facility. Specifically, the July 2015 NOV/FOV alleges violations of the facility's existing operating and construction permits, including allegations related to opacity emissions, sulfur dioxide and particulate matter emissions, and failure to keep necessary records and properly monitor certain equipment. On October 27, 2016, GMI met with the DOJ and the EPA to discuss the alleged violations, GMI's preliminary assessment of those alleged violations, and its possible defenses to the NOV/FOV. As a result of that meeting, GMI has agreed to the government's request that GMI prepare an assessment of Best Available Control Technologies ("BACT") that could be applicable to the facility under the federal PSD program, to conduct a ventilation study to assess emissions at the facility, and to continue discussions with the government regarding an appropriate resolution of the NOV/FOV by consent. In February 2017, the EPA formally issued a request under Section 114 of the Clean Air Act, requiring GMI to conduct the ventilation study that GMI had previously agreed to conduct. On January 4, 2017, GMI received a second NOV/FOV dated December 6, 2016, arising from the same facts as the July 2015 NOV/FOV and subsequent EPA inspections. The second NOV/FOV alleges opacity exceedances at certain units, failure to prevent the release of particulate emissions through the use of furnace hoods at a certain unit, and the failure to install Reasonably Available Control Measures (as defined) at certain emission units at the Beverly facility. As part of the on-going consent process to resolve the NOVs/FOVs, the government could demand that GMI install additional pollution control equipment or implement other measures to reduce emissions from the facility, as well as pay a civil penalty. GMI's environmental consultants have completed the ventilation study and a Ventilation Evaluation Report documenting the same, which GMI provided to EPA on October 6, 2017. Since that time, GMI and the government have continued negotiations regarding potential resolution of the NOV/FOVs, which negotiations are ongoing. At this time, however, GMI does not know the extent of potential injunctive relief or the amount of a civil penalty a negotiated resolution of this matter may entail. Should the DOJ and GMI be unable to reach a negotiated resolution of the NOVs/FOVs, the government could institute formal legal proceedings for injunctive relief and civil penalties. The statutory maximum penalty is $93,750 per day per violation, from April 2013 to the present.

25. Income and expenses

25.1 Sales

Sales by segment for the years ended December 31 are as follows:

	2018 US$'000	2017 US$'000	2016 US$'000
Electrometallurgy - North America	710,716	541,143	521,192
Electrometallurgy - Europe	1,447,973	1,083,200	949,547
Electrometallurgy - South Africa	208,543	122,504	142,160
Other segments	94,111	60,199	90,337
Eliminations	(187,305)	(65,353)	(127,199)
Total	**2,274,038**	**1,741,693**	**1,576,037**

Sales by geographical area for the years ended December 31 are as follows:

	2018 US$'000	2017 US$'000	2016 US$'000
Spain	274,769	253,991	201,403
Germany	359,737	245,152	241,046
Italy	138,796	94,590	90,267
Other EU Countries	487,340	340,877	236,746
USA	674,243	547,309	563,619
Rest of World	339,153	259,774	242,956
Total	**2,274,038**	**1,741,693**	**1,576,037**

25.2 Staff costs

Staff costs are comprised of the following for the years ended December 31:

	2018 US$'000	2017 US$'000	2016 US$'000
Wages, salaries and similar expenses	265,405	222,733	212,098
Pension plan contributions	12,136	13,631	10,647
Employee benefit costs	63,523	65,599	73,654
Total	**341,064**	**301,963**	**296,399**

25.3 Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs are comprised of the following for the years ended December 31:

	2018 US$'000	2017 US$'000	2016 US$'000
Amortization of intangible assets (Note 8)	9,312	8,440	12,649
Depreciation of property, plant and equipment (Note 9)	109,832	94,051	105,695
Other write-downs and reversals	(7)	2,038	7,333
Total	**119,137**	**104,529**	**125,677**

Included within other write-downs and reversals for the years ended December 31, 2017 and 2016 are amounts of $1,784 thousand and $7,578 thousand, respectively, relating to the change in impairment losses on uncollectible trade receivables.

25.4 Finance income and finance costs

Finance income is comprised of the following for the year ended December 31:

	2018 US$'000	2017 US$'000	2016 US$'000
Finance income of related parties (Note 23)	72	224	74
Other finance income	5,302	3,484	1,462
Total	**5,374**	**3,708**	**1,536**

Finance costs are comprised of the following for the year ended December 31:

	2018 US$'000	2017 US$'000	2016 US$'000
Interest on debt instruments	34,188	28,961	—
Interest on loans and credit facilities	8,249	15,834	18,630
Interest on note and bill discounting	205	7,403	1,503
Interest on interest rate swaps	1,710	2,689	2,525
Interest on finance leases	2,974	2,917	3,186
Trade receivables securitization expense (Note 10)	12,097	7,256	—
Other finance costs	2,599	352	4,407
Total	**62,022**	**65,412**	**30,251**

25.5 Impairment losses and net loss (gain) due to changes in the value of assets

Impairment losses and net loss (gain) due to changes in the value of assets are comprised of the following for the years ended December 31:

	2018 US$'000	2017 US$'000	2016 US$'000
Impairment of goodwill (Note 7)	—	30,618	194,612
Impairment of intangible assets (Note 8)	16,073	443	230
Impairment of property, plant and equipment (Note 9)	42,846	(104)	67,624
Impairment of non-current financial assets (Note 10)	—	—	5,623
Impairment losses	**58,919**	**30,957**	**268,089**
(Increase) decrease in fair value of biological assets (Note 28)	7,615	(7,504)	(1,891)
Other (gain) loss	8	—	—
Net (gain) loss due to changes in the value of assets	**7,623**	**(7,504)**	**(1,891)**

25.6 Loss (gain) on disposal of non-current assets

Loss (gain) on disposal of non-current assets is comprised of the following for the years ended December 31:

	2018 US$'000	2017 US$'000	2016 US$'000
Loss on disposal of intangible assets	—	503	—
Gain on disposal of property, plant and equipment	(2,950)	(1,779)	(468)
Loss on disposal of property, plant and equipment	162	3,733	—

(Gain) loss on disposal of other non-current assets	(29)	1,859	128
Gain on disposal of subsidiary	(11,747)	—	—
Total	**(14,564)**	**4,316**	**(340)**

On December 31, 2018, the Company completed the sale of its majority interest in its Spanish subsidiary Hidro Nitro Española S.A. to an entity sponsored by a Spanish renewable energies fund. The Company received net cash proceeds of $20,533 thousand and recognized a gain on disposal of $11,747 thousand.

26. Remuneration of key management personnel

The remuneration of the key management personnel, which comprises the Company's management committee, during the years ended December 31 is as follows:

	2018 US$'000	2017 US$'000	2016 US$'000
Fixed remuneration	6,068	5,625	5,611
Variable remuneration	—	3,710	4,007
Contributions to pension plans and insurance policies	379	215	285
Share-based compensation	1,777	1,738	—
Termination benefits	2,284	—	22,672
Other remuneration	23	17	177
Total	**10,531**	**11,305**	**32,752**

During the year ended December 31, 2016, severance benefits were accrued in the amount of $22,672 thousand, related to the resignation of the former Company's Executive Chairman.

During 2018, 2017 and 2016, no loans and advances have been granted to key management personnel.

27. Financial risk management

Ferroglobe operates in an international and cyclical industry which exposes it to a variety of financial risks such as currency risk, liquidity risk, interest rate risk, credit risk and risks relating to the price of finished goods, raw materials and power.

The Company's management model aims to minimize the potential adverse impact of such risks upon the Company's financial performance. Risk is managed by the Company's executive management, supported by the Risk Management, Treasury and Finance functions. The risk management process includes identifying and evaluating financial risks in conjunction with the Company's operations and quantifying them by project, region and subsidiary. Management provides written policies for global risk management, as well as for specific areas such as foreign currency risk, credit risk, interest rate risk, liquidity risk, the use of hedging instruments and derivatives, and investment of surplus liquidity.

The financial risks to which the Company is exposed in carrying out its business activities are as follows:

a) Market risk

Market risk is the risk that the Company's future cash flows or the fair value of its financial instruments will fluctuate because of changes in market prices. The primary market risks to which the Company is exposed comprise foreign currency risk, interest rate risk and risks related to prices of finished goods, raw materials and power.

Foreign currency risk

Ferroglobe generates sales revenue and incurs operating costs in various currencies. The prices of finished goods are to a large extent determined in international markets, primarily in US dollars and Euros. Foreign currency risk is partly mitigated by the generation of sales revenue, the purchase of raw materials and other operating costs being denominated in the same currencies. Although it has done so on occasions in the past, and may decide to do so in the future, the Company does not generally enter into foreign currency derivatives in relation to its operating cash flows. At December 31, 2018, and December 31, 2017, the Company was not party to any foreign currency forward contracts.

In February 2017, the Company completed a restructuring of its finances which included the issue of $350,000 thousand of senior notes due 2022 (see Note 18) and the repayment of certain existing indebtedness denominated in a number of currencies across its subsidiaries. The Company is exposed to foreign exchange risk as the interest and principal of the Notes is payable in US dollars, whereas its operations principally generate a combination of US dollar and Euro cash flows. Following approval by the Board, the Company entered into a cross currency interest rate swap to exchange 55% of the principal and interest payments in US dollars for principal and interest payments in Euros (see Note 19). The Company has designated a proportion of the cross currency swap as a cash flow hedge (see Note 19), with the remainder accounted for at fair value through profit or loss.

Interest rate risk

Ferroglobe is exposed to interest rate risk in respect of its financial liabilities that bear interest at floating rates. These primarily comprise credit facilities (see Note 16) and obligations under finance leases related to hydroelectrical installations (see Note 17).

During the year ended December 31, 2018 and 2017, the Company did not enter into any interest rate derivatives in relation to its interest bearing credit facilities. At December 31, 2018, the Company had drawn down $135,919 thousand under its credit facilities (2017: nil).

Prior to the Business Combination, the Company entered into interest rate swaps to fix the interest payable in respect of its obligations under finance leases until 2022. Details of the interest rate derivative financial instruments at December 31, 2017 and 2016 are included in Note 19 to these consolidated financial statements.

b) Credit risk

Credit risk refers to the risk that a customer or counterparty will default on its contractual obligations resulting in financial loss. The Company's main credit risk exposure related to financial assets is set out in Note 10 and includes trade receivables, other receivables and other financial assets.

Trade receivables consist of a large number of customers, spread across diverse industries and geographical areas. The Company has established policies, procedures and controls relating to customer credit risk management. Ongoing credit evaluation is performed on the financial condition of accounts receivable and, where appropriate, the Company insures its trade receivables with reputable credit insurance companies.

Since August 2017, the Company has sold substantially all of the trade receivables generated by its subsidiaries in the United States, Canada, Spain and France to an accounts receivable securitization program (see Note 10). This has enabled it to monetize these assets earlier than it did previously and significantly reduce working capital.

c) Liquidity risk

The purpose of the Company's liquidity and financing policy is to ensure that the Company keeps sufficient funds available to meet its financial obligations as they fall due. The Company's main sources of financing are as follows:

- $350,000 thousand aggregate principal amount of 9.375% Senior Notes due March 1, 2022 (the "Notes"). The proceeds from the Notes, issued by Ferroglobe and Globe (together, the "Issuers") on February 15, 2017, were primarily used to repay certain existing indebtedness of the Parent Company and its subsidiaries. Interest is payable semi-annually on March 1 and September 1 of each year. If Ferroglobe experiences a change of control, the Company is required to offer to redeem the Notes at 101% of their principal amount (further information below).

- $200,000 thousand Revolving Credit Facility. Loans under the Revolving Credit Facility may be borrowed, repaid and reborrowed until the maturity of the facility in February 2021. Borrowings are available to be

used to provide for the working capital and general corporate requirements of the Parent Company and its subsidiaries (including permitted acquisitions and permitted capital expenditures). At December 31, 2018 $139,325 thousand was utilized, including letters of credit (2017: nil) (see Note 30).

- Hydroelectric finance lease. In May 2012, the Company entered into a sale and leaseback agreement with respect to certain hydroelectric assets in Spain. The lease payments are due in 120 installments from May 2012 to maturity in May 2022 (see Note 17).

The Indenture governing the Company's Notes includes change of control provisions that would require the Company to offer to redeem the outstanding Notes at a purchase price in cash equal to 101% of the principal amount of the notes, plus any accrued and unpaid interest in the event of a change of control. A change in control is defined in the Indenture as the occurrence of any of the following:

1. If the Company becomes aware, that any person or group, other than one of the Permitted Holders (which is defined as Grupo Villar Mir (GVM), Alan Kestenbaum or members of senior management) or affiliates of those Permitted Holders, directly or indirectly controls 35% or more of the Company's voting stock and the aggregate voting stock of the Permitted Holders is the same or a lesser percentage;
2. If the Company sells or otherwise disposes of all or substantially all of its assets;
3. If the Company ceases to hold directly or indirectly 100% of the capital stock of Globe; or
4. If the shareholders or the Company or the U.S. subsidiary approve the liquidation or dissolution of either the Company or Globe.

GVM currently owns approximately 54% of the Company's voting stock and it is the Company's understanding that a significant majority of GVM's shares in the Company are pledged as collateral for GVM's obligations to certain of its lenders ("GVM Lenders"). An enforcement by the GVM Lenders of their security over GVM's shares will not automatically give rise to a change of control. There are contractual provisions in place that limit the likelihood of a change of control arising as a result of any such enforcement. These include a limitation on the number of shares that a GVM Lender is entitled to hold (individually or as a part of a group) to no more than 19% of the Company's outstanding shares and a prohibition on the sale of shares by or on behalf of the GVM Lenders to any purchaser other than one who is believed to be a passive investor who would, following the acquisition, own no more than 15% of the Company's outstanding share capital.

A change of control may occur if a person other than a Permitted Holder were to acquire 35% or more of the Company's outstanding shares at a time when the Permitted Holders held an equal or lesser percentage. So long as GVM maintains its current shareholding, that cannot occur. The position would be less clear following an enforcement and sale of shares by the GVM Lenders to a number of purchasers (per the terms above), as the contractual restrictions on share holdings then may cease to apply. Even so, building a significant stake in the Company would impose disclosure obligations on such a purchaser and is unlikely to occur on an unforeseen or precipitate basis.

Based on our review of the provisions cited above, the Company has concluded that a change of control as defined in the Indenture is unlikely to occur and, accordingly, that the requirement to offer to redeem the Notes at the above-referenced premium is unlikely. Even if such unlikely developments were to occur, the Company believes it would have access to the credit markets and could utilize other cash generating initiatives, such as permitted divestitures of non-core assets, in order to meet its obligation to offer to redeem the Notes and fulfill such redemption on a timely basis.

Further, on February 22, 2019, the Company amended its Revolving Credit Facility to afford the Company additional flexibility under its financial maintenance covenants during an interim period beginning with the first quarter of 2019 and continuing through the first quarter of 2020.

The Company is committed to continuing to enhance its liquidity and capital structure and is looking at alternative financing arrangements and further non-core asset divestitures.

Quantitative information

i. Interest rate risk:

At December 31, the Company's interest-bearing financial liabilities were as follows:

	2018		
	Fixed rate	**Floating rate**	**Total**
	US$'000	**US$'000**	**US$'000**
Bank borrowings	—	141,012	141,012
Obligations under finance leases	—	66,471	66,471
Debt instruments	352,595	—	352,595
Other financial liabilities (*)	61,849	—	61,849
	414,444	**207,483**	**621,927**

(*) Other financial liabilities comprise loans from government agencies and exclude derivative financial instruments (see Note 19).

	2017		
	Fixed rate	**Floating rate**	**Total**
	US$'000	**US$'000**	**US$'000**
Bank borrowings	—	1,003	1,003
Obligations under finance leases	—	82,633	82,633
Debt instruments	350,270	—	350,270
Other financial liabilities (*)	86,238	13,153	99,391
	436,508	**96,789**	**533,297**

(*) Other financial liabilities comprise loans from government agencies and exclude derivative financial instruments (see Note 19).

In respect of the above financial liabilities, at December 31, 2018, the Company had floating to fixed interest rate swaps in place covering 31% of its exposure to floating interest rates (2017: 83%).

Analysis of sensitivity to interest rates

At December 31, 2018, an increase of 1% in interest rates would have given rise to additional borrowing costs of $1,425 thousand (2017: $161 thousand).

ii. Foreign currency risk:

Notes and cross currency swap

The Parent Company is exposed to exchange rate fluctuations as it has a Euro functional currency and future commitments to pay interest and principal in US dollars in respect of its outstanding debt instruments of $150,000 thousand (see Note 18). To manage this foreign currency risk, the Parent Company has entered into a cross currency swap and designated a portion of this as an effective cash flow hedge of the future interest and principal amounts due on its debt instruments. As discussed in Note 19, the notional amount of the cross currency swap exceeds the principal amount of the Parent Company's debt instruments by $42,500 thousand and therefore a portion of the cross currency swap is not designated as a hedge and is accounted for at fair value through profit or loss. The Company has performed a sensitivity analysis that indicates that if the Euro was to strengthen (weaken) against the US Dollar by 10% it would record a loss (gain) of $4,615 thousand in respect of the portion of the cross currency swap accounted for at fair value through profit or loss (2017: $5,831 thousand).

Foreign currency swaps in relation to trade receivables and trade payables

At December 31, 2018 and 2017, the Company has no foreign currency swaps in place in respect of foreign currency accounts receivable and accounts payable.

iii. Liquidity risk:

The table below summarizes the maturity profile of the Company's financial liabilities at December 31, 2017, based on contractual undiscounted payments. The table includes both interest and principal cash flows. The cash flows for debt instruments assume that principal of the Notes is repaid at maturity in March 2022 (see Note 18).

	2018				
	Less than 1 year	Between 1-2 years	Between 2-5 years	After 5 years	Total
	US$'000	US$'000	US$'000	US$'000	US$'000
Bank borrowings	8,191	—	132,821	—	141,012
Finance leases	12,999	13,817	39,655	—	66,471
Debt instruments	32,813	32,813	399,219	—	464,845
Financial loans from government agencies	58,758	6,996	1,822	507	68,083
Derivative financial instruments	(491)	(939)	7,559	—	6,129
Payables to related parties	11,128	—	—	—	11,128
Payable to non-current asset suppliers	11,648	99	—	—	11,747
Contingent consideration	3,103	6,193	18,530	12,758	40,584
Trade and other payables	256,823	—	—	—	256,823
	394,972	**58,979**	**599,606**	**13,265**	**1,066,822**

	2017				
	Less than 1 year	Between 1-2 years	Between 2-5 years	After 5 years	Total
	US$'000	US$'000	US$'000	US$'000	US$'000
Bank borrowings	1,003	—	—	—	1,003
Finance leases	15,379	15,504	58,225	—	89,108
Debt instruments	32,813	32,813	432,031	—	497,656
Financial loans from government agencies	88,127	2,362	2,349	1,056	93,894
Derivative financial instruments	595	203	18,108	—	18,906
Payables to related parties	12,973	—	—	—	12,973
Payable to non-current asset suppliers	5,411	—	—	—	5,411
Trade and other payables	192,859	—	—	—	192,859
	349,160	**50,882**	**510,713**	**1,056**	**911,810**

The amounts disclosed in the table above for derivative financial instruments are the net undiscounted cash flows. The following table shows the gross inflows and outflows and the corresponding reconciliation of those amounts to the net carrying value of the derivatives.

	2018				
	Less than 1 year	Between 1-2 years	Between 2-5 years	After 5 years	Total
	US$'000	US$'000	US$'000	US$'000	US$'000
Inflows	18,047	18,047	219,570		255,664
Outflows	(17,556)	(17,108)	(227,129)		(261,793)
Net cash flow	491	939	(7,559)	—	(6,129)
Discounted at the applicable interbank rates	82	52	(23,597)	—	(23,463)

	2017				
	Less than 1 year	Between 1-2 years	Between 2-5 years	After 5 years	Total
	US$'000	US$'000	US$'000	US$'000	US$'000
Inflows	18,198	17,996	237,526	—	273,720
Outflows	(18,793)	(18,199)	(255,634)	—	(292,626)
Net cash flow	(595)	(203)	(18,108)	—	(18,906)
Discounted at the applicable interbank rates	(995)	(985)	(36,060)	—	(38,040)

Changes in liabilities arising from financing activities

The changes in liabilities arising from financing activities during the year ended December 31, 2018 and 2017 were as follows:

	January 1, 2018 US$'000	Reclassification of business held for sale (*) US$'000	Changes from financing cash flows US$'000	Effect of changes in foreign exchange rates US$'000	Changes in fair values US$'000	Other changes US$'000	December 31, 2017 US$'000
Bank borrowings	1,003	—	140,781	(772)	—	—	141,012
Obligations under finance leases	82,633	—	(12,948)	(3,214)	—	—	66,471
Debt instruments	350,270	—	—	—	—	2,324	352,594
Financial loans from government agencies (Note 19)	99,391	—	(33,096)	(4,446)	—	—	61,849
Derivative financial instruments (Note 19)	38,040	—	—	(1,677)	(12,841)	(59)	23,463
Total liabilities from financing activities	**571,337**	**—**	**94,737**	**(10,109)**	**(12,841)**	**2,265**	**645,389**
Dividends paid			(20,642)				
Proceeds from stock option exercises			240				
Other amounts paid due to financing activities			(932)				
Payments to acquire or redeem own shares			(20,100)				
Net cash (used) by financing activities			**53,303**				

	January 1, 2017 US$'000	Reclassification of business held for sale (*) US$'000	Changes from financing cash flows US$'000	Effect of changes in foreign exchange rates US$'000	Changes in fair values US$'000	Other changes US$'000	December 31, 2017 US$'000
Bank borrowings	421,291	—	(426,641)	1,916	—	4,437	1,003
Obligations under finance leases	5,237	81,383	(14,610)	10,623	—	—	82,633
Debt instruments	—	—	337,383	—	—	12,887	350,270
Financial loans from government agencies (Note 19)	87,360	—	—	12,031	—	—	99,391
Derivative financial instruments (Note 19)	699	5,576	—	1,971	31,614	(1,820)	38,040
Total liabilities from financing activities	**514,587**	**86,959**	**(103,868)**	**26,541**	**31,614**	**15,504**	**571,337**
Proceeds from stock option exercises			180				
Other amounts paid due to financing activities			(9,709)				
Net cash (used) by financing activities			**(113,397)**				

(1) (*) Liabilities associated with the Spanish energy business were separately presented in the consolidated statement of financial position at December 31, 2016, as part of a disposal group held for sale. The business ceased to be classified as held for sale during the year ended December 31, 2017 (see Note 29).

28. Fair value measurement

Fair value of assets and liabilities that are measured at fair value on a recurring basis

The following table provides the fair value measurement hierarchy of the Company's assets and liabilities that are carried at fair value in the statement of financial position:

	December 31, 2018			
	Total US$'000	Quoted prices in active markets (Level 1) US$'000	Significant observable inputs (Level 2) US$'000	Significant unobservable inputs (Level 3) US$'000
Other assets (Note 12):				
Biological assets	**7,790**	—	—	7,790
Other financial assets (Note 10):				
Debt investments	**67,079**	—	—	67,079
Listed equity securities	**2,523**	2,523	—	—
Other financial liabilities (Note 19):				
Derivative financial instruments - cross currency swap	**(20,384)**	—	(20,384)	—
Derivative financial instruments - interest rate swaps	**(3,079)**	—	(3,079)	—
Other liabilities (Note 21)				
Contingent consideration in a business combinations	**(26,222)**	—	—	(26,222)

	December 31, 2017			
	Total US$'000	Quoted prices in active markets (Level 1) US$'000	Significant observable inputs (Level 2) US$'000	Significant unobservable inputs (Level 3) US$'000
Other assets (Note 12):				
Biological assets	**27,279**	—	—	27,279
Other financial assets (Note 10):				
Other	**82,638**	—	—	82,638
Other financial liabilities (Note 19):				
Derivative financial instruments - cross currency swap	**(33,648)**	—	(33,648)	—
Derivative financial instruments - interest rate swaps	**(4,392)**	—	(4,392)	—

Cross currency swap

The cross currency swap is valued using a discounted cash flow technique. The valuation model incorporates foreign exchange spot and forward rates, yield curves of the respective currencies, currency basis spreads between the respective currencies and forward interest rates. The valuation also incorporates a credit risk adjustment, calculated based on credit spreads derived from current credit default swap prices (see Note 19).

The fair value of the swap at December 31, 2018 was a liability of $20,384 thousand, which is categorized as a level 2 measurement in the fair value hierarchy as it is based on valuation techniques for which the inputs are directly or indirectly observable. The fair value is calculated as the present value of the estimated future cash flows and is subject to a credit risk adjustment that reflect the credit risk of the Company; this is calculated based on credit spreads derived from current credit default swap prices.

Interest rate swaps

Interest rate swaps are valued using a discounted cash flow technique. Future cash flows are estimated based on forward interest rates (from observable yield curves at the end of the reporting period) and contract interest rates, discounted at a rate that reflects the credit risk of various counterparties.

Biological assets

Biological assets comprise timber farms in South Africa, which are a source of raw materials used for the production of silicon metal. The timber farms plantations are measured at fair value less the incremental costs to be incurred until the related products are at the point of sale. The changes in the fair value of this asset are recognized in the income statement in the line "net gain (loss) due to changes in the value of assets" (see Note 25.5).

During the year ended December 31, 2018, the Company divested of certain timber farm plantations and associated property, plant and equipment, which resulted in proceeds of $12,734 thousand.

The fair value of the remaining timber farm plantations at December 31, 2018 is based on indicative offers received. In the prior year, the fair value of the biological assets was based on a valuation model for which the key assumptions were as follows:

- the arm's length price (market price) used by the market for wood of varying ages;
- the wood pulp industry Mean Annual Increment (MAI) index of 15 for gum and 10.5 for pine is used to determine the annual growth rate of the plantations; and
- the density index used to convert cubic meters of wood to metric tons is 0.94 for pine and 1 for wood pulp.

The changes in fair value of biological assets classified at level 3 in the hierarchy were as follows:

	Level 3 US$'000
January 1, 2017	**17,365**
Gain recognised in profit or loss (Note 25.5)	7,504
Translation differences	2,410
December 31, 2017	**27,279**
Loss recognised in profit or loss (Note 25.5)	(7,615)
Disposal of biological assets	(12,168)
Translation differences	294
December 31, 2018	**7,790**

29. Non-current assets held for sale

On December 12, 2016, the Company entered into a sale agreement to dispose of its Spanish energy business. The assets and associated liabilities of this business were classified as held for sale in the balance sheet at December 31, 2016. Subsequently, in July 2017, the Company announced that it did not receive the required regulatory approvals to divest of its Spanish energy business and although it will continue to explore all options to capture the full value of these assets, completion of the previously announced sale is no longer considered to be highly probable. Accordingly, the Company in the second quarter of 2017 ceased to classify the assets and liabilities of the business as held for sale.

In accordance with IFRS 5, the Company ceased to recognize depreciation expense in relation to its Spanish energy business while it was classified as held for sale. When the business ceased to be classified as held for sale, the Company recorded an adjustment of $2,608 thousand to the carrying amount of its assets, equivalent to the depreciation that would have been charged if the business had not been classified as held for sale. This loss is charged in the income statement for the year ended December 31, 2017, within the line item "other loss".

30. Events after the reporting period

Amendment to revolving credit facility

On February 22, 2019, Ferroglobe obtained the consent of its lenders for an amendment to its Revolving Credit Facility that affords the Company additional flexibility under its financial maintenance covenants. The amendment suspends the existing covenant to maintain a maximum total net leverage ratio during an interim period beginning with the first quarter of 2019 and continuing through the first quarter of 2020, and provides a new covenant to maintain a maximum secured net leverage ratio and a new covenant to maintain a minimum cash liquidity level which is the greater of $150,000 thousand or the Revolving Facility Usage, as defined, in the Revolving Credit Facility Agreement. The new covenants will be in effect only during the interim period, after which the existing covenant to maintain a maximum total net leverage ratio will be reinstated. The amendment also reduced the aggregate commitments under the Revolving Credit Facility from $250,000 thousand to $200,000 thousand.

Exhibit 4.13

28 JUNE 2017 **EXECUTION VERSION**

PEDRO LARREA PAGUAGA

FERROGLOBE PLC

AMENDED AND RESTATED SERVICE AGREEMENT

CONTENTS

CLAUSE **PAGE**

1.	TERM AND JOB DESCRIPTION	1
2.	DUTIES	2
3.	SALARY	3
4.	BONUS AND LONG-TERM INCENTIVE ARRANGEMENTS	3
5.	TAXATION	4
6.	EXPENSES	5
7.	PENSION	5
8.	INSURANCE	5
9.	HOLIDAY	6
10.	SICKNESS AND OTHER INCAPACITY	6
11.	REPRESENTATIONS AND WARRANTIES	6
12.	OTHER INTERESTS	7
13.	SHARE DEALING AND OTHER CODES OF CONDUCT	8
14.	INTELLECTUAL PROPERTY	8
15.	DISCIPLINARY AND GRIEVANCE PROCEDURES	9
16.	TERMINATION	9
17.	RESIGNATION BY THE EXECUTIVE FOR GOOD REASON	12
18.	REMUNERATION POLICY, MALUS AND CLAWBACK.	13
19.	SUSPENSION AND GARDENING LEAVE	13
20.	RESTRAINT ON ACTIVITIES OF EXECUTIVE AND CONFIDENTIALITY	15
21.	POST-TERMINATION COVENANTS	15
22.	EXECUTIVE'S POSITION AS DIRECTOR	17
23.	WAIVER OF RIGHTS	17
24.	DATA PROTECTION	18
25.	EMAIL AND INTERNET USE	19
26.	COUNTERPARTS	19
27.	CONTRACTS (RIGHTS OF THIRD PARTIES) ACT 1999	19
28.	DEFINITIONS	19
29.	MISCELLANEOUS	21

THIS AMENDED RESTATED AGREEMENT *(THE AGREEMENT)* IS MADE ON 28 June 2017

BETWEEN

(1) **FERROGLOBE PLC,** a company with registered number 09425113, which has its registered office at Legalinx Ltd., One Fetter Lane, London, EC4A lBR (the ***Company);*** and

(2) **Pedro Larrea Paguaga** of 22 Rutland Court, Rutland Gardens, Knightsbridge, London SW7 lBW (the *Executive);*

WHEREAS

(1) The Executive commenced Employment with the Company on the Effective Date; and

(2) The Executive and the Company have now agreed to amend and restate the terms and conditions of the Employment and, in consideration of the mutual rights and undertakings contained herein, have entered into this Agreement to bring the amendment and restatement into legal effect on and with effect from the date of this Agreement.

IT IS AGREED as follows: -

1. TERM AND JOB DESCRIPTION

1.1 The Executive shall be employed by the Company as Chief Executive Officer.

1.2 The Employment began on the Effective Date. For statutory purposes, there is no previous period of continuous employment preceding the Effective Date.

1.3 Subject to clauses 1.4 and 16 below, the Employment will continue until terminated by:

(a) the Company giving the Executive 12 months' written notice; or

(b) the Executive giving the Company 6 months' written notice.

1.4 Notwithstanding clause l.3(a) above, prior to the third anniversary of the Effective Date, the Company shall be required to give the Executive the following written notice:

(a) 24 months' written notice, if notice is given prior to the first anniversary of the Effective Date;

(b) 21 months' written notice, if notice is given between the first and second anniversaries of the Effective Date; and

(c) 18 months' written notice, if notice is given between the second and third anniversaries of the Effective Date.

2. DUTIES

2.1 During the Employment, the Executive will:-

(a) diligently perform all such duties and exercise all such powers as are lawfully and properly assigned to him from time to time by the Board, whether such duties or powers relate to the Company or any other Group Company;

(b) comply with all Company rules, regulations, policies and procedures (including the Company's code of business ethics) and those of any applicable Group Company from time to time in force;

(c) comply with all directions lawfully and properly given to him by the Board;

(d) unless prevented by sickness, injury or other incapacity, devote the whole of his time, attention and abilities during his Working Hours to the business of the Company or any other Group Company for which he is required to perform duties;

(e) promptly provide the Board with all such information as it may require in connection with the business or affairs of the Company and of any other Group Company for which he is required to perform duties; and

(f) report to the Company and any applicable Group Company any matters of concern that come to his attention, or of which he is aware, in particular any acts of misconduct, dishonesty, breach of any of the Company or Group policies, including but not limited to the Code of Conduct or breach of any relevant regulatory rules committed, contemplated or discussed by any member of staff, contractor or other third party.

2.2 The Executive's Working Hours shall be such hours as are required in the proper performance of his duties.

2.3 The Executive agrees, in accordance with Regulation 5 of the Working Time Regulations 1998 (the ***Regulations),*** that the provisions of Regulation 4(1) do not apply to the Executive, and that the Executive shall give the Company three months' notice in writing if he wishes Regulation 4(1) to apply to him.

2.4 The Executive's normal place of work is the Company's headquarters in central London. The Company may from time to time reasonably require the Executive to base himself in other locations. New York City, Miami, other similarly major cities on the East Coast of the United States, Madrid, and Barcelona shall be considered reasonable locations for the purpose of this clause.

2.5 The Executive agrees to travel and work (both within and outside the United Kingdom) as may be required for the proper performance of his duties under the Employment.

3. SALARY

3.1 The Executive' s Salary as of the date of this Agreement is £475,000 (four hundred and seventy-five thousand) (less any required deductions). The Salary will be reviewed annually during the Employment, with the next review to take place in 2018 with any increase effective 1 January 2018 thereafter. No Salary review will be undertaken after notice has been given by either party to terminate the Employment. The Company is under no obligation to increase the Executive' s Salary following a Salary review, but will not decrease it.

3.2 The Executive's Salary will accrue on a daily basis, and will be payable in arrears in equal monthly instalments.

3.3 The Executive's Salary will be inclusive of all fees and other remuneration to which he may be or become entitled as an officer of the Company or of any other Group Company.

3.4 The Executive agrees that, pursuant to Part II of the Employment Rights Act 1996 the Company has the right to deduct from his Salary and/or bonus any amount owed to the Company or any Group Company by the Executive.

3.5 While the Executive's normal place of work is outside of Spain, the Executive will be entitled to an annual expatriate benefits allowance equivalent to:

(a) 20% of the Salary per annum, plus, provided the Executive's normal place of work is located in London, an exceptional allowance of a further 20% of the Salary per annum for the first 3 years of the Employment, and

(b) 20% of Salary per annum thereafter,

provided that any such allowance shall be determined in a manner consistent with the Company's Remuneration Policy.

3.6 The Company shall comply with all administrative requirements, including (subject to that being the correct legal position in relevant jurisdictions) the making of any necessary applications, to ensure that the Executive pays employee's national insurance contributions in the United Kingdom and is not required to pay social security contributions in any other jurisdiction with respect to the Employment.

4. BONUS AND LONG-TERM INCENTIVE ARRANGEMENTS

4.1 The Company operates a long-term incentive plan, and the Executive is eligible to participate therein. The term of vesting and the conditions of such vesting will be determined by the Company in a manner consistent with the Company's Remuneration Policy and any such award will be governed by the rules of the relevant long-term incentive plan. The 2016 Remuneration Policy establishes a long-term incentive award with a target level of vesting ***(Target LTIP)*** of 200% of Salary. Any long-term incentive award will be non-pensionable.

4.2 The Executive is eligible for an annual bonus if objectives established by the Compensation Committee are met ***(Annual Bonus)*** in accordance with the Company's Remuneration Policy. The Compensation Committee will set the target annual bonus opportunity ***(Target Annual Bonus)*** and the maximum bonus opportunity ***(Maximum Annual Bonus)*** applicable to an Annual Bonus. Under the 2016 Remuneration Policy, (i) the Target Annual Bonus for the Executive will normally be 100% of Salary; (ii) the Maximum Annual Bonus for the Executive is normally 200% of the Executive's Target Annual Bonus; and (iii) in circumstances where there has been exceptional performance, the Maximum Annual Bonus for the Executive will be up to 500% of Salary. Any bonus payment will be non-pensionable.

4.3 In exceptional circumstances the Compensation Committee may decide to change the weighting of the Target Annual Bonus and the long-term incentive plan benefits provided to the Executive. In 2017 and 2018, provided that the market conditions remain similar and subject to the Company's Remuneration Policy, it is the Company's intention (without being legally bound) that there will be no material reduction to the level of the aggregate of Target Annual Bonus and the Target LTIP (based on face value of shares at grant date) granted during each such financial year ***(Aggregate Incentive Awards).*** Any changes to the level of Aggregate Incentive Awards applicable generally to the Company's Tier 1 Executives and Tier 2 Executives will not be considered a material reduction for the purpose of this clause.

5. TAXATION

5.1 To the extent required by any applicable regulations, the Company shall make all necessary deductions of tax at source in respect of the Executive's employment income and benefits in any applicable jurisdiction, including PAYE income tax and employee's national insurance contributions in the United Kingdom.

5.2 Subject to the Executive providing full, correct and timely information to the Company, the Company shall apply any tax reliefs available to the Executive at source and shall cooperate with the Executive in making such applications to HM Revenue and Customs as may be required to obtain their approval to make adjustments in respect of overseas work day relief pursuant to section 690 of the Income Tax (Earnings and Pensions) Act 2003 or any other reliefs that may become available to the Executive in the future.

5.3 The Executive shall be entitled to direct the amount of payment of the Executive's salary and cash benefits into two separate bank accounts as follows:

(a) into a UK bank account; and

(b) into a non-UK bank account with such sum to be paid in the currency (which the Executive may direct) equivalent of the sterling amount, based on the official exchange rate on the date of payment, and the Company will, in its discretion, bear administrative fees associated with such payment,

provided that,

(i) unless until the Executive makes a direction, the entire earnings shall be paid into a UK bank account, and

(ii) the Company shall be under no obligation to comply with such a direction if the Company considers that the amount to be paid into the non-UK bank account would result in insufficient earnings to pay UK PAYE income tax, is otherwise not in compliance with applicable regulations, or the Compensation Committee by unanimity determines, based on the advice of its external independent advisers, that such payment into the non-UK bank account would materially prejudice the Company.

6. EXPENSES

The Company will reimburse (or procure the reimbursement of) all out-of-pocket expenses properly and reasonably incurred by the Executive in the course of his Employment subject to production of receipts or other appropriate evidence of payment.

7. PENSION

7.1 Subject to clause 7.2 below, the Company will pay the Executive an annual allowance in lieu of a pension contribution on his behalf at a rate of 20% of his Salary from time to time. The allowance will accrue on a daily basis and will be payable in arrears (less any required deductions) in equal monthly instalments with the Executive's Salary.

7.2 The Executive acknowledges that the Company may have an obligation to auto enrol him into a pension scheme and agrees that to the extent such an obligation exists and he does not opt out of the pension scheme, the Company may reduce the amount payable to him pursuant to clause 7.1 above by an amount equal to the contributions it is required to make to the pension scheme.

8. INSURANCE

During the Employment, subject to the Executive's age or health not being such as to prevent cover being obtained without exceptional conditions or unusually high premiums, the Company will:

(a) pay for the benefit of the Executive, his Spouse and any dependent children (as determined in accordance with the rules of the applicable scheme) subscriptions to the Company's private medical expenses insurance arrangements for the time being in force;

(b) pay for the benefit of the Executive subscriptions to the Company's permanent health insurance arrangements for the time being in force; and

(c) pay for the benefit of the Executive subscriptions to the Company's life assurance arrangements for the time being in force.

For the avoidance of doubt, the Executive will be liable for any income tax and employee's national insurance contributions payable in respect of the provision of these benefits.

9. HOLIDAY

9.1 The Executive is entitled to 25 working days' paid holiday per calendar year during his Employment (plus bank and public holidays in England), to be taken at a time or times convenient to, and with prior approval from, the Company. The right to paid holiday will accrue pro-rata during each calendar year of the Employment.

9.2 Subject to clause 9.3 the Executive has no entitlement to be paid in lieu of accrued but untaken holiday.

9.3 On termination of the Employment, the Executive's entitlement to accrued holiday pay shall be calculated on a pro-rata basis (which calculation shall be made on the basis that each day of paid holiday is equivalent to 1/260 of the Executive's Salary). If the Executive has taken more working days' paid holiday than his accrued entitlement, the Company is authorised to deduct the appropriate amount from his final Salary instalment (which deduction shall be made on the basis that each day of paid holiday is equivalent to 1/260 of the Executive's Salary).

10. SICKNESS AND OTHER INCAPACITY

10.1 Subject to the Executive's compliance with the Company's policy on notification and certification of periods of absence from work, the Executive will continue to be paid his full Salary during any period of absence from work due to sickness, injury or other incapacity, up to a maximum of 26 weeks in aggregate in any period of 52 consecutive weeks. Such payment will be inclusive of any statutory sick pay payable in accordance with applicable legislation in force at the time of absence.

10.2 The Executive will not be paid during any period of absence from work (other than due to holiday, sickness, injury or other incapacity) without the prior permission of the Board.

10.3 The Executive agrees that he will undergo a medical examination by a doctor appointed by the Company at any time (provided that the costs of all such examinations are paid by the Company). The Company will be entitled to receive a copy of any report produced in connection with all such examinations and to discuss the contents of the report with the doctor who produced it.

11. REPRESENTATIONS AND WARRANTIES

11.1 By entering into this Agreement the Executive represents, warrants and acknowledges to the Company that he is not subject to any contract of service or for the provision of services, any notice period or any restrictive covenant with a previous employer which would be breached by signing this Agreement and/or commencing his Employment with the Company and he is legally free from all agreements, arrangements or other restrictions seeking to restrict his right to compete with any person or to deal with or solicit clients or solicit, employ or engage employees of any

person or in any way restricting him from entering into and performing the terms of this Agreement and he may join the Company to commence his duties on the Effective Date.

12. OTHER INTERESTS

12.1 The Company acknowledges that the Executive has business interests other than those of the Company and that the Executive has declared any conflicts that are apparent as of the date of this Agreement. In the event that the Executive becomes aware of any conflicts of interest that may arise, he must disclose these to the Board together with any information or knowledge acquired or gained by him in any manner whatsoever whilst he continues in office which may be of value or which may be to the detriment of the Company or any of its subsidiary undertakings.

12.2 Subject to clauses 12.3 and 12.4, during the Employment the Executive will not (without the Board's prior written consent) be directly or indirectly engaged, concerned or interested in any other business activity, trade or occupation.

12.3 Notwithstanding clause 12.2, the Executive may, subject to his duty as a director (if applicable), hold:

(a) an investment by way of shares or other securities in a business which is similar to or competitive with the Company of not more than 3% of the total issued share capital of any company (whether or not it is listed or dealt in on a recognised stock exchange) provided he has obtained prior written approval from the Board; and

(b) investments in companies and executive directorships in unquoted companies which do not carry on a business similar to or competitive with any business for the time being carried on by the Company without restriction provided only that (i) such holdings and directorships are notified to the Board, (ii) there is, in the reasonable opinion of the Board, no conflict of interest between the Company and the Executive, and (iii) such holdings and directorships (including, but without limitation, in respect of their time commitment) do not, in the reasonable opinion of the Board, interfere with the Employment. Subject always to the Executive's duty as a director (if applicable), the obligation to notify the Board does not apply (x) if the Executive's investment in any one business does not exceed £100,000 and the Executive has no active participation or involvement in the business of the entity in which the investment is made; or (y) if the Executive's investment is in a mutual fund or any other form of undertakings for collective investment where the Executive has no active participation or involvement in the investment decisions (in this case, without any maximum amount).

12.4 Notwithstanding clause 12.2 above, during the Employment, the Executive may accept positions as a non-executive director (but, for the avoidance of doubt, not as a non-executive chairman) of another publicly listed company provided (i) he has obtained prior written approval from the Board, which shall not be unreasonably withheld, (ii) there is, in the reasonable opinion of the Board, no conflict of interest between the Company with respect to the proposed role, and (iii) such positions do

not, in the reasonable opinion of the Board, interfere with the Employment. Depending on the Executive's other external business activities at the time, the Board will normally consider two such non-executive director roles in other publicly listed companies to be reasonable. For the avoidance of doubt, (a) the Executive is not entitled to accept a position as an executive director in any company that is not a Group Company (except for those within the scope of clause 12.3(b) above), and (b) a role as advisor to any business shall be considered a non-executive director role of a publicly listed company for the purpose of this clause.

13. SHARE DEALING AND OTHER CODES OF CONDUCT

The Executive will comply with all codes of conduct adopted from time to time by the Board and with all applicable rules and regulations of relevant regulatory bodies, including (a) Nasdaq Stock Market or any other exchanges on which the Company's securities may be listed and (b) any applicable regulations on dealings in securities. The Executive acknowledges that compliance may require him to take appropriate steps to ensure that his connected persons (as defined in section 96B(2) of the Financial Services and Markets Act 2000) also comply with any such codes of conduct and regulations.

14. INTELLECTUAL PROPERTY

It shall be part of the Executive's normal duties or other duties specifically assigned to him (whether or not during normal working hours and whether or not performed at the Executive's normal place of work) at all times to consider in what manner and by what new methods or devices the products, services, processes, equipment or systems of the Company with which he is concerned or for which he is responsible might be improved and might, as part of such duties, originate designs (whether registrable or not) or patentable work or other work in which copyright, database rights or trade mark rights (together ***Employee Works)*** may subsist. Accordingly:

(a) the Executive shall forthwith disclose full details of any Employee Works **in** confidence to the Company and shall regard himself in relation to any Employee Works as a trustee for the Company;

(b) all intellectual property rights in any Employee Works shall vest absolutely in the Company which shall be entitled, so far as the law permits, to the exclusive use thereof;

(c) notwithstanding (b) above, the Executive assigns to the Company all right, title and interest, present and future, anywhere in the world, in copyright and in any other intellectual property rights in respect of all Employee Works written, originated, conceived or made by the Executive (except only those Employee Works written, originated, conceived or made by the Executive wholly outside his normal working hours hereunder and wholly unconnected with the Employment) during the continuance of the Employment;

(d) the Executive hereby waives all moral rights as author under the Copyright Designs and Patents Act 1988 or any equivalent laws in respect of any Employee Works; and

(e) the Executive agrees and undertakes that at any time during or after the termination of the Employment he will execute such deeds or documents and do all such acts and things as the Company may deem necessary or desirable to substantiate its rights in respect of the matters referred to above including for the purpose of obtaining letters patent or other privileges in all such countries as the Company may require.

15. DISCIPLINARY AND GRIEVANCE PROCEDURES

15.1 If the Executive is dissatisfied with any disciplinary decision taken in relation to him he may appeal in writing to the Chairman of the Board within 7 days of that decision. The Chairman's decision shall be final.

15.2 If the Executive has any grievance in relation to the Employment he may raise it in writing with the Chairman of the Board whose decision shall be final.

16. TERMINATION

16.1 Either party may terminate the Employment in accordance with clause 1.3 or clause 1.4, as applicable.

16.2 In lieu of giving notice to terminate the Executive's employment or at any time during any notice period under clause 1.3 or clause 1.4, as applicable (following service of notice either by the Executive or the Company), the Company may **in** its absolute discretion (but is not obliged to) terminate the Executive's employment with immediate effect and, subject to clause 16.5, make a payment in lieu of notice (the ***Payment in Lieu)*** within 28 days of the Termination Date of an amount equal to:

(a) the basic Salary which the Executive would have been entitled to receive under this Agreement during the notice period referred to at clause 1.3 or clause 1.4, as applicable if notice had been given on the date that the Employment was terminated with immediate effect (or, if notice has already been given, during the remainder of the notice period) (the ***Unserved Notice Period);*** and

(b) the pension allowance the Executive would have been entitled to receive in the Unserved Notice Period. For the avoidance of doubt, where the Unserved Notice Period covers multiple years then the Executive will be entitled to a payment in lieu of a pension allowance applicable for the year in which the Termination Date occurs;

(c) the bonus(es) the Executive would have been entitled to receive in the Unserved Notice Period, calculated, in each case, by way of an average of Annual Bonuses awarded (including the value of any deferred portion thereof on the date of the award) to the Executive by the Company in respect of the last three completed financial years immediately prior to the Termination Date (provided that (i) if the Termination Date occurs before the third anniversary of the Effective Date, the average shall mean the amount of the Annual Bonuses awarded since the Effective Date divided by the number of Annual Bonuses awarded, and (ii) if during the period between the Effective Date and

the Termination Date, the Company has not awarded any Annual Bonus (other than as a result of failure to satisfy the applicable performance conditions), the average shall be determined by reference to the mid-point between the threshold opportunity (at which the lowest level of Annual Bonus is payable) and the Target Annual Bonus, and by reference to the Salary on the Termination Date). In all cases, the average amount calculated under this sub clause shall be proportionately adjusted for the length of the Unserved Notice Period; and

(d) the cost to the Company of the benefits consisting of (i) those provided pursuant to clause 8 the Executive would have been entitled to receive during the Unserved Notice Period, and (ii) if an allowance under clause 3.5 is being paid at the time of the Termination Date, an annual expatriate benefits allowance equivalent to 20% of Salary pro-rated for the length of the Unserved Notice Period but not exceeding six months.

For the avoidance of doubt, the Executive will remain bound by the post-termination covenants set out in clause 21.

16.3 In the event the Employment is terminated by resignation by the Executive for Good Reason (as defined in clause 17), the Company will make an immediate payment of a liquidated sum to the Executive of an amount equal to the Payment in Lieu (described in clause 16.2) that would be applicable at that time. The liquidated sum shall be subject to such deductions as the Company may be required to make and shall be made in full and final settlement of any claims (other than statutory claims) the Executive may have against the Company or any Group Company arising from the employment or the termination thereof. In consideration for this payment, the Executive agrees to remain bound by the post-termination covenants set out in clause 21.

16.4 For the avoidance of doubt:

(a) the Payment in Lieu or the liquidated sum will not include any amount in respect of any other amount or benefit envisaged under this Agreement; and

(b) the Executive will not be entitled to receive any payment in addition to the Payment in Lieu or the liquidated sum in respect of any holiday entitlement that would have accrued during the period for which the Payment in Lieu or the liquidated sum is made.

16.5 The Company may determine in its absolute discretion that up to one-third of the Payment in Lieu under clause 16.2 or the liquidated sum under clause 16.3 will be payable in equal monthly instalments on the normal payroll dates over a 12 month period following the Termination Date.

16.6 The Payment in Lieu shall be subject to such deductions as may be required by law and shall be made in full and final settlement of any claims (other than statutory claims) the Executive may have against the Company or any Group Company arising from the employment or the termination thereof.

16.7 The Company may also terminate the Employment immediately and with no liability to make any further payment to the Executive (other than in respect of amounts accrued due at the date of termination) for Cause. ***Cause*** means if the Executive:

(a) commits any repeated breach (provided that the Company has notified the Executive of such breach and if capable of cure, the breach has not been cured within 30 days following receipt of the notice) or any serious breach of any of his obligations under this Agreement or his Employment;

(b) provides materially false or misleading information about himself or his previous employment history or omits to divulge material factors relevant to his suitability for the Employment;

(c) is guilty of serious misconduct which, in the Board's reasonable opinion, has damaged or may damage the business or affairs of the Company or any other Group Company;

(d) is guilty of conduct which, in the Board's reasonable opinion, brings or is likely to bring himself, the Company or any other Group Company into disrepute;

(e) is charged with a criminal offence (other than a road traffic offence not subject to a custodial sentence);

(f) is disqualified from acting as a director of a company by order of a competent court;

(g) is declared bankrupt or makes any arrangement with or for the benefit of his creditors, has an interim order made against him under Part VIII of the Insolvency Act or has an administration order made against him under the County Courts Act 1984; or

(h) resigns his directorship of the Company or any Group Company (other than at the explicit request of the Board).

This clause shall not restrict any other right the Company may have (whether at common law or otherwise) to terminate the Employment summarily.

Any delay by the Company in exercising its rights under this clause shall not constitute a waiver of those rights.

16.8 The Company may terminate the Employment even when, as a result, the Executive would or may forfeit any entitlement to benefit under the permanent health insurance arrangements referred to in clause 8 or to sick pay under clause 10, save that the Company will not terminate the Employment solely on grounds of the Executive's ill health where such an entitlement or benefit would be forfeited.

16.9 On termination of the Employment for whatever reason (and whether in breach of contract or otherwise) the Executive will:

(a) immediately deliver to the Company all books, documents, papers, computer records, computer data, credit cards, and any other property relating to the business of or belonging to the Company or any other Group Company which is in his possession or under his control. The Executive is not entitled to retain copies or reproductions of any documents, papers or computer records relating to the business of or belonging to the Company or any other Group Company;

(b) immediately resign from any office he holds with the Company or any other Group Company (and from any related trusteeships) without any compensation for loss of office. Should the Executive fail to do so he hereby irrevocably authorises the Company to appoint some person in his name and on his behalf to sign any documents and do anything to give effect to his resignation from office; and

(c) immediately pay to the Company or, as the case may be, any other Group Company all outstanding loans or other amounts due or owed to the Company or any Group Company. The Executive confirms that, should he fail to do so, the Company is to be treated as authorised to deduct from any amounts due or owed to the Executive by the Company (or any other Group Company) a sum equal to such amounts.

16.10 The Executive will not at any time after termination of the Employment represent himself as being in any way concerned with or interested in the business of, or employed by, the Company or any other Group Company.

16.11 Any long-term incentive awards, including deferred bonus awards, held by the Executive under the Company's long-term incentive plan on the Termination Date will be treated in accordance with the applicable rules of the plan.

17. RESIGNATION BY THE EXECUTIVE FOR GOOD REASON

17.1 For the avoidance of doubt, the Executive may resign from the Employment at any time under any of the following circumstances (each a ***Good Reason):***

(a) the Company's material failure to comply with the clauses of this Agreement, provided that the Executive has submitted a written notice of such failure to the Board and the failure is not cured within 90 days following receipt of the notice;

(b) the overall compensation (including Salary, Aggregate Incentive Awards, pension and other benefits) granted to the Executive by the Company in a given financial year is materially reduced from the preceding financial year, unless such reduction (i) is applied generally to the Company's Tier 1 and Tier 2 Executives and (ii) is a result of substantial changes in the market conditions affecting the Company. For the avoidance of doubt, both (i) and (ii) need to be met;

(c) the Company puts forward to its shareholders a directors' remuneration policy (as defined in Section 439A of the Companies Act 2006) pursuant to which, if approved by shareholders, the overall compensation (including Salary,

Aggregate Incentive Awards, pension and other benefits) granted to the Executive by the Company in a given financial year would be materially reduced from the preceding financial year, unless such reduction (i) is applied generally to the Company's Tier 1 and Tier 2 Executives and (ii) is a result of substantial changes in the market conditions affecting the Company. For the avoidance of doubt, both (i) and (ii) need to be met;

(d) his duties or responsibilities are substantially altered;

(e) as a result of long-term sickness he is unable to carry out his duties and his entitlements under clause 10 have ceased;

(f) he ceases to report to the Board or the Executive Chairman of the Company (or of any holding company of the Company, if applicable); or

(g) the Company's headquarters are relocated outside the United Kingdom (and not to New York City, Miami, similarly major cities on the East Coast of the United States, Madrid or Barcelona).

18. REMUNERATION POLICY, MALUS AND CLAWBACK

18.1 Notwithstanding any other provision of this Agreement, the Executive acknowledges and agrees that the payment of any amount or provision of any benefit to him is conditional upon such payment or provision being consistent with the Company's Remuneration Policy. Any provision of this Agreement which is not consistent with the Company's Remuneration Policy shall be void and the Executive shall have no entitlement to compensation or damages in respect of any loss suffered in consequence thereof.

18.2 The Executive acknowledges that in order to comply with UK corporate governance standards the discretionary bonus arrangements and share incentive plans operated by the Company from time to time (the ***Plans)*** include, or may in the future include, provisions which in certain circumstances allow for the reduction of amounts payable to the Executive and/or for the Executive to repay to the Company all or part of any amounts received by him pursuant to those Plans. The Executive hereby agrees to be bound by such provisions of the Plans both during and following the Employment and, without prejudice to clause 3.4, acknowledges the right of the Company to deduct from any amount payable to him any amount he owes to the Company or any Group Company pursuant to the Plans.

19. SUSPENSION AND GARDENING LEAVE

19.1 Where notice of termination has been served by either party whether in accordance with clause 1.3 or otherwise, the Company shall be under no obligation to provide work for or assign any duties to the Executive for the whole or any part of the relevant notice period ("Gardening Leave") and may require him:

(a) not to attend any premises of the Company or any other Group Company;

(b) to resign with immediate effect from any offices he holds with the Company or any other Group Company (and any related trusteeships);

(c) to refrain from business contact with any customers, clients or employees of the Company or any Group Company;

(d) to take any holiday which has accrued under clause 9 during any period of suspension under this clause 19.1;

(e) to deliver promptly to the Company all papers, Confidential Information and property relating to the business of the Company or any Group Company which is in his possession or under his control (including, for the avoidance of doubt, any shares held by him as nominee for any member of the Group);

(f) not to compete with the Company or any Group company; and/or

(g) not to do any act or thing or make or cause to be made any statement reasonably likely to damage the business or reputation of the Company or any Group Company and the Executive must use all reasonable efforts to ensure that his Spouse does not do any such act or thing or make or cause to be made any such statements.

19.2 For the avoidance of doubt, the Executive's entitlement to the annual bonus (clause 4) shall continue during any period of Gardening Leave. To the extent that the Executive is required not to attend work or otherwise carry out his Duties during any period of Gardening Leave, the Company agrees that his Annual Bonus entitlements shall not be adversely affected and he shall receive such sums as he would have received had he remained at work and/or performing his duties calculated by way of an average of the last three years' bonus awards (or an average across the Executive's length of service, if lower than 3 years).

19.3 The provisions of clause 12.1 shall remain in full force and effect during any period of suspension under clause 19.1. The Executive will also continue to be bound by duties of good faith and fidelity to the Company and remain available to perform such duties and/or exercise such powers, authorities and discretions (if any) when called upon by the Company to do so during any period of suspension under clause 19.1.

Any suspension under clause 19.1 shall be on full Salary and benefits (save that the Executive shall not be entitled to earn or be paid any bonus during any period of suspension).

19.4 The Company may suspend the Executive from the Employment during any period in which the Company is carrying out a disciplinary investigation into any alleged acts or defaults of the Executive. Such suspension shall be on full Salary and benefits.

20. RESTRAINT ON ACTIVITIES OF EXECUTIVE AND CONFIDENTIALITY

The Executive will keep secret and will not at any time (whether during the Employment or thereafter) use for his own or another' s advantage, or reveal to any person, firm, company or organisation and shall use his best endeavours to prevent the publication or disclosure of any Confidential Information or information which the Executive knew or ought reasonably to have known to be confidential, concerning the business or affairs of the Company or any Group Company or any of its or their customers.

The restrictions in this clause shall not apply:

(a) to any disclosure of information which is already m the public domain otherwise than by breach of this Agreement;

(b) to any disclosure of information which was known to, or in the possession of, the Executive prior to his receipt of such information from the Company or any Group Company whenever so received;

(c) to any disclosure of information which has been conceived or generated by the Executive independently of any information or materials received or acquired by the Executive from the Company or any Group Company;

(d) to any disclosure or use authorised by the Board or required by the Employment or by any applicable laws or regulations, including, without limitation, to any disclosure required for patent purposes provided that the Executive promptly notifies the Company when any such disclosure requirement arises to enable the Company to take such action as it deems necessary, including, without limitation, to seek an appropriate protective order and/or make known to the appropriate government or regulatory authority or court the proprietary nature of the Confidential Information and make any applicable claim of confidentiality with respect hereto;

(e) so as to prevent the Executive from using his own personal skill, experience and knowledge in any business in which he may be lawfully engaged after the Employment is ended; or

(f) to prevent the Executive making a protected disclosure within the meaning of section 43A of the Employment Rights Act 1996.

21. POST-TERMINATION COVENANTS

21.1 In order to protect the confidential information, trade secrets and business connections of the Company and any Group Company to which the Executive has access as a result the Employment, the Executive covenants with the Company (for itself and as trustee and agent for each other Group Company) that he shall not, whether directly or indirectly, on his own behalf or on behalf of or in conjunction with any other person, firm, company or other entity:

(a) for the period of (subject to clause 21.2 below) 12 months following the Termination Date, solicit or entice away or endeavour to solicit or entice away from the Company or any Group Company any person, firm, company or other entity who is, or was, in the period of 12 months immediately prior to the Termination Date, a client of the Company or any Group Company with whom the Executive had business dealings during the course of the Employment in that period. Nothing in this clause 21.l(a) shall prohibit the seeking or doing of business not in direct or indirect competition with the business of the Company or any Group Company;

(b) for the period of (subject to clause 21.2 below) 12 months following the Termination Date, have any business dealings with any person, firm, company or other entity who is, or was, in the period of 12 months immediately prior to the Termination Date, a client of the Company or any Group Company with whom the Executive had business dealings during the course of the Employment in that period. Nothing in this clause 21.l(b) shall prohibit the seeking or doing of business not in direct or indirect competition with the business of the Company or any Group Company;

(c) for the period of (subject to clause 21.2 below) 12 months following the Termination Date, solicit or entice away or endeavour to solicit or entice away any individual who is employed or engaged by the Company or any Group Company as a director or in a managerial or technical capacity and with whom the Executive had business dealings during the course of the Employment in the 12 month period immediately prior to the Termination Date;

(d) for the period of (subject to clause 21.2 below) 12 months following the Termination Date, carry on, set up, be employed, engaged or interested in a business anywhere in the United Kingdom, United States of America, or such other country in which a Major Division operates as at the Termination Date, which is or is about to be in competition with the business of the Company or any Group Company as at the Termination Date with which the Executive was actively involved (including in an oversight capacity as a director of the Company) during the 12 month period immediately prior to the Termination Date. **A *Major Division*** means a division or business carried on as at the Termination Date by the Company or any Group Company which accounts for at least 20% of the Group's revenues or 20% of the Group's profits and with which the Executive was actively involved during the six month period to the Termination Date. The provisions of this clause 21.l(d) shall not, at any time following the Termination Date, prevent the Executive from holding shares or other capital not amounting to more than 3% of the total issued share capital of any company whether listed on a recognised stock exchange or not and, in addition, shall not prohibit the seeking or doing of business not in direct or indirect competition with the business of the Company or any Group Company.

21.2 The period during which the restrictions referred to in clauses 21.l(a) (b), (c) and (d) inclusive shall apply following the Termination Date shall be reduced by the

amount of time during which, if at all, the Company suspends the Executive under the provisions of clause 19.1.

21.3 The Executive agrees that if, during either the Employment or the period of the restrictions set out in 21.l(a), (b), (c) and (d) inclusive (subject to the provisions of clause 21.2), he receives an offer of employment or engagement, he will provide a copy of clause 21 to the offeror as soon as is reasonably practicable after receiving the offer and will inform the Company of the identity of the offeror as soon as possible after the offer is accepted.

21.4 The Executive warrants that the covenants contained in this clause are reasonable and necessary to protect the Company and any Group Company legitimate business interests.

21.5 Each of the restrictions in this clause is intended to be separate and severable. If any of the restrictions shall be held to be void but would be valid if part of their wording were deleted, such restriction shall apply with such deletion as may be necessary to make it valid or effective.

21.6 The Executive will, at the request and expense of the Company, enter into a separate agreement with any Group Company that the Company may require under the terms of which he will agree to be bound by restrictions corresponding to those contained in clauses 21.l(a) (b), (c) and (d) inclusive (or such as may be appropriate in the circumstances).

22. EXECUTIVE'S POSITION AS DIRECTOR

22.1 The Executive's duties as a director of the Company or any other Group Company, as applicable, are subject to the Articles of Association of the relevant company for the time being.

22.2 The Company shall provide and maintain for the benefit of the Executive directors' and officers' liability insurance coverage in respect of the period for which the Executive is a director of the Company or any Group Company and for a period of not less than six years following the Termination Date at such level as the Company (or any Group Company as applicable) maintains such cover for its directors generally.

23. WAIVER OF RIGHTS

23.1 If the Employment is terminated by either party and the Executive is offered re-employment by the Company (or employment with another Group Company) on terms no less favourable in all material respects than the terms of the Employment under this Agreement, the Executive shall have no claim against the Company in respect of such termination.

24. DATA PROTECTION

24.1 The Executive consents to the Company and any Group Company processing data relating to him at any time (whether before, during or after the Employment) for the following purposes:

(a) performing its obligations under this Agreement (including remuneration, payroll, pension, insurance and other benefits, tax and social security (including national insurance) obligations;

(b) the legitimate interests of the Company and any Group Company including any sickness policy, working time policy, investigating acts or defaults (or alleged or suspected acts or defaults) of the Executive, security, management forecasting or planning and negotiations with the Executive;

(c) processing in connection with any merger, sale or acquisition of a company or business in which the Company or any Group Company is involved or any transfer of any business in which the Executive performs his duties; and

(d) transferring data to countries outside the European Economic Area for the purposes of maintaining comprehensive records and conducting analyses of the Group-wide employee population, in particular in the United States of America.

24.2 The Executive explicitly consents to the Company and any Group Company processing sensitive personal data (within the meaning of the Data Protection Act 1998) at any time (whether before, during or after the Employment) for the following purposes:

(a) where the sensitive personal data relates to the Executive's health, any processing in connection with the operation of the Company's (or any Group Company's) sickness policy or any relevant pension scheme or monitoring absence;

(b) where the sensitive personal data relates to an offence committed, or allegedly committed, by the Executive or any related proceedings, processing for the purpose of disciplinary investigation and/or action by the Company or any Group Company;

(c) for all sensitive personal data, any processing in connection with any merger, sale or acquisition of a company or business in which the Company or any Group Company is involved or any transfer of any business in which the Executive performs his duties; and

(d) for all sensitive personal data, any processing in the legitimate interests of the Company or any Group Company.

25. EMAIL AND INTERNET USE

25.1 In accordance with the Company Policy and within the bounds of the law, the Company reserves the right to monitor the Executive ' s electronic communications on a regular basis (including during any notice period, if applicable) and to monitor and record logging and traffic information as well as actual content (including the content of personal email and internet sites visited) **in** the Company's legitimate business interest, for example security or disciplinary reasons. **All** documents, communications and other files created, sent or received on email or through the internet or intranet are the Company's property.

25.2 Upon request by the Company, the Executive must give the Company access to his Company PC, laptop, Blackberry or other electronic device provided by the Company. Failure to comply with such a request will be regarded as a serious breach by the Executive and may result in disciplinary action being taken against him, including dismissal without notice or pay in lieu of notice.

26. COUNTERPARTS

This Agreement may be executed in any number of counterparts, and by each party on separate counterparts. Each counterpart is an original, but all counterparts shall together constitute one and the same instrument. Delivery of an executed counterpart signature page of this agreement by e-mail or fax shall be as effective as delivery of a manually executed counterpart of this agreement. In relation to each counterpart, upon confirmation by or on behalf of the signatory that the signatory authorises the attachment of such counterpart signature page to the final text of this agreement, such counterpart signature page shall take effect together with such final text as a complete authoritative counterpart.

27. CONTRACTS (RIGHTS OF THIRD PARTIES) ACT 1999

A person who is not a party to this Agreement shall have no right under the Contracts (Rights of Third Parties) Act 1999 to enforce any of its terms.

28. DEFINITIONS

In this Agreement the following expressions have the following meanings:

2016 Remuneration Policy means the Remuneration Policy approved by the Company ' s shareholders at the 2016 Annual General Meeting;

Board means the board of directors of the Company or a duly constituted committee of the board of directors;

Compensation Committee means a compensation committee of the Board;

Civil Partner has the same meaning as in the Civil Partnerships Act 2004;

Confidential Information means any information relating to the business, customers, transactions, processes, products, know-how, secrets or affairs of the Company, or

any Group Company received or acquired by the Executive in pursuance of his duties under this Agreement or any information which is specified as confidential by the Company or a Group Company. Without prejudice to the pregoing generality; ***Confidential Information*** also applies to information concerning:

(a) the markets, customers and potential markets and customers of the Company or any Group Company;

(b) the pricing policy, costs of products and services to the Company or any Group Company;

(c) the profits turnover, profit margins, business expectations, budgets, business plans or any other similar financial information of the Company or any Group Company;

(d) technical data or know-how relating to the business carried on by the Company or any Group Company;

(e) research projects of the Company or any Group Company; and

(f) administrative, managerial, employment or other internal policies of the Company or any Group Company or the relations of the Company or any Group Company with customers, suppliers, competitors, the business community or the general public.

Effective Date means 1 January 2016;

Employment means the Executive's employment, which commenced on the Effective Date, in accordance with the terms and conditions of this Agreement and its predecessor agreement;

Group Company means the Company, any holding company and any subsidiary of the Company or any holding company (as defined in the Companies Act 2006) and ***Group*** shall be defined accordingly;

Remuneration Policy means the remuneration policy of the Company most recently approved by shareholders in accordance with section 439A of the Companies Act 2006;

Salary means the salary referred to **in** clause 3.1 as increased from time to time;

Spouse means the person to whom the Executive is married and shall include a Civil Partner. For the avoidance of doubt, references to ***'marry', 'married'*** and ***'marriage'*** throughout shall be deemed to include a registered Civil Partnership and entering into or being in a registered Civil Partnership;

Termination Date means the date of termination of the Employment howsoever caused (including, without limitation, termination by the Company which is in repudiatory breach of this Agreement);

Tier 1 Executives means executive directors and chief executive officer (if not a director) of the Company;

Tier 2 Executives means executive officers, including chief financial officer and chief legal officer, and deputy executive officers of the Company (including, for the avoidance of doubt, the deputy chief executive officer of the Company); and

Working Hours has the meaning given to it by clause 2.2.

29. MISCELLANEOUS

29.1 This Agreement, together with any other documents referred to in this Agreement, constitutes the entire agreement and understanding between the parties, and supersedes all other agreements both oral and in writing between the Company and the Executive (other than those expressly referred to herein). The Executive acknowledges that he has not entered into this Agreement in reliance upon any representation, warranty or undertaking which is not set out in this Agreement or expressly referred to in it as forming part of the Executive's contract of employment.

29.2 The Executive represents and warrants to the Company that he will not by reason of entering into the Employment, or by performing any duties under this Agreement, be in breach of any terms of employment with a third party whether express or implied or of any other obligation binding on him.

29.3 Any notice to be given under this Agreement to the Executive may be served by being handed to him personally or by being sent by recorded delivery first class post to him at his usual or last known address; and any notice to be given to the Company may be served by being left at or by being sent by recorded delivery first class post to its registered office for the time being. Any notice served by post shall be deemed to have been served on the day (excluding Sundays and public and bank holidays) next following the date of posting and in proving such service it shall be sufficient proof that the envelope containing the notice was properly addressed and posted as a prepaid letter by recorded delivery first class post.

29.4 Any reference in this Agreement to an Act of Parliament shall be deemed to include any statutory modification or re-enactment thereof.

29.5 This Agreement is governed by, and shall be construed in accordance with, the laws of England. The Courts of England shall have exclusive jurisdiction in relation to all disputes arising out of or in connection with this Agreement.

SIGNED as a DEED and
DELIVERED by
/S/ PEDRO LARREA PAGUAGA

in the presence of
Name: /s/ Nicholas Deeming
Address: 1A Ducks Walk, Twickenham, TW1 2DD

SIGNED for and on behalf of
FERROGLOBE PLC
/s/Javier Lopez Madrid

Exhibit 4.5

FIRST AMENDMENT
TO
CREDIT AGREEMENT

THIS FIRST AMENDMENT TO CREDIT AGREEMENT ("this First Amendment") is

made and entered into as of the 31st day of October, 2018, by and among:

(i) FERROGLOBE PLC, a public limited company organized under the laws of England and Wales with a registered address at 5 Fleet Place, London EC4M 7RD, United Kingdom and registered number 09425113 (the "Borrower");

(ii) each of the GUARANTORS party hereto (each a "Guarantor" and, collectively, the "Guarantors");

(iii) the LENDERS SIGNATORIES hereto (each a "Lender" and, collectively, the "Lenders"); and

(iv) PNC BANK, NATIONAL ASSOCIATION, a national banking association, in its capacity as administrative agent (in such capacity, the "Administrative Agent").

Recitals:

A. The Borrower, the Guarantors, the Administrative Agent, the Lenders, and certain other parties are the parties to that certain Credit Agreement dated as of February 27, 2018 (the "Credit Agreement"). Capitalized terms used herein and not otherwise defined herein shall have the meanings ascribed to such terms in the Credit Agreement.

B. The Borrower and the Guarantors have requested (i) that the definition of "Lender Provided Interest Rate Hedge" be amended to include an Interest Rate Hedge between the Borrower and Goldman Sachs International, an Affiliate of Goldman Sachs Lending Partners LLC, that was entered into before Goldman Sachs Lending Partners LLC became a Lender party to the Credit Agreement and (ii) certain other amendments to the Credit Agreement.

C. Subject to the terms and conditions of this First Amendment, the Lenders have agreed to grant such requests.

Agreements:

NOW, THEREFORE, in consideration of the foregoing Recitals and of the mutual agreements hereinafter set forth, the parties hereby agree as follows:

1. Amendments of the Credit Agreement; Waiver. Subject to the terms, conditions and limitations of this First Amendment, including, without limitation, Section 2, below,

(A) The following defined term is hereby added to Section 1.1 [Certain Definitions] of the Credit Agreement in the appropriate alphabetical order:

> "Goldman Hedge" shall mean the Interest Rate Hedge, with Reference Number LTAAB67S33333M3CQRT.0.0.0/059703538, dated as of May 19, 2017, between the Borrower and Goldman Sachs International, which is subject to the 2002 ISDA Master Agreement dated as of May 11, 2017 between the Borrower and Goldman Sachs International (and related documents).

(B) The definition of the term "Lender Provided Interest Rate Hedge" in Section 1.1 [Certain Definitions] of the Credit Agreement is hereby amended and restated in its entirety to provide as follows:

> Lender Provided Interest Rate Hedge shall mean (i) an Interest Rate Hedge which is provided by any Lender or its Affiliate and for which such Lender confirms to the Administrative Agent in writing prior to the execution thereof that it: (a) is documented in a standard International Swaps and Derivatives Association Master Agreement or another reasonable and customary manner, (b) provides for the method of calculating the reimbursable amount of the provider's credit exposure in a reasonable and customary manner, and (c) is entered into for hedging (rather than speculative) purposes and (ii) the Goldman Hedge. The liabilities owing to the provider of any Lender Provided Interest Rate Hedge (the "Interest Rate Hedge Liabilities") by any Loan Party that is party to such Lender Provided Interest Rate Hedge shall, for purposes of this Agreement and all other Loan Documents be "Obligations" of such Loan Party and of each other Loan Party, be guaranteed obligations under the Guaranty Agreement and secured obligations under any other Loan Document, as applicable, and otherwise treated as Obligations for purposes of the other Loan Documents, except to the extent constituting Excluded Hedge Liabilities of any such other Loan Party. The Liens securing the Interest Rate Hedge Liabilities shall be pari passu with the Liens securing all other Obligations under this Agreement and the other Loan Documents, subject to the express provisions of Section 9.2.4 [Application of Proceeds].

(C) Subsection (b) of Section 12.1 [UK Security Trustee as Trustee] of the Credit Agreement is hereby amended and restated in its entirety to provide as follows:

> (b) The UK Security Trustee declares that it holds the UK Collateral on trust for itself, the Administrative Agent, the Issuing Bank, the Swing Lender, and the Lenders, and any Lenders or their Affiliates from time to time providing Lender Provided Foreign Currency Hedges, Lender Provided Interest Rate Hedges or Other Lender Provided Financial Service Products (collectively, and together with the Spanish Security Agent, the "Secured Parties") on the terms contained in this Agreement.

(D) The Lenders hereby waive any such Potential Default or Event of Default under Section 9.1.4 [Breach of Negative Covenants, Visitation Rights or Anti-Terrorism Laws], by reference to Section 8.2.1 [Indebtedness], as may exist prior to the First Amendment Effective Date by virtue of the Borrower's being party to the Goldman Hedge (the "Goldman Hedge Default"). Such waiver (i) is limited to its express terms, (ii) shall not be deemed to be a waiver of any Event of Default or Potential Default that may have existed on or prior to the First Amendment Effective Date (defined below), other than the Goldman Hedge Default, or of any Event of Default or Potential Default that may hereafter arise, (iii) is not intended to, and shall not, establish any course of dealing between the Borrower and the Lenders or the Administrative Agent that is inconsistent with the express terms of the Credit Agreement, (iv) shall not operate as a waiver of any other right, power, or remedy of the Lenders or the Administrative Agent under the Credit Agreement or any other Loan Document, at law or in equity, and (v) shall not be construed as an agreement or understanding by the Lenders or the Administrative Agent to grant any other waiver or other accommodation in the future with respect to any provision of the Credit Agreement or any other Loan Document.

2. First Amendment Effective Date; Conditions Precedent; Certifications.

(A) Conditions Precedent. The amendments and waiver provided for in Section 1, above, shall not be effective unless and until the Borrower has satisfied all of the following

conditions precedent (the date on which such effectiveness occurs being the "First Amendment Effective Date"):

(i) The Borrower, the Guarantors, the Administrative Agent and the Required Lenders shall have executed and delivered this First Amendment;

(ii) The certifications of the Borrower and the Guarantors contained in clauses (i) and

(ii) of paragraph (B), below, shall be true and correct as of such date, and the Borrower and the Guarantors shall be deemed to have re-made each such certification on and as of the First Amendment Effective Date;

(iii) The certifications of the Borrower and the Guarantors contained in clause (iii) of paragraph (B), below, shall be true and correct as of such date, and the Administrative Agent shall have received a certificate of the secretary or an assistant secretary of the Borrower, and a certificate of the Borrower on behalf of each Guarantor, to that effect dated as of the First Amendment Effective Date and reasonably satisfactory to the Administrative Agent in form and substance;

(iv) All legal matters incident to this First Amendment and the consummation of the transactions contemplated hereby shall be reasonably satisfactory to Squire Patton Boggs (US) LLP, Cleveland, Ohio, special counsel to the Administrative Agent (the "Special Counsel"); and

(v) The Administrative Agent and the Lenders shall have received such approvals, documents or materials as they may reasonably request.

(B) Loan Party Certifications. Each Loan Party hereby certifies to the Administrative

Agent and each Lender that, as of the First Amendment Effective Date, and after giving effect to the modifications and waiver provided for in Section 1, above, (i) the representations and warranties of the Loan Parties contained in the Credit Agreement are true and correct in all material

respects as though made on and as of such date, unless expressly made as of a prior date (in which case such representations and warranties shall have been true and correct in all material respects as of such prior date); provided that any representation and warranty that is qualified as to materiality, "Material Adverse Change" or similar language shall be true and correct (after giving effect to any qualification therein) in all respects as of such respective dates; (ii) no event or condition has occurred and is continuing that constitutes an Event of Default or Potential Default; and (iii) the execution and delivery of this First Amendment by the Borrower and each Guarantor have been approved by all necessary action of such Loan Parties' respective boards of directors (or equivalent bodies otherwise named).

Upon the satisfaction of the foregoing conditions and the effectiveness of this First Amendment, the Administrative Agent shall advise the Borrower and the Lenders of the date on which the First Amendment Effective Date occurs. Notwithstanding the foregoing, if the First Amendment Effective Date has not occurred on or before November 5, 2018, this First Amendment shall not become effective and shall be deemed of no further force and effect.

3. No Other Modifications. Except as expressly provided in this First Amendment, all of the terms and conditions of the Credit Agreement and the other Loan Documents remain unchanged and in full force and effect.

4. Confirmation of Obligations. The Borrower and each Guarantor hereby confirm that the Borrower is indebted to the Lenders for the outstanding Loans and Letter of Credit Obligations and are also obligated to the Lenders in respect of other Obligations as set forth in the Credit Agreement and the other Loan Documents. Each of the Borrower and the Guarantors further acknowledges and agrees that as of the date hereof, to its knowledge after due inquiry, it has no claim, defense or set-off right against any Lender, the Administrative Agent, or the Issuing

Lender of any nature whatsoever, whether sounding in tort, contract or otherwise, and has no claim, defense or set-off of any nature whatsoever to the enforcement by any Lender, the Administrative Agent, or the Issuing Lender of the full amount of the Loans and other Obligations of the Loan Parties under the Credit Agreement and the other Loan Documents.

5. Administrative Agent's Expense. The Borrower agrees to reimburse the Administrative Agent promptly for its reasonable invoiced out-of-pocket costs and expenses incurred in connection with this First Amendment and the transactions contemplated hereby, including, without limitation, the reasonable fees and expenses of the Special Counsel.

6. Governing Law; Binding Effect.

(A) This First Amendment shall be deemed to be a contract under the Laws of the State of New York without regard to its conflict of laws principles.

(B) The provisions of this First Amendment shall be binding upon, and inure to the benefit of, the parties hereto and their respective successors and assigns permitted by the Credit Agreement.

7. Counterparts. This First Amendment may be executed in counterparts (and by different parties hereto in different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. Delivery of an executed counterpart of a signature page of this First Amendment, or any certificate delivered hereunder, by telecopy or e-mail shall be effective as delivery of a manually executed counterpart of this First Amendment. Upon request of the Administrative Agent, any party delivering by facsimile or email transmission a counterpart executed by it shall promptly thereafter also deliver a manually signed counterpart of this First Amendment.

8. Miscellaneous.

(A) Upon the effectiveness of this First Amendment, this First Amendment shall be a Loan Document.

(B) The provisions of this First Amendment are intended to be severable. If any provision of this First Amendment shall be held invalid or unenforceable in whole or in part in any jurisdiction, such provision shall, as to such jurisdiction, be ineffective to the extent of such invalidity or unenforceability without in any manner affecting the validity or enforceability thereof in any other jurisdiction or the remaining provisions hereof in any jurisdiction.

(C) Section headings herein are included for convenience and shall not affect the interpretation of this First Amendment.

9. Waiver of Jury Trial. EACH PARTY HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN ANY LEGAL PROCEEDING DIRECTLY OR INDIRECTLY ARISING OUT OF OR RELATING TO THIS FIRST AMENDMENT OR ANY OTHER LOAN DOCUMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY OR THEREBY (WHETHER BASED ON CONTRACT, TORT OR ANY OTHER THEORY). EACH PARTY HERETO (A) CERTIFIES THAT NO REPRESENTATIVE, ADMINISTRATIVE AGENT OR ATTORNEY OF ANY OTHER PERSON HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PERSON WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER AND (B) ACKNOWLEDGES THAT IT AND THE OTHER PARTIES HERETO HAVE BEEN INDUCED TO ENTER INTO THIS FIRST AMENDMENT AND THE OTHER LOAN DOCUMENTS BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND

CERTIFICATIONS IN THIS SECTION.

[No additional provisions are on this page; the page next following is a signature page.]

IN WITNESS WHEREOF, the Borrower, the Guarantors, the Lenders, and the Administrative Agent have hereunto set their hands as of the date first above written.

BORROWER

FERROGLOBE PLC
By: /s/ Pedro Larrea Paguaga
Name: Pedro Larrea Paguaga
Title: CEO

GUARANTORS

GLOBE SPECIALTY METALS, INC.
By: /s/ Brian D’Amico
Name: Brian D’Amico
Title: Vice President and Secretary

GRUPO FERROATLÁNTICA S.A.U
By: /s/ Oscar Robles Alvarez
Name: Oscar Robles Alvarez
Title: Deputy Chief Financial Officer

FERROATLÁNTICA S.A.U.
By: /s/ Oscar Robles Alvarez
Name: Oscar Robles Alvarez
Title: Deputy Chief Financial Officer

FERROPEM, S.A.S.

By: /s/ Pedro Larrea Paguaga
Name: Pedro Larrea Paguaga
Title: President

ALABAMA SAND AND GRAVEL, INC., a Delaware corporation
GLOBE METALLURGICAL INC., a Delaware corporation
ALDEN RESOURCES LLC, a Delaware limited liability company
ARL RESOURCES, LLC, a Delaware limited liability company
ARL SERVICES, LLC, a Delaware limited liability company
ALDEN SALES CORP, LLC, a Delaware limited liability company
CORE METALS GROUP HOLDINGS LLC, a Delaware limited liability company
CORE METALS GROUP LLC, a Delaware limited liability company
METALLURGICAL PROCESS MATERIALS, LLC, a Delaware limited liability company
TENNESSEE ALLOYS COMPANY, LLC, a Delaware limited liability company
GSM SALES, INC., a Delaware corporation
NORCHEM, INC., a Florida corporation
GATLIFF SERVICES, LLC, a Delaware limited liability company

By: /s/ Brian D’Amico
Name: Brian D’Amico
Title: Vice President and Secretary

ADMINISTRATIVE AGENT, ISSUING LENDERS AND LENDERS

PNC BANK, NATIONAL ASSOCIATION, as Administrative Agent, Spanish Security Agent, UK Security Trustee, Issuing Lender, Swing Loan Lender and a Lender

By: /s/ Mahir J. Desai
Name: Mahir J. Desai
Title: Vice President

CITIZENS BANK OF PENNSYLVANIA, as Issuing Lender for Existing Letters of Credit and a Lender

By: /s/ A. Paul Dawley
Name: A. Paul Dawley
Title: Senior Vice President

BMO HARRIS BANK N.A., as a Lender

By: /s/ Patrick Hartweger
Name: Patrick Hartweger
Title: Managing Director

CAPITAL ONE, NATIONAL ASSOCIATION, as a Lender

By: /s/ Michael Sullivan
Name: Michael Sullivan
Title: Senior Director

CAIXABANK, S.A., as a Lender

By: /s/ Javier Garcia Faubel /s/ Fernando Alvarez-Qui
Name: Javier Garcia Faubel Fernando Alvarez-Qui
Title:

GOLDMAN SACHS LENDING PARTNERS LLC, as a Lender

By: /s/ Jamie Minieri
Name: Jamie Minieri
Title: Authorized Signatory

Exhibit 8.1

SUBSIDARIES OF THE REGISTRANT*

Name	Registered
Alabama Sand and Gravel, Inc.	United States
Alden Resources, LLC	United States
Alden Sales Corporation, LLC	United States
ARL Resources, LLC	United States
Core Metals Group Holdings, LLC	United States
Core Metals Group, LLC	United States
Gatliff Services, LLC	United States
GBG Holdings, LLC	United States
Globe Metallurgical Inc.	United States
Globe Metals Enterprises, Inc.	United States
GSM Alloys I, Inc.	United States
GSM Alloys II, Inc.	United States
GSM Enterprises Holdings, Inc.	United States
GSM Enterprises, LLC	United States
GSM Sales, Inc.	United States
LF Resources, Inc.	United States
Metallurgical Process Materials, LLC	United States
Norchem, Inc.	United States
QSIP Canada ULC	Canada
Quebec Silicon General Partner	Canada
Quebec Silicon Limited Partnership	Canada
Tennessee Alloys Company, LLC	United States
West Virginia Alloys, Inc.	United States
WVA Manufacturing, LLC	United States
Cuarzos Industriales, S.A.U.	Spain
Ferroatlántica del Cinca, S.L.	Spain
Ferroglobe Mangan Norge AS	Norway
Ferroglobe Manganese France SAS	France
FerroPem, S.A.S.	France
Grupo FerroAtlántica, S.A.U	Spain
Kintuck (France) SAS	France
Kintuck AS	Norway
Rocas, Arcillas y Minerales, S.A.	Spain
Rebone Mining (Pty.), Ltd.	South Africa
Silicon Smelters (Pty.), Ltd.	South Africa
Silicon Technology (Pty.), Ltd.	South Africa
Thaba Chueu Mining (Pty.), Ltd.	South Africa
Samquarz Proprietary Limited	South Africa
Actifs Solaires Bécancour, Inc	Canada
Cuarzos Indus. de Venezuela (Cuarzoven), S.A.	Venezuela
Emix, S.A.S.	France
ECPI, Inc.	United States
FerroAtlántica Canada Company Ltd	Canada
Ferroatlántica de México, S.A. de C.V.	Mexico
Ferroatlántica de Venezuela (FerroVen), S.A.	Venezuela
Ferroatlántica Deutschland, GmbH	Germany
Ferroatlántica do Brasil Mineraçao Ltda.	Brazil
Ferroatlántica I+D, S.L.U.	Spain
FerroAtlántica International Ltd	United Kingdom
Ferroatlántica y Cía., F. de Ferroaleac. y Metales, S.C.	Spain
Ferroatlántica, S.A.U.	Spain
Ferroglobe Services (UK) PLC	United Kingdom
FerroManganese Mauritania SARL	Mauritania
Ferroquartz Company Inc.	Canada
Ferroquartz Holdings, Ltd (Hong Kong)	Hong Kong
FerroQuartz Mauritania SARL	Mauritania
Ferrosolar OPCO Group SL.	Spain
Ferrosolar R&D SL.	Spain
FerroTambao, SARL	Burkina Faso
Globe Metales S.R.L.	Argentina
Globe Metallurgical Carbon, LLC	United States
Globe Specialty Metals, Inc.	United States
GSM Netherlands, BV	Netherlands
Laurel Ford Resources, Inc.	United States
MST Financial Holdings, LLC	United States
MST Financial, LLC	United States
MST Resources, LLC	United States
Ningxia Yonvey Coal Industrial Co., Ltd.	China
Photosil Industries, SAS	France
Silicio Ferrosolar, SLU	Spain
Solsil, Inc.	United States
Ultra Core Polska (UCP)	Poland
Ultracore Energy SA	Argentina

* The names of other subsidiaries that would not constitute a significant subsidiary in the aggregate have been omitted.

Exhibit 12.1

CERTIFICATION

I, Pedro Larrea Paguaga, certify that:

1. I have reviewed this annual report on Form 20-F of Ferroglobe PLC;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;

4. The company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in U.S. Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in U.S. Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and

5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: April 29, 2019

By: /s/ Pedro Larrea Paguaga
Chief Executive Officer (Principal Executive Officer)

Exhibit 12.2

CERTIFICATION

I, Phillip Murnane, certify that:

1. I have reviewed this annual report on Form 20-F of Ferroglobe PLC;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;

4. The company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in U.S. Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in U.S. Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and

5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: April 29, 2019

By: /s/ Phillip Murnane
Chief Financial Officer and Principal Accounting Officer (Principal Financial Officer)

Exhibit 13.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002

In connection with the annual report of Ferroglobe PLC (the "Company") on Form 20-F for the period ended December 31, 2018, as filed with the U.S. Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to his knowledge:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the U.S. Securities Exchange Act of 1934; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: April 29, 2019

By: /s/ Pedro Larrea Paguaga
Chief Executive Officer (Principal Executive Officer)

By: /s/ Phillip Murnane
Chief Financial Officer and Principal
Accounting Officer (Principal Financial Officer)

This certification is being furnished to the U.S. Securities and Exchange Commission with this Report pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and shall not, except to the extent required by such Act, be deemed filed by the Company for purposes of Section 18 of the U.S. Securities Exchange Act of 1934, or otherwise subject to the liability of that section.

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to Ferroglobe and will be retained by Ferroglobe and furnished to the U.S. Securities and Exchange Commission or its staff upon request.

Exhibit 15.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement No. 333-208911 on Form S-8 of our reports relating to the financial statements of Ferroglobe PLC and the effectiveness of Ferroglobe PLC's internal control over financial reporting dated April 29, 2019, appearing in the Annual Report on Form 20-F of Ferroglobe PLC for the year ended December 31, 2018.

/s/ Deloitte, S.L.

Madrid, Spain
April 29, 2019

Exhibit 16.1

Mine Safety and Health Administration Safety Data

On July 21, 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Act”) was enacted. Section 1503 of the Act contains new reporting requirements regarding coal or other mine safety.

We are committed to providing a safe workplace for all of our employees. We continue to engage proactively with federal and state agencies in support of measures which can legitimately improve the safety and well-being of our employees.

The operation of our mines located in the United States is subject to regulation by the Federal Mine Safety and Health Administration (MSHA) under the Federal Mine Safety and Health Act of 1977 (the “Mine Act”). MSHA inspects our mines on a regular basis and issues various citations and orders when it believes a violation has occurred under the Mine Act. We present information below regarding certain mining safety and health violations, orders and citations issued by MSHA, as well as related assessments and legal actions with respect to our mining operations. In evaluating this information, consideration should be given to factors such as the following: (i) the number of violations, citations and orders will vary depending on the size of the mine, (ii) the number of citations and orders issued will vary from inspector to inspector and mine to mine, and (iii) violations, citations and orders can be contested and appealed, and in that process, may be reduced in severity and amount, and are sometimes dismissed.

The table below includes references to specific sections of the Mine Act. We are providing the information in the table by mining complex because that is how we manage and operate our business. The information in the table reflects violations, citations and orders issued to us by MSHA and related assessments and legal actions during the year ended December 31, 2018, as reflected in our records. Due to timing and other factors, the data in our system may not agree with the data maintained by MSHA.

For each mine, of which we or one of our Subsidiaries is an operator (number of occurrences, except for proposed assessment U.S. Dollar values).

Mine of Operating Name/MSHA Identification Number	Section 104 S&S Citations (#)	Section 104(b) Orders (#)	Section 104(d) Citations and Orders (#)	Section 110(b)(2) Violations (#)	Section 107(a) Orders (#)	Total Dollar Value of MSHA Assessments Proposed ($)	Total Number of Mining Related Fatalities (#)	Received Notice of Pattern of Violations Under Section 104(e) (yes/no)	Received Notice of Potential to Have Pattern Under Section 104(e) (yes/no)	(A) Legal Actions Pending as of Last Day of Period (#)	Legal Actions Initiated During the Period (#)	Legal Actions Resolved During Period (#)
Alden Resources - Maple Creek North - 1519788	-	-	-	-	-	-	-	No	No	-	-	-
Alden Resources Maple Creek Springtown - 1519814	-	-	-	-	-	826	-	No	No	-	7.00	7.00
Alden Resources - Imperial Hollow - 1519818	-	-	-	-	-	354	-	No	No	-	3.00	3.00
Alden Resources - Mine #3 Bain Branch- 1517691	11	-	-	-	-	8,074	-	No	No	-	49.00	50.00
Alden Resources - Gatliff Plant - 1509938	6	-	-	-	-	5,398	-	No	No	-	39.00	39.00
Alden Resources - Harps Creek - 1518466	-	-	-	-	-	826	-	No	No	2.00	7.00	5.00
Alden Resources Mine #5 Log Cabin - 1518426	15	-	-	-	-	7,890	-	No	No	-	56.00	56.00
Alabama Sand and Gravel: 01-03316 Mims Pit	-	-	-	-	-	236	-	No	No	-	2.00	2.00
Alabama Sand and Gravel: 01-03479 Rail/Washer Pit	-	-	-	-	-	-	-	No	No	-	-	-
Alabama Sand and Gravel: 01-03517 Meadows Pit	4	-	-	-	-	1,102	-	No	No	4.00	9.00	5.00

(A) The pending legal actions are all contests of citations and orders, which typically are filed prior to an operator’s receipt of a proposed penalty assessment from MSHA or relate to orders for which penalties are not assessed (such as imminent danger orders under Section 107 of the Mine Act). This category includes:

- contests of citations or orders issued under section 104 of the Mine Act,
- contests of imminent danger withdrawal orders under section 107 of the Mine Act, and
- emergency response plan dispute proceedings (as required under the Mine Improvement and New Emergency Response Act of 2006, Pub. L. No. 109-236, 120 Stat. 493).