Ferroglobe

Ferroglobe PLC

Extracts from the 2016 Form 20-F

To accompany the Ferroglobe PLC Annual Report and Accounts 2016

ITEM 3. KEY INFORMATION

D. Risk factors.

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

You should note that the risks described below may not be the only risks we face. We have described only those risks that we currently consider to be material and there may be additional risks and uncertainties not presently known to us, or that we currently consider immaterial, that might also have a material adverse effect on our business, financial condition or results of operations.

Risks Related to Our Business and Industry

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

Because we primarily sell the silicon metal, silicon-based alloys, manganese-based alloys and other specialty metals we produce to manufacturers of aluminum, steel, polysilicon, silicones, and solar photovoltaic products, our results are significantly affected by the economic trends in the steel, aluminum, polysilicon, silicone and solar photovoltaic industries. Primary end users of steel and aluminum that drive demand for steel and aluminum are construction companies, shipbuilders, electric appliance and car manufacturers, and companies operating in the rail and maritime industries. Primary end users of polysilicon and silicones that drive demand for polysilicon and silicones include the automotive, chemical, solar photovoltaic, pharmaceutical, construction and consumer products industries. Demand for steel, aluminum, polysilicon and silicones from these 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 demand and supply 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 metals. Polysilicon and silicone producers are subject to fluctuations in crude oil, platinum, methanol and natural gas prices, which could adversely affect their businesses. The solar photovoltaic industry has been growing in the past years. However, 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 solar photovoltaic industry. A significant and prolonged downturn in the end-markets for steel, aluminum, polysilicon, silicone and solar photovoltaic products, could adversely affect these industries, and, in turn, our business, results of operations and financial condition.

The metals industry, including silicon--based metals, 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 have experienced a weakened economic environment in national and international metals markets, including a sharp decrease in silicon metal prices in all major markets since late 2014. The weakened economic environment has adversely affected our profitability for the year ended December 31, 2016, with a particularly pronounced effect on the profitability of our European business over those periods.

Historically, our subsidiary, Globe Metallurgical, Inc., has been affected by recessionary conditions in the end-markets for its products, such as automotive and construction. 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 in light of the 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 prospects, condition (financial or otherwise) and results of operations.

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 are scheduled to end in 2020. While such reorganization proceedings are ongoing, Globe Metales cannot dispose of or encumber its registered assets (such as real estate properties) or perform any action outside its ordinary course of business without prior court approval from the bankruptcy court.

In calendar years 2009 and 2016, the global silicon metal, manganese- and silicon-based alloys industries suffered from unfavorable market conditions. Any decline in the global silicon metal and silicon-based alloys industries could have a material adverse effect on our business prospects, condition (financial or otherwise), and results of operations. 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 markets. 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 internationally traded products with 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 prospects, condition (financial or otherwise) and results of operations.

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

The price of energy 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 and other factors can affect the price of energy supply to our plants and adversely affect its results of operations and financial conditions.

Electricity is one of our largest production cost components. Because electricity constitutes such a high percentage of our production costs, we are particularly vulnerable to cost fluctuations

in the energy industry. For example, energy prices and supply in South Africa are not stable, and prices have increased at a rate higher than inflation in recent years. Power supply to our South African plants in Polokwane, eMalahleni and New Castle is provided by the public utility company Eskom. Our Spanish, Argentine, South African and Chinese plants have higher prices of energy, and, as such, production is regulated to reduce the cost of energy in peak hours or seasons with higher energy prices in order to maintain profitability. Venezuela depends on national hydraulic energy production (rainfall) to produce enough power to allow us to have a reliable source of supply. The electricity supply price in Venezuela has recently been affected by the currency fluctuations in the country. Additionally, though our production of energy in Spain and France through our hydroelectric power operations partially mitigates our exposure to increases in power prices in these two countries, we have entered into a definitive agreement with respect to the disposal of our hydroelectric power operations in Spain with an experienced and reputable owner and operator of renewable energy businesses and are pursuing a strategic disposal of our hydroelectric power operations in France. These disposals, if completed, will result in our further exposure to increases in power prices in Spain and France.

The termination or non-renewal of any of our energy contracts, or an increase in the price of energy, could have a material adverse effect on our future earnings and may prevent us from effectively competing in our markets. Also, 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.

Electrical power to our U.S. and Canada facilities is supplied mostly by AEP, Alabama Power, Brookfield Power, Hydro Quebec, Tennessee Valley Authority and Niagara Mohawk Power Corporation through dedicated lines. Our Alloy, West Virginia facility obtains approximately 56% of its power needs under a fixed-price contract with a nearby hydroelectric facility. This facility is over 70 years old and any breakdown could result in the Alloy facility having to pay much higher rates for electric power from third parties. Our energy supply for our facilities located in Argentina is supplied through Edemsa facilities located in Mendoza, Argentina, under a month-to-month arrangement. Energy rates in Argentina have increased on average by 200% from and after February 2016. However, the increase in energy rates have been challenged in the courts (with preliminary injunctive relief having been granted) and alternative arrangements are being negotiated with the Government. We received notice from the New York Power Authority that our hydropower allocation will be reduced by 54% resulting in our need to source more power from the free market and such reduction went into effect in June 2016. Our exposure to the free market could make the Niagara facility's costs increase and/or make it non-competitive.

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 scarcity of available supply, and are likely to continue increasing. Also, NERSA applies certain revisions to rates based on cost variances for Eskom that are completely out of our control. Towards the end of 2016, we commenced negotiations with Eskom for a new power contract for 2017 and 2018.

In Spain, power is purchased in the competitive wholesale market. Our facilities have to pay access tariffs to the 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 subjects our power price to uncertainty that can be only partially offset with financial hedging contracts.

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

Almost all of the revenues from Ferroglobe's energy segment are tied, either directly or indirectly, to the wholesale market price for electricity in Spain. Wholesale market prices for electricity are impacted by a number of factors and may decline for many reasons that are not within our control, which may impact our ability to sell electricity. Those factors include the price of fuel that is used to generate other sources of electricity, the management of generation and the amount of excess generating capacity relative to load in a particular market, the cost of controlling emissions of pollution, the structure of the electricity market, changes in demand for electricity, regulatory and governmental actions and 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.

We are pursuing a strategic disposal of our hydroelectric power operations in Spain and France, and have entered into a definitive agreement with respect to the disposal of our hydroelectric power operations in Spain with an experienced and reputable owner and operator of renewable energy businesses. Because our production of energy in Spain and France through our hydroelectric power operations partially mitigates our exposure to increases in power prices in these two countries, if such a disposal is completed, it will result in our further exposure to increases in power prices in France and Spain.

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 had an adverse effect on the profitability of our energy operations in 2016 and 2015 as compared to previous years, as prices at which we are able to sell our energy are now substantially dependent on wholesale market prices. Though we are pursuing a strategic disposal of our hydroelectric power operations in Spain and France, and have entered into a definitive agreement with respect to the disposal of our hydroelectric power operations in Spain with an experienced and reputable owner and operator of renewable energy businesses, until such disposal has been completed, if power sector regulation is 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.

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, Quebec and Argentina facilities. Additionally, we have, on occasion, been instructed to suspend operations for several hours by the sole energy supplier in South Africa due to a general power shortage which continues in the country. It is possible that this supplier may instruct us to suspend our operations for a similar or longer amount of time in the future. Large amounts of electricity are used to produce silicon metal, manganese- and silicon-based alloys and other specialty metals, and any interruption or reduction in the supply of electrical power would adversely affect production levels and result in reduced

profitability. Our insurance coverage does not cover all events and may not be sufficient to cover any or all losses. Certain of our insurance policies may not cover any losses that may be incurred if our suppliers are unable to provide power during periods of unusually high demand.

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 access 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, carbon electrodes, manganese ore, quartzite, wood chips, steel scrap, and other metals. While we own certain sources of raw materials, we buy some 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 may be volatile, as they are dependent on market supply and demand. We are dependent on certain suppliers of these products, their labor union relationships, mining and lumbering regulations and output and general local economic conditions, in order to obtain raw materials in a cost efficient and timely manner.

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. These raw materials and products often must be transported over long distances between the mines and other production sites where raw materials are produced and our factories where raw materials are processed 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, financial condition and productivity levels. 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 increases in the price or shortfall in the production and delivery of raw materials, could materially adversely affect our business prospects, condition (financial or otherwise) or results of operations.

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

The availability and prices of raw material inputs may be influenced by supply and demand, changes in world politics, unstable governments in exporting nations and inflation. The market prices of our products and raw material inputs are subject to change. We may not be able to pass a significant amount of increased input costs on to our customers. If we try to pass them on, we may lose sales and thereby revenue, in addition to having the higher costs. Additionally, we may not be able to obtain lower prices from our suppliers should our sale prices decrease.

Metals 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.

Metals manufacturing generally, and smelting in particular, is inherently dangerous and subject to fire, explosion and sudden major equipment failure. Quartz and coal mining are inherently dangerous and subject to numerous hazards, including collisions, equipment failure, accidents arising from the operation of large open pit mining and rock transportation equipment, dust inhalation, flooding, collapse, blasting operations and operating in extreme climatic conditions. This can and has resulted in accidents resulting in the serious injury or death of production personnel and prolonged production shutdowns. In January 2015, the death of a subcontractor at our South Africa mine caused a shutdown of production for several days. We have also experienced fatal accidents and equipment malfunctions in our manufacturing facilities in recent years, including a fire at our Bridgeport, Alabama facility in November 2011 and a fatality at our Selma, Alabama facility in October 2012. We may experience fatal accidents or equipment malfunctions in the future, which could have a material adverse effect on our business and operations.

We are heavily dependent on our mining operations, which are subject to 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 supply. Certain factors 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. For example, the recent installation of additional capacity at our quartz mine in Alabama took longer and was more costly than expected.

Regulatory agencies have the authority under certain circumstances following significant health and safety incidents, such as fatalities, to order a mine to be temporarily or permanently closed. If this occurred, we may be required to incur capital expenditures to re-open the mine. Environmental regulations 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

complete 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 technology upgrades to our facilities that could represent material capital expenses. For example, we have received two Notices and Findings of Violation (''NOV/FOV'') from the federal government, alleging numerous violations of the Clean Air Act relating to Globe Metallurgical Inc.'s (''GMI'') Beverly facility. Should GMI and the federal government be unable to reach a negotiated resolution of the NOV/FOVs, the government could file a formal lawsuit in 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.

Under certain environmental laws, we could be required to remediate or be held responsible for all of the costs relating to any 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 are reasonably likely to restrict 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 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 such that the potential requirements of emissions rights purchases will have a limited impact on our business. After 2020, however, new regulations may require significant purchases of emissions rights in the market. Also, several Canadian provinces have implemented cap-and-trade programs. As such, our facilities in Canada and in the European

Union may be required to purchase emission credits in the future (85% of the cost which may be exempted in the European Union). 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 the United States and South Africa, some of the proposed 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 been adopted or have been included in the U.S. EPA's ''Clean Power Plan,'' if any such program were adopted 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 adopted, 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, 2016, Ferroglobe's ten largest customers accounted for approximately 42.2% of Ferroglobe's consolidated revenue and sales corresponding to Dow Corning Corporation represented 13.7% of our sales. We expect that we will continue to derive a significant portion of our business from sales to these customers. If we were to experience a significant reduction in the amount of sales we make to some or all of these customers and could not replace these sales with sales to other customers, it could have a material adverse effect on our revenues and profits.

Some of the contracts with our customers do not provide commitments from our customers to purchase specified or minimum volumes of products for terms longer than one month to one year. Accordingly, with respect to these contracts, we do not benefit from any contractual protection mechanism in case of unexpected reduced demand for our products from such customers as a result of, for instance, downturns in the industries in which these customers operate or any other factor affecting their business, and this could have a material adverse effect on our revenues and profits. If we were to experience a significant reduction in the amount of sales it makes to some or all of these 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. As a result, 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 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. A sunset review of the U.S. antidumping order covering silicon metal imports from China is currently being conducted. Antidumping and countervailing duties in the European Union and Canada also are subject to periodic reviews. In the European Union, 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. In Canada, orders may be rescinded as a result of periodic expiry reviews. Similarly, export duties 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 find ourselves acting against the interests of our customers. Some of our customers may not continue to do business with us because we filed a trade action.

In March 2017, Globe petitioned the U.S. Department of Commerce and the U.S. International Trade Commission to provide relief from unfairly traded silicon metal imports from Australia, Brazil, Kazakhstan and Norway. If these actions are successful, antidumping orders will be issued covering silicon metal imports from Australia, Brazil and Norway and countervailing duty orders will be issued covering silicon metal imports from Australia, Brazil and Kazakhstan. In December 2016, Ferroglobe and its subsidiaries filed a complaint with the Canada Border Services Agency alleging that silicon metal from Brazil, Kazakhstan, Laos, Malaysia, Norway, Russia and Thailand is being dumped, and that silicon metal from Brazil, Kazakhstan, Malaysia, Norway and Thailand is being subsidized. If imports from these countries are found to be dumped or subsidized and to be causing injury, antidumping and countervailing duties will be imposed on such imports into Canada. If the U.S. or Canadian actions are not successful, our sales in the United States or Canada may be adversely affected.

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, financial condition and results of operations.

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 larger 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 and ultimately the business of our customers, resulting in lower sales for us, and, in turn, have a material adverse effect on our business prospects and results of operations.

Moreover, our customers might seek to relocate or refocus their operations to China or other countries with lower labor costs and higher growth rates. If they do so, these customers might choose to purchase from other suppliers of silicon metal, manganese- and silicon-based alloys and other specialty metals, and this 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 lengthy consultations with labor unions or strikes, work stoppages or other industrial actions. Strikes called by employees or unions could disrupt our operations. In 2014, there was a strike at our South African subsidiary that required us to reduce production for seven days. We have also experienced strikes by our employees in France from time to time.

New labor contracts will have to be negotiated to replace expiring contracts from time to time. It is possible that new collective bargaining agreements could contain terms less favorable than the current agreements. If we are unable to satisfactorily renegotiate those labor contracts on terms acceptable to us without a work stoppage, the effects on our business could be materially adverse. Any strike or work stoppage could disrupt production schedules and delivery times, adversely affecting sales. In addition, existing labor contracts may not prevent a strike or work stoppage, and any such work stoppage could have a material adverse effect on our business.

Many of our key customers are similarly subject to union disputes and work stoppages, which may reduce their demand for our products 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 the effect of the Business Combination, which may impair our ability to attract, retain and motivate key management, sales, technical and other personnel.

If key employees depart, achieving further integration after the Business Combination may be more difficult and our business may be harmed. Furthermore, we may have to incur significant costs in identifying, hiring and retaining replacements for departing employees and 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, there could be disruptions to or distractions for the workforce and management associated with activities of labor unions or works councils or integrating employees. Accordingly, no assurance can be given that we will be able to attract or retain key employees to the same extent that we were able to attract or retain our employees prior to the Business Combination.

The success of our operations following our Business Combination, which was consummated on December 23, 2015, depends to a significant degree on the continued employment of our core senior management team. It is important that we retain the other members of our core senior management team following this change. 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, Joseph Ragan, our Chief Financial Officer, and Nicholas Deeming, our Chief Legal Officer and Corporate Secretary. If these employees are unable to continue in their respective roles, or if we are unable to attract and retain other skilled employees, our results of operations and financial condition could be adversely affected. We currently have employment agreements with Messrs. López Madrid, Larrea Paguaga, Ragan and Deeming. The employment agreements with Messrs. López Madrid, Larrea Paguaga, Ragan and Deeming contain certain non-compete provisions, which may not be enforceable by us. Additionally, we are substantially dependent upon key personnel in our financial and information technology staff that enables 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 silicon furnaces and other facilities. Some of our facilities are located in areas where demand for skilled laborers often exceeds supply. Shortages of skilled furnace technicians and other skilled laborers 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 our recent Business Combination.

The combination of two independent companies is a complex, costly and time-consuming process. As a result, we are required to devote significant management attention and resources to integrating our business practices and operations. The integration process may disrupt our business and, if implemented ineffectively, could preclude realization of the full benefits expected. Failure to meet the challenges involved in successfully integrating our operations or otherwise to realize the anticipated benefits of the Business Combination could cause an interruption of our activities and could seriously harm our results of operations. In addition, the overall integration of the two companies may result in material unanticipated problems, expenses, liabilities, competitive responses, loss of client relationships, and diversion of management's attention, and may cause

our stock price to decline. The difficulties of combining the operations of the companies include, among others:

- managing a significantly larger company;
- coordinating geographically separate organizations;
- the potential diversion of management focus and resources from other strategic opportunities and from operational matters;
- retaining existing customers and attracting new customers;
- maintaining employee morale and retaining key management and other employees;
- integrating two unique business cultures, which may prove to be incompatible;
- the possibility of faulty assumptions underlying expectations regarding the integration process;
- 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 businesses, financial condition and results of operations. In addition, even if the operations are integrated successfully, we may not realize the full benefits of the Business Combination, including the synergies, cost savings or sales or growth opportunities that we expect. These benefits may not be achieved within the anticipated time frame, or at all. As a result, we cannot assure our shareholders that the Business Combination will result in the realization of the full 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 representations and warranties that are excluded from the R&W Policy (including, for example, any purchase price, net worth or similar adjustment provisions of the Business Combination Agreement (hereinafter ''Business Combination Agreement'' or ''BCA''), transfer pricing, environmental or pollution matters, the intended tax treatment of the Business Combination, etc.), or 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. Under the Articles, we are required to distribute the aggregate net proceeds under the R&W Policy, if any, to the holders of the Trust Units. We are not permitted to retain the net proceeds, if any, under the R&W Policy. Accordingly, if we suffer a loss that is otherwise recoverable under the R&W Policy, but use the net proceeds of the R&W Policy to fund the required distribution to the holders of the Trust Units, we will be required to use our existing cash on hand or draws under our credit facility to fund the actual loss incurred. 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.

Our inability to integrate recently acquired businesses or to successfully complete future acquisitions could limit our future growth or otherwise be disruptive to our ongoing business.

From time to time, we expect to pursue acquisitions in support of our strategic goals. In connection with any such acquisitions, 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.

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 55% 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 any special resolutions, which, under English law, requires 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, who owns approximately 55% of our outstanding shares, has pledged all of its shares to secure its obligations to Crédit Agricole Corporate and Investment Bank, Banco Santander and HSBC; 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 matures in March 2018, which allows them to borrow up to €415 million (''GVM Loan''). In March 2015, Grupo VM entered into a security and pledge agreement, as amended on December 23, 2015 (the ''GVM Pledge Agreement''), with Crédit Agricole Corporate and Investment Bank, Banco Santander and HSBC (the ''Lenders''), pursuant to which Grupo VM agreed to pledge all 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 the outstanding principal, any accrued interest on and any other amounts owed by us under one or more of our bank facilities or our other debt. The source of funds for these repayments would be our available cash or cash generated from other sources. If we do not have sufficient funds available upon a change of control to make these repayments, third party financing could be required to provide the necessary funds, which financing could be prohibited 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, financial condition and results of operations.

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. 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, which is partly owned by Mr. Javier López Madrid, our Executive Chairman, and a Grupo VM affiliate. We have also entered into a number of other agreements with affiliates of Grupo VM with respect to 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-corruption laws and regulations, economic sanctions programs and laws against human trafficking and slavery.

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 and regulations, such as the U.S. Foreign Corrupt Practices Act of 1977 (''FCPA''), the UK Bribery Act of 2010 (the ''Bribery Act''), economic sanctions programs, including those administered by the UN, EU and OFAC and regulations set forth under the Comprehensive Iran Accountability Divestment Act, and laws against human trafficking and slavery, such as the UK Modern Slavery Act 2015 (''Modern Slavery Act'').

The FCPA prohibits providing anything of value to foreign officials for the purposes of obtaining or retaining business or securing any improper business advantage. We may deal with both governments and state-owned business enterprises, the employees of which are considered foreign officials for purposes of the FCPA. The provisions of the Bribery Act extend beyond bribery of foreign public officials and are more onerous than the FCPA in a number of other respects, including jurisdiction, non-exemption of facilitation payments and penalties. Economic sanctions programs restrict our business dealings with certain sanctioned countries.

As a result of doing business in foreign countries, we are exposed to a risk of violating anti-corruption laws and sanctions regulations applicable in those countries where we, our partners or our agents operate. Some of the international locations in which we operate lack a developed legal system 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 employment of local agents in the countries in which we operate increases the risk of violations of anti-corruption laws, OFAC or similar laws. Violations of anti-corruption laws and sanctions regulations 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 fines and imprisonment. In addition, any major violations could have a significant impact on our reputation and consequently on our ability to win future business.

In addition, we are subject to certain disclosure obligations under the Modern Slavery Act, which was recently introduced in the United Kingdom. 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 the duty to prepare a slavery and human trafficking statement by means of civil proceedings against the organization concerned. In light of the international nature of our operations and the regions in which we operate, it may be difficult for us to effectively detect instances of modern slavery in certain of our supply chains that would be subject to the disclosure requirements. To the extent that we are found to be non-compliant with the Modern Slavery Act, whether or not we have knowledge of such non-compliance, we may face governmental or other regulatory sanctions.

We seek to build and continuously improve our systems of internal controls and to remedy any weaknesses identified. There can be no assurance, however, that the policies and procedures will be followed at all times or effectively detect and prevent violations of the applicable laws by one or more of our employees, consultants, agents, partners or suppliers and, as a result, we could be subject to penalties and material adverse consequences on our business, financial condition or results of operations.

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 to adapt to changes in the industry or the global economy. The advantages that our competitors have over us could have a material adverse effect on our business. In addition, new entrants may increase competition in our industry, which could have a material adverse effect on our business. An increase in the use of substitutes for

certain of our products also could have a material adverse effect on our financial condition and operations.

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 399,200 tons of silicon metal (excluding Dow Corning's portion of the capacity of our Alloy, West Virginia and Becancour, Quebec plants), 376,500 tons of silicon-based alloys and 423,500 tons of manganese-based alloys on an annual basis. Our ability to increase production and revenues will depend on expanding existing facilities or opening new ones. Increasing capacity is difficult because:

- adding new production capacity to an existing silicon plant to produce approximately 30,000 tons of metallurgical grade silicon would cost approximately $120,000,000 and take at least 12 to 18 months to complete once permits are obtained, which could take more than a year;
- a greenfield development project would take at least three to five years to complete and would require significant capital expenditure and environmental compliance costs; and
- obtaining sufficient and dependable power at competitive rates near areas with the required natural resources is difficult to accomplish.

We may not have sufficient funds to expand existing 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.

Our actual financial position and results of operations may differ materially from certain of the financial data included in this annual report, and the historical financial information included in this annual report may not be representative of our results for the periods presented or future periods.

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 historical data and results of Ferroglobe for the 2015 fiscal year are composed of the results of:

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

The historical data and results of fiscal years before 2015 correspond exclusively to the Predecessor, unless otherwise expressly stated. This affects the comparability of our historical data and results for the year ended December 31, 2015 and any subsequent periods with our historical data and results for any previous periods.

Furthermore, the historical financial information included in this annual report may not be indicative of our future financial performance or our ability to meet our obligations.

We are subject to restrictive covenants under our credit facilities. 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 entered into credit facilities that contain covenants that at certain levels, 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 to us; repurchase stock; or make capital expenditures. These credit facilities also require compliance with specified financial covenants, including minimum interest coverage and maximum leverage ratios. We cannot borrow under the credit facilities if the additional borrowings would cause a breach of the 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 the Amended Revolving Credit Facility.

We may breach, and we have in the past breached, certain covenants under our credit facilities, including financial maintenance covenants under the Existing Revolving Credit Facility as of and for the three months ended September 30 and December 31, 2016. Our ability to comply with the applicable covenants may be affected by events beyond our control. The breach of any of the covenants contained in the credit facilities, unless waived, would be a default. This would permit the lenders to terminate their commitments to extend credit under, and accelerate the maturity of, the facility. The acceleration of debt could have a material adverse effect on our financial condition and liquidity. If we were unable to repay our debt to the lenders and holders or otherwise obtain a waiver from the lenders and holders, the lenders and holders could proceed against the collateral securing the credit facilities and exercise all other rights available to them. We may not have sufficient funds to make these accelerated payments and may not be able to obtain any such waiver on acceptable terms or at all.

Our insurance costs may increase, and we may experience additional exclusions and limitations on coverage in the future.

We have maintained various forms of insurance, including insurance covering claims related to our properties and risks associated with our operations. Our existing property and liability insurance coverage contains exclusions and limitations on coverage. From time to time, in connection with renewals of insurance, we have experienced additional exclusions and limitations on coverage, larger self-insured retentions and deductibles and significantly higher premiums. For example, as a result of the fire at our facility in Bridgeport, Alabama, our business interruption insurance premium has increased significantly. As a result, in the future, our insurance coverage may not cover claims to the extent that it has in the past and the costs that we incur to procure insurance may increase significantly, either of which could have an adverse effect on our results of operations.

We have operations and assets in the U.S., Spain, France, Canada, China, South Africa, Venezuela, Poland and Argentina, 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 will expose us to risks that are more significant in developing markets than in developed markets and which could negatively impact our future sales or profitability. Our operations may not develop in the same way or at the same rate as might be expected in a country with an economy similar to western countries. The additional risks that we may be exposed to in these cases include, but are not limited to:

- tariffs and trade barriers;

- recessionary trends, inflation or instability of financial markets;
- currency fluctuations, which could decrease our revenues or increase our costs in U.S. Dollars;
- 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 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;
- different and/or more stringent environmental laws and regulations;
- 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.

Ferroglobe's competitive strength, among others, as a low-cost producer is partly tied to the value of the currency where we operate compared to other currencies. Currencies have fluctuated significantly especially in recent years.

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. For example, the results of our Venezuelan subsidiary have been adversely affected by changes to exchange rate policies, and while Argentina recently lifted its restrictions limiting the ability of companies to buy foreign currency and to make dividend payments abroad, it devalued the peso, which is likely to fuel inflation and increase operating costs.

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

In recent years, the Venezuelan government has continuously devalued the Bolívar and inflation has left the local economy in a critical state. This has led to a shortage of basic materials and parts and difficulties in importing raw materials. In 2016, we idled our Venezuelan operations and, at the time, determined the recoverable amount of the long-lived assets based on the fair value of the assets less costs to dispose of the facility and 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. We are currently partially operating the facility and making products for the domestic market with the intention of operating to achieve results that are cash flow neutral. If the critical social, political and economic conditions in Venezuela continue 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 expect that a significant portion of our business will continue to take place in international markets. We prepare our consolidated financial statements in U.S. Dollars, while the financial statements of each of our subsidiaries will be prepared in the functional currency of that entity. Accordingly, fluctuations in the exchange rates will impact our results of operations and financial condition. As such, it is expected that our revenues and earnings will continue to be exposed to the risks that may arise from fluctuations in foreign currency exchange rates, which could have a material adverse effect on our business, results of operations or financial condition.

Our sales made in U.S. Dollars exceed the amount of our purchases made in U.S. Dollars. The appreciation of certain currencies (like the Euro or the South African Rand) against the U.S. Dollar could have an adverse effect on our margins and results of operations.

We depend on a limited number of third party suppliers for some of our required raw materials. The loss of one of these suppliers or the failure of one of these suppliers to supply raw materials in compliance with our contractual obligations could have a material adverse effect on our business.

Colombia and the United States are among the preferred sources for the coal required for the production of silicon alloys and the vast majority of the industry is supplied from these two countries. In the year ended December 31, 2016, approximately 76% of our coal was purchased from third parties. Of our third party purchases, approximately 65% came from Colombia. Additionally, in 2016, the vast majority of manganese ore purchased by us came from suppliers located in South Africa and Gabon, which supplied approximately 96% of the manganese ore purchased by us in 2016. We do not control these third party suppliers, and rely on them to provide their products and perform their services in accordance with the terms of their contracts, which increases our vulnerability to problems with the products and services they provide. If these suppliers fail to provide us with the required raw material in a timely manner or at all, or if the quantity or quality of the raw material provided is lower than that contractually agreed, we may not be successful in procuring adequate supplies of raw materials from alternative sources on terms as favorable. Such events could have a material adverse effect on our reputation, business, results of operations and financial condition. Additionally, any economic, social, political or other factor adversely affecting the economies of Colombia, South Africa and Gabon might adversely affect the ability of suppliers from those countries to provide their products to us, in which case we might not be able to procure the required raw materials from other sources in a timely manner, at comparable costs or at all, which could have a material adverse effect on our reputation, business, results of operations and financial condition.

We may be unable to successfully develop our planned investments in the construction of new capacity or in the expansion and improvement of existing facilities and this could have a material adverse effect on our business prospects, financial condition and results of operations.

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

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 proportional to the amount of electricity generated, which, in turn, is entirely dependent upon available water flows. Operating results for our plants may vary significantly from period to period depending on the water flows during the periods in question. Hydrology conditions have natural variations from season to season and from year to year and may also change permanently because of climate change or other factors.

Hydroelectric power generation is dependent on the amount of rainfall and river flows in the regions in which our hydropower projects are located, which may vary considerably from quarter to quarter and from year to year. Any reduction in seasonal rainfall could cause our hydropower plants to run at a reduced capacity and therefore produce less electricity, impacting our profitability. A sustained decline in water flow or shutdown at our hydropower plants could lead to a material adverse change in the volume of electricity generated, which could have a material adverse effect on our results of operations.

Conversely, if hydrological conditions are such that 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 flood levels, which may result in the forced dumping of reservoir water. A natural disaster or severe weather conditions, including flooding, lightning strikes, earthquakes, severe storms, wildfires, and other unfavorable weather conditions (including those from climate change), could impact water flows of the rivers on which our hydropower plants depend and require us to shut down our turbines or related equipment and facilities, impeding our ability to maintain and operate our projects and decreasing electricity production levels and revenues.

We are pursuing a strategic disposal of our hydroelectric power operations in Spain and France, and have entered into a definitive agreement with respect to the disposal of our hydroelectric power operations in Spain with an experienced and reputable owner and operator of renewable energy businesses.

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 operation.

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 the 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 such plant. If we fail to satisfy the conditions or comply with the restrictions imposed by governmental permits or concessions, or the restrictions imposed by any statutory or regulatory requirements, we may become subject to regulatory enforcement action and the operation of our hydropower plants could be adversely affected or be subject to fines, penalties or additional costs or revocation of such permits or concessions. Any failure to procure, renew or maintain necessary permits and concessions would adversely affect continuing operation of our hydropower plants.

In Spain, the use and exploitation of the hydropower plants located in Aragón and Galicia are not only subject to the limitations imposed on their concession titles, but also to the limitations imposed by environmental regulation related to ecological flows. Power generation and the use of water at all hydropower plants must meet the ecological flow 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, which would further expose us to increases in power prices in Spain.

In the United States, our hydropower supply is provided by Brookfield Renewable Power (''BRP''). BRP is currently in the process of renewing their hydropower license, which is set to expire on December 31, 2017. The Federal Energy Regulatory Commission (''FERC'') has a process of license renewal which includes public meetings and participation by interested parties. The white water rafting industry has requested that additional water be permitted to bypass the hydro facility to facilitate increased white water rafting opportunities. If the FERC ultimately grants this request and imposes this condition on BRP's new license, this will result in a loss of water for the hydro facility which would increase the electricity and production cost for our WVA Manufacturing facility.

We are pursuing a strategic disposal of our hydroelectric power operations in Spain and France, and have entered into a definitive agreement with respect to the disposal of our hydroelectric power operations in Spain with an experienced and reputable owner and operator of renewable energy businesses.

Equipment failures may lead to production curtailments or shutdowns and repairing any failure could require us to expend significant amounts of capital and other resources, which could adversely affect our business and results of operations.

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 and operations.

Our hydropower generation assets and other equipment may not continue to perform as they have in the past or as they are expected. Any 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 and repairing such failures could require us to expend significant amounts of capital and other resources, which could have a material adverse effect on our business and operations. Such failures could result in damage to the environment or damages and harm to third parties or the public, which could expose us to significant liability.

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. Some of these proprietary technologies that we rely on are:

- computerized technology that monitors and controls production furnaces;
- electrode technology and operational know-how;
- metallurgical process 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 may not be enforceable, and it may not 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 proprietary intellectual property may subject us to a significant award of damages, or we may be enjoined from using our proprietary intellectual property, which could have a material adverse effect on our operations.

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.

We are a holding company whose principal source of operating cash is the income received from our subsidiaries.

We are dependent on the income generated by our subsidiaries, in order to make distributions and dividends on our shares. The amount of distributions and dividends, if any, which may be paid to us from 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 make distributions and dividends on our shares.

The BCA Special Committee may not be able to effectively enforce our rights under the Grupo VM indemnity in the Business Combination Agreement, and the operation of the BCA Special Committee could have an adverse impact on relationships with Grupo VM if it seeks to take enforcement action.

At the closing of the Business Combination, our Board formed a three-member standing committee, composed of two independent Globe directors and one independent Grupo VM director (the ''BCA Special Committee''). The BCA Special Committee takes action by majority vote. The functions of the BCA Special Committee include responsibility for, among other things, the evaluation of potential claims for losses and enforcement of the indemnification rights under the Business Combination Agreement. The BCA Special Committee performs its duties on behalf of and in the best interests of us and our shareholders but excluding Grupo VM. Grupo VM deals exclusively with the BCA Special Committee on all indemnity matters under the Business Combination Agreement. It is uncertain whether the BCA Special Committee will be able to effectively perform its duties as contemplated by the Business Combination Agreement or whether the BCA Special Committee will have the appropriate authority to implement the actions it wishes to take. Further, if the BCA Special Committee decides to pursue enforcement action against Grupo VM or under the R&W Policy, such action could negatively impact our and the BCA Special Committee members' relationships with Grupo VM and the members of our Board designated by

Grupo VM, which could impact the effective functioning of our Board and have an adverse impact on our business.

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 pending against us is uncertain, and although such claims, lawsuits and other legal matters are not expected individually to have a material adverse effect on our financial condition or results of operations, such matters could have, in the aggregate, a material adverse effect on our financial condition or results of operations. 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 with respect to certain claims, 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 any 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 subject.

We are exposed to changes in market conditions for our products and such conditions are dependent upon factors beyond our control.

Our industry is affected by economic conditions in our markets, including changes in national, regional and local unemployment levels, changes in national, regional and local economic development plans and budgets, shifts in consumer spending patterns, credit availability, and business and consumer confidence. Disruptions in the overall economy and volatility in the financial markets could reduce consumer confidence, negatively affecting consumer spending, which could be harmful to our financial position and results of operations. For example, the global economic crisis that began in 2008 increased unemployment and reduced the financial capacity of businesses and consumers in the markets in which we operate. The outlook for the global economy in the near- to medium-term remains uncertain due to several factors, including geopolitical risks and concerns around global growth and stability. Despite signs of economic recovery in certain geographic markets, global financial markets have experienced considerable volatility from uncertainty surrounding the level and sustainability of the sovereign debt of various countries. Concerns also remain regarding the sustainability of the European Monetary Union and its common currency, the Euro, in their current form, particularly following the vote in favour of the United Kingdom's exit from the European Union in June 2016 and in light of elections to be held in several European countries in 2017.

We are not able to predict the timing or rate at which economic conditions in our markets may recover, nor are we able to predict the timing or duration of any other downturn in the economy that may occur in the future.

We may be unable to complete the potential Hydroelectric Sale.

While we are pursuing a strategic disposal of our hydroelectric power operations in Spain and France, and have entered into a definitive agreement with respect to the disposal of our hydroelectric power operations in Spain with an experienced and reputable owner and operator of renewable energy businesses, any such disposal would be subject to certain conditions, including receipt of applicable governmental approvals. A failure to complete such disposal would result in an

inability to repay certain existing indebtedness and thus reduce our leverage and may adversely affect our ability to maintain our liquidity and meet our financial obligations.

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.

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 $230 million as of December 31, 2016, or 11% 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 income statement. For example, in 2016, in connection with our annual goodwill impairment test, the Company recognized an impairment charge of $193,000,000 related to the partial impairment of goodwill in North America, which was recorded as a result of Business Combination, 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 its North American business 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 related to the occurrence of future events and the characteristics of the relevant market; therefore, our ability to meet our directors' forecasts may affect future evaluations, including goodwill assessment. Furthermore, any future impairment of goodwill may result in material reductions of our income and equity under IFRS.

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

We have a substantial amount of outstanding indebtedness with significant debt service requirements. Our significant leverage could have important consequences, including:

- making it more difficult for us to satisfy our obligations with respect to our indebtedness;

- 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 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 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 Amended 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 Amended 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 cause all amounts outstanding with respect to such indebtedness to be due and payable immediately, which, in turn, could result in cross-defaults under our other 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 that are 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 amounts that we have borrowed under our credit facilities and other indebtedness to be due and payable, together with accrued and unpaid interest. Such a default, or a failure to make interest payments, could mean that borrowings under other debt instruments that contain cross-acceleration or cross-default provisions may, as a result, also be accelerated and become due and payable. 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 may be volatile. The stock market in general has experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, you may not be able to sell your ordinary shares at or above the price at which you purchase our ordinary shares. The market price for our ordinary shares may be influenced by many factors, including:

- the success of competitive products or technologies;
- regulatory developments in the United States and foreign 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 industry 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, provide more favorable relative recommendations about our competitors or 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 to regularly publish reports on us, 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. This may afford less protection to holders of our ordinary shares, and you may not receive corporate and company information and disclosure 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 regarding sales of ordinary 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, 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 comprised 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 nominating 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 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 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 have identified material weaknesses in our internal control over financial reporting. Failure to remediate the identified material weakness or establish and maintain effective internal control over financial reporting could result in material misstatements in our financial statements or a failure to meet our reporting obligations, which could also impact the market price of our ordinary shares or our ability to remain listed on NASDAQ.

The Sarbanes-Oxley Act requires, among other things, that we maintain effective internal controls for financial reporting and disclosure controls and procedures. We are required under Section 404(a) of the Sarbanes-Oxley Act to furnish a report by management on, among other things, the effectiveness of our internal controls over financial reporting. This assessment includes disclosure of any material weaknesses identified by our management in our internal controls over financial reporting. A material weakness is a control deficiency, or combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of annual or interim financial statements will not be prevented or detected on a timely basis.

In connection with the preparation of our consolidated financial statements for the year ended December 31, 2016, we and our independent registered public accounting firm carried out an evaluation of the effectiveness of our internal controls over financial reporting and concluded that there were material weaknesses in relation to (a) the Control Environment, Control Activities and Monitoring function and (b) Revenue recognition related to cut-off. These material weaknesses resulted from several factors as described in ''Item 15.B. — Controls and Procedures — Management's annual report on internal control over financial reporting'' below. As a consequence of these material weaknesses, management concluded that our internal control over financial reporting and, consequently, our disclosure controls and procedures, were not effective as of December 31, 2016. However, all identified misstatements were corrected in the financial statements as of December 31, 2016 and, notwithstanding these material weaknesses and management's assessment that internal control over financial reporting was ineffective as of December 31, 2016, our management believes that the consolidated financial statements included in this annual report fairly present in all material respects our financial condition, results of operations and cash flows for the periods presented.

We are taking, and will continue to take, measures to remediate the causes of these material weaknesses. However, failure to effectively remediate these material weaknesses or establish and maintain effective internal control over financial reporting could result in material misstatements in our financial statements or a failure to meet our reporting obligations. This, in turn, could negatively impact our business and operating results, the market price of our ordinary shares and our ability to remain listed on 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. The regulatory and compliance costs to us under U.S. securities laws under such event may be significantly higher than costs we incur as a foreign private issuer, which could have a material adverse effect on our business and financial results.

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 some or all of its shares, it could result in Grupo VM owning less than 50% of the total voting power of our shares. Accordingly, we may 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 comply with 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, and may result in deviations from our current growth strategy, which could have a material adverse effect on our business and financial results.

As an English public limited company, certain capital structure decisions will 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 to subscribe for 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 December 23, 2015 (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 December 23, 2015, 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, being a resolution passed by a simple majority of votes cast, and other formalities. Such approval may be for a maximum period of up to five years.

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 our directors and executive officers are located outside of the United States, our shareholders could experience more difficulty enforcing judgments obtained against us 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. directors. In addition, it may be more difficult (or impossible) to bring some types of claims against us or our 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 providing for reciprocal recognition and enforcement of judgments, other than arbitral awards, rendered in civil and commercial matters with Spain or the United Kingdom. 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 sought 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

Transfers of our ordinary shares may be subject to U.K. stamp duty or U.K. stamp duty reserve tax (''SDRT'').

U.K. stamp duty and/or SDRT is imposed on certain transfers of or agreements to transfer chargeable securities (which include shares in companies incorporated in the U.K.) at a rate of 0.5% of the consideration paid for the transfer. Certain issues or transfers of shares to depositaries or into clearance services are charged at a higher rate of 1.5%.

Our ordinary shares are held in one or more clearance systems or depositary systems. Subsequent transfers of such ordinary shares within a clearance system, or between clearance systems, should not be subject to U.K. stamp duty or SDRT. Transfers of shares from a clearance system into a depositary system should also not be subject to U.K. stamp duty or SDRT.

A transfer of our ordinary shares from within a clearance system or depositary system out of that clearance system or depositary system and any subsequent transfers that occur entirely outside such systems, including the repurchase of our ordinary shares by us, will generally be subject to U.K. stamp duty or SDRT at a rate of 0.5% of any consideration, which is payable by the transferee of the ordinary shares. If such ordinary shares are redeposited into a clearance system or depositary system, the redeposit will also generally be subject to U.K. stamp duty or SDRT at the higher 1.5% rate. The repurchase of our ordinary shares by us from within a clearance system or depositary system may also be subject to U.K. stamp duty or SDRT.

The application of Section 7874 of the Code, including under recent IRS guidance, and/or 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'') recently issued new 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/or 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/or 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 change 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 group to achieve tax efficiencies.

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

The IRS and the U.S. Treasury also recently 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 anticipated 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,'' 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.

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.

ITEM 4. INFORMATION ON THE COMPANY

A. History and Development of the Company

Ferroglobe PLC

Ferroglobe 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 whollyowned subsidiary of Grupo Villar Mir, S.A.U. (''Grupo VM''). As a result of the Business Combination, which was completed on December 23, 2015, FerroAtlántica and Globe merged through corporate transactions to create one of the largest producers worldwide of silicon metal and silicon- and manganese based alloys. Ferroglobe acquired from Grupo VM all of the issued and outstanding ordinary shares, par value €1,000 per share, of FerroAtlántica 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 after, 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 Global Select Market (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 a distributable reserve.

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 Representation and Warranty Insurance Trust to certain Ferroglobe shareholders.

Our FerroAtlántica division's history dates back to 1992, with the acquisition by Grupo VM of the ferroalloys division of Grupo Carburos Metálicos, a Spanish industrial gas and chemical products producer. Our Globe division's history dates back to 2006, with the acquisition by Globe of Globe Metallurgical, Inc., which consisted of Selma, a production plant with two furnaces for silicon metal, Niagara, a production plant with two furnaces for silicon metal and ferroalloys and Beverly, a production plant with five furnaces for silicon metal, specialty alloys and ferroalloys, all located in the United States.

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 Électrométallurgie, currently named FerroPem, S.A.S., a silicon metal and silicon-based alloys company with operations in France which owned Silicon Smelters operating in South Africa;

- **2005:** acquisition of Alloy, Alabama Sand and Gravel and Alloy Power (U.S.);
- **2006:** acquisition of Globe Metallurgical, Inc., the largest metal manufacturer 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 FerroAtlántica, 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 (subsequently purchased the remaining stake);
- **2009:** creation of French company Photosil Industries, which conducts research and development activities in the solar grade silicon sector;
- **2009:** Sold Camargo stake in Brazil to Dow Corning and formed a joint venture with Dow Corning at Alloy, West Virginia silicon facility;
- **2010:** acquisition of Core Metals, 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 factory, MangShi Sinice Silicon Industry Company Limited;
- **2011:** acquisition of Alden Resources in the United States, 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 Becancour (Canada), a silicon metal production facility with Dow Corning as the joint venture partner; and
- **2014:** acquisition of Siltech, a ferrosilicon facility in South Africa.

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.

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 and South Africa, low-ash metallurgical quality coal mining activities in the United States, and interests in hydroelectric power in Spain and France (though we are currently pursuing a strategic disposal of these interests). 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 key products to a diverse base of customers worldwide. These products are important inputs to manufacture a wide range of industrial and consumer products, including aluminum, silicone compounds used in the chemical industry, ductile iron, automotive parts, photovoltaic (solar) cells, electronic semiconductors and steel.

We are able to provide our customers the broadest range of specialty metals and alloys in the industry from our production centers, which are located 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, which we are able to achieve by owning critical raw materials and maintaining flexibility of alternating production of some of our furnaces among silicon metal and silicon-base alloy products.

In addition to the smelting operations, Ferroglobe currently has interests in hydroelectric power operations in Spain and France, high-purity quartz quarries in Spain, the United States and South Africa, low-ash, metallurgical quality coal mining mines in the United States and timber farms and charcoal production units in South Africa. Ferroglobe controls the supply of most of its raw materials, and captures, recycles and sells most of the by-products generated in its production processes.

In the following description of Ferroglobe's business, we include all of Ferroglobe's assets as of December 31, 2016. However, data referring to activity in 2015 and 2014 (for example, production levels, revenues or revenue breakdown) refers to FerroAtlántica as the Predecessor for Ferroglobe's past fiscal years.

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 a leading metals industry consultant 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. With total global silicon metal production capacity of 399,200 metric tons (which includes 51% of our attributable joint venture capacity), we have over 80% of the merchant production capacity market share in North America and approximately 32% of the global market share (i.e., all of the world excluding China), according to management estimates for our industry. 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 ownership of critical high quality raw materials 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, though our largest customer concentration is 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 our end-markets have similar growth drivers, others are less correlated and offer diversification benefits. Our 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 our customers based on the breadth and quality of our product offerings and our ability to produce products which 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, 2016 and 2015, Ferroglobe's ten largest customers accounted for approximately 42% and 40%, 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, often provide us with opportunities to cross-sell new products, such as silicon-based alloys and manganese-based alloys, to existing steel customers. Our largest global customer, Dow Corning, is also a 49% minority owner in our Alloy, West Virginia and Becancour, Canada facilities.

Flexible and low cost structure

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

We believe our vertically integrated business model and ownership of raw materials provides us with a cost advantage over our competitors. We are not reliant on any single supplier for our raw materials and currently own sources of critical raw materials, which provides us with stable, long-term access to critical raw materials for our production processes and, therefore, enhances operational and financial stability. Transportation costs can be significant and, therefore, our proximity to sources of principal 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 lower 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 across facilities and between different products in response to changes in market conditions over time. Additionally, the diversity of our currency and commodity exposures provides a partial natural hedge against volatility. Our production costs are mostly dependent on local factors while our product prices are more dependent on global factors. The depreciation of local currencies reduces the costs of our operations, allowing us to become more competitive 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 a reliable supply of critical high quality raw materials for the production of our core metals, we have invested in strategic acquisitions to control a meaningful portion of these critical inputs. In addition to our smelting facilities, 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 and South Africa, timber farms and charcoal production units in South Africa and have our own patented electrode technology. For third-party purchases, we have qualified multiple suppliers in each operating region for each raw material to help 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 from 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 other companies, which process the material for use in a variety of other applications. Silica fume (also known as microsilica) is 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, are typically recycled into our production process or are sold to customers who utilize these products in other manufacturing processes, including steel production.

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 that coordinates all of our R&D activities, 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 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 significantly reduces iron contamination. With this technology we are able to run our furnaces with fewer stoppages, which minimizes the consumption of power, one of the largest cost components in the smelting process. The ELSA electrode technology and know-how is unique and has no proven alternative worldwide, which we believe gives us a competitive advantage. Given the operational benefits, the ELSA technology nearly halves the cost of the utilization of electrodes, relative to prebaked electrodes. Furthermore, ELSA 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 — Our FerroSolar Project involves the production of solar grade silicon metal with a purity level above 99.9999% through a new electrometallurgical process, instead of the traditional chemical process, which tends to be costly and involves high energy consumption and potentially environmentally hazardous processes. The new technology, entirely developed by us at an earlier stage at our research and development facilities in Spain and France, aims to reduce the costs and energy consumption associated with the production of solar grade silicon. We have already started production of solar grade silicon metal through this new process in a prototype factory, and we currently sell the small amounts we produce to manufacturers of solar wafers. A pre-industrial site plant is under analysis and consideration for the production of 1,500 to 3,000 tons of solar grade silicon annually. In 2016, we entered into an agreement with Aurinka providing for the formation and operation of a joint venture with the purpose of producing upgraded metallurgical grade (UMG) solar silicon. See ‘‘— Research and Development (R&D) — Solar grade silicon’’ below.

Experienced management team and centralized location at global center of 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. Additionally, following the Business Combination, we moved our headquarters to London, one of the global centers for the metals and specialized materials industries. We believe London offers us a central location with easy access to our international factories, customers, suppliers and financial markets, which provides us with a competitive advantage.

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 this will be achieved through developing our existing strengths and pursuing long-term growth. We plan to accomplish organic growth by continuously expanding and enhancing our production capabilities as well as developing new generation 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 to regularly review our customer contracts in an effort to improve the terms thereunder and to optimize the balance between selling production under contract 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 material inputs through our captive sources and long-term supply contracts as well as reducing 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 expenditures, 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 the terms thereunder, 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 to continue investing in our FerroSolar Project, which involves the production of solar grade silicon metal with a purity level above 99.9999% through a new electrometallurgical process that may prove to be more cost-effective than the traditional chemical process. 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 and opportunistic 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. For example, we are pursuing a strategic disposal of our hydroelectric power operations in Spain and France, and have entered into a definitive agreement with respect to the disposal of our hydroelectric power operations in Spain with an experienced and reputable owner and operator of renewable energy businesses, pursuant to which we expect to receive gross proceeds of €255 million (approximately $270 million) and net cash proceeds of approximately $165 million. The closing of the transaction remains subject to certain conditions, including receipt of applicable governmental approvals. We are pursuing a strategic disposal of our hydroelectric power operations in France, from which we expect to receive gross and net cash proceeds of $21 million. We intend to use the proceeds from any such disposals to repay certain existing indebtedness and for general corporate purposes.

Facilities and Production Capacity

The following chart shows, as of December 31, 2016, 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 (ferrosilicon/foundry alloys), manganese-based alloys and other silicon-based alloys.

Ferroglobe Assets

1 Bécancour, Canada	20 Venezuela (Mining)
2 La Malbaie, Quebec	21 Esmeralda, Spain
3 Niagara Falls, NY	22 SamQuarz, South Africa
4 Beverly, OH	23 Mangshi, China
5 Alloy, WV	24 Venezuela (Metallurgy)
6 Corbin, KY (Alden Resources)	25 eMalahleni, South Africa
7 Aurora, IN	26 Polokwane, South Africa
8 Billingsley, AL	27 Laudun, France
9 Bridgeport, AL	28 Boo, Spain
10 Selma, AL	29 Cee, Spain
11 Mendoza, Argentina	30 Dumbria, Spain
12 Ningxia, China ("Yonvey")	31 Sabon, Spain
13 Police, Poland	32 Monzon, Spain
14 New Castle, South Africa	33 Pierrefitte, France
15 Hydro Plants, Spain	34 Anglefort, France
16 Hydro Plants, France	35 Les Clavaux, France
17 Serrabal, Spain	36 Montricher, France
18 Sonia, Spain	37 Chateau Feuillet, France
19 Conchitina,Spain	

Legend: Electrometallurgy; Energy; Mining

Global Footprint Spanning Five Continents

Capacity by Geography[1]

(000, mt)	Europe	North America	South America	Africa	Asia	Total
Silicon	200	137	0	62	0	399[2]
Ferrosilicon / Foundry Alloys	118	87	96	40	0	341
Manganese-based Alloys	390	0	34	0	0	424
Other Silicon-Based Alloys	15	0	21	0	0	36
Total						**1,200**

[1] Based on company estimates.
[2] Includes pro rata share (51%) of attributable joint-venture. capacity

Our production facilities are strategically spread worldwide across the United States, Spain, France, South Africa, Canada, Venezuela, Argentina, Poland and China. We operate quartz mines located in Spain, South Africa, Canada and the United States, and timber farms and charcoal production units 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. Due to current market conditions, facilities in Alabama (United States), Argentina, Venezuela, South Africa and China are partially or fully idled.

Our energy business comprises twelve hydroelectric power plants in Spain with a combined power generation installed capacity of 192 megawatts, as of December 31, 2016. Additionally, Ferroglobe operates two hydroelectric power plants in France with a combined installed capacity of 20 megawatts, as of December 31, 2016.

Products

For the years ended December 31, 2016, 2015 and 2014, Ferroglobe's consolidated sales by product were as follows:

	Year ended December 31,		
($ millions)	2016	2015	2014
Silicon metal	751.5	592.5	596.2
Manganese-based alloys	223.5	260.4	316.5
Ferrosilicon	242.8	228.8	285.0
Other silicon-based alloys	173.9	105.7	103.4
Silica fume	37.5	29.7	31.6
Byproducts and other	126.5	72.9	84.4
Total Sales	**1,555.7**	**1,290.0**	**1,417.1**

Silicon metal

Ferroglobe is a leading global silicon metal producer based on production capacity, with a total production capacity of approximately 399,200 (including 51% of our attributable joint venture capacity) tons per annum in several facilities in the United States, France, South Africa, Canada, Spain and China. For the years ended December 31, 2016, 2015 and 2014, Ferroglobe's revenues generated by silicon metal sales accounted for 48.3%, 45.9% and 42.1%, 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, 2016, sales to aluminum producers represented approximately 35% 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, 2016 sales to chemical producers represented approximately 55% 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, 2016 sales to polysilicon producers represented approximately 10% of silicon metal revenues. Producers of polysilicon employ processes to further purify the silicon metal and then use the material to grow ingots and then cut wafers. These wafers are the base material to produce solar cells, which are capable of converting sunlight to electricity. The individual solar cells are then soldered together to make solar modules.

Manganese-based alloys

With 229,500 tons of annual silicomanganese production capacity and 194,000 tons of annual ferromanganese production capacity in our factories in Spain and Venezuela, Ferroglobe is among the leading global manganese-based alloys producers based on production capacity. During the year ended December 31, 2016, Ferroglobe sold 271,913 tons of manganese-based alloys. For the years ended December 31, 2016, 2015, and 2014, Ferroglobe's revenues generated by manganese-based alloys sales accounted for 14.4%, 20.2% and 22.3%, 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. Manganese alloys improve the hardness, abrasion resistance, elasticity and surface condition of steel when rolled. Manganese alloys are also used for deoxidation and desulphurization in the steel manufacturing process.

Ferroglobe produces two types of manganese alloys, silicomanganese and ferromanganese.

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.

Ferrosilicon

Ferroglobe is among the leading global ferrosilicon producers based on production output for 2015 and 2016. During the year ended December 31, 2016, Ferroglobe sold 207,173 tons of ferrosilicon and had 244,500 tons of annual ferrosilicon production capacity. For the years ended December 31, 2016, 2015 and 2014, Ferroglobe's revenues generated by ferrosilicon sales accounted for 15.6%, 17.7% and 20.1%, 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 65% 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 silico calcium 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. Ferroglobe's combined annual production capacity in connection with these other silicon-based alloys is approximately 60,000 tons (excluding ferrosilicon). During the year ended December 31, 2016, Ferroglobe sold 89,430 tons of silicon-based alloys (excluding ferrosilicon). For the years ended December 31, 2016, 2015 and 2014, Ferroglobe's revenues generated by silicon-based alloys (excluding ferrosilicon) accounted for 11.2%, 8.2% and 7.3%, respectively, of Ferroglobe's total consolidated revenues.

The primary use for silico calcium is the deoxidation and desulfurization of liquid steel. In addition, silico calcium 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. Silico calcium 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

During the year ended December 31, 2016, Ferroglobe sold 212,512 tons of silica fume. For the years ended December 31, 2016, 2015 and 2014, Ferroglobe's revenues generated by silica fume sales accounted for 2.4%, 2.3% and 2.2%, 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 held for sale Spanish energy business mainly focuses on the small hydro power sector, as most of its hydroelectric plants have an installed power capacity below 50 megawatts. Ferroglobe's total installed power capacity in Spain is 192 megawatts, with an average annual electric output of approximately 583,000 megawatt hours, and an electric output of approximately 496,500 megawatt hours in 2016. For the years ended December 31, 2016, 2015 and 2014, Ferroglobe recognized a loss from discontinued operations, which represented the Spanish hydroelectric operations, in the amounts of $3,065,000, $196,000 and a profit from discontinued operations of $10,290,000, 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 is currently carrying out the construction of 19 megawatts of additional capacity to its hydroelectric plants in Spain, expected to become available in 2017. If fully utilized, the additional capacity would represent an increase of 42,000 megawatt hours, or 8%, in the average annual production of Ferroglobe's existing plants in Spain.

Ferroglobe also owns and operates 20 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, 2016, 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 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 its purchasing and logistics manager, whereas responsibility for the procurement of other raw materials rests with each country's raw materials procurement manager or the individual plant managers.

Manganese ore

The global supply of manganese ore is comprised of 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 2016 came from suppliers located in South Africa (59.6% of total purchases) and Gabon (36.0% of total purchases). In 2016, key suppliers of manganese ore to Ferroglobe supplied 94.5% of the manganese ore Ferroglobe utilized while the remaining 5.5% was procured on the international spot market from other suppliers. In 2016, Ferroglobe has contractual arrangements with two main suppliers (located in

South Africa and Gabon) with terms of one to three years and prices, expressed in U.S. Dollars, which depend primarily on spot prices.

Global manganese ore prices are mainly driven by manganese demand from India and China. 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/or 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 64.6% of the coal Ferroglobe purchased in 2016 for its facilities in Europe, South Africa and Venezuela was sourced from one mining supplier in Colombia while the remaining 35.4% came from other Colombian mines, as well as from Poland, China 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. International 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 and Canada (see '' — Mining Operations''). For the year ended December 31, 2016 approximately 61.7% 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 quartzite.

Other raw materials

Wood is needed for the production of 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.

Wood from Ferroglobe's 10,000 hectares plantation in South Africa is of good quality and is partially sold as lumber in exchange for lower quality wood to produce charcoal for Ferroglobe's

South African operations. Ferroglobe's charcoal production in South Africa is entirely subcontracted to third parties.

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.

Petroleum coke, carbon electrodes, 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 is purchased at spot prices or under contracts of a year or less.

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 the 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 in exchange for an agreement to interrupt production, and thus power usage, upon request by the grid operator. Ferroglobe uses derivative financial instruments 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 alternative arrangements with Electricité de France for 2017, and is currently negotiating long-term supply contracts with suppliers in the market place. Additionally, new regulation enacted by the National Assembly and the Government through Laws and Decrees allows FerroPem, S.A.S. to benefit from reduced access tariffs plus rebates based on interruptibility. Furthermore, the new arrangements will allow FerroPem, S.A.S. to operate competitively on a 12-month basis, avoiding the need to stop for two months 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 enter into long-term electric power supply contracts. Our power supply contracts result in stable, favorably priced, long-term commitments of power at reasonable rates. In West Virginia, we have a contract with Brookfield Energy to provide approximately 45% of our power needs, from a dedicated hydroelectric facility, at a fixed rate through December 2021. The rest of our power needs in West Virginia, Ohio and Alabama are primarily sourced through special contracts that provide historically competitive rates and the remainder is sourced at market rates. At our Niagara Falls, New York plant, we have been granted a public-sector package including 18.4 megawatts of hydropower through to 2021, effective June 1, 2016.

In Venezuela, Ferroglobe has access to low and stable power prices through a long-term contract with the local power supplier, as its factory is located in the proximity of five hydroelectric power plants.

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

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 and 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, 2016.

Mine	Location	Mineral	Annual capacity kt	Production in 2016 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	150	0.4	2.17	0.8	Open-pit	Metallurgical	N/A	21	2069
Esmeralda	Spain (Val do Dubra)	Quartz	50	22	0.4	0.12	0.17	Open-pit	Metallurgical	N/A	12	2029
Serrabal.	Spain (Vedra & Boqueixón)	Quartz	330	231	0.2	3.85	1.9	Open-pit	Metallurgical	N/A	19	2038
SamQuarz	South Africa (Delmas)	Quartzite	1,000	690	0.7	8.02	19.5	Open-pit	Metallurgical & Glass	N/A	39	2039
Mahale	South Africa (Limpopo)	Quartz	New	New	0.5	—	2.4	Open-pit	Metallurgical	N/A	15	2035
Roodepoort	South Africa (Limpopo)	Quartz	50	40	0.5	—	0.05	Open-pit	Metallurgical	N/A	1	2028
Fort Klipdam	South Africa (Limpopo)	Quartz	100	10	0.6	—	0.2	Open-pit	Metallurgical	N/A	2	2017[4]
AS&G Miller Pit	United States (Alabama)	Quartzite	150	145	0.4	0.02	—	Surface	Metallurgical	N/A	1	2017
AS&G Mims Pit.	United States (Alabama)	Quartzite	120	88	0.4	0.25	—	Surface	Metallurgical	N/A	3	2020
			1,950	**1,376**		**14.43**	**25.02**					
Maple Creek	United States (Kentucky)	Coal	200	190	0.7	0.6		Surface	Metallurgical	14,000	3	2020
Colonel Hollow	United States (Kentucky)	Coal	150	7	0.7	0.8		Surface	Metallurgical	14,000	5	2022
Engle Hollow	United States (Kentucky)	Coal	24	24	0.6	0.2		Underground	Metallurgical	14,000	4	2021
Bain Branch No. 3	United States (Kentucky)	Coal	120	25	0.5	3.6	2.9	Underground	Metallurgical	14,000	25	2042
Harpes Creek 4A	United States (Kentucky)	Coal	100	92	0.6	1.2	1.3	Underground	Metallurgical	14,000	12	2029
			594	**338**		**6.40**	**4.20**					

(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 and intends to merge the mining concessions for these properties. In addition, Ferroglobe currently holds all necessary permits to start production at its Conchitina and Conchitina Segunda mines. Although Ferroglobe has not received formal approval from the Spanish Mining Authority over its 2017 Annual Mining Plan, we are not legally prevented from commencing mining operations in the area based on the fully-authorized 2016 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:

				Recoverable Reserves			
Mine	Location	Mineralization	Mining Recovery	Proven MT[1]	Probable MT[1]	Reserve Grade	Mining Method
Conchitina and Conchitina Segunda	Spain (O Vicedo)	Quartz	0.35	0	1.25	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. Ferroglobe does not consider certain Venezuelan mines to be mining assets (La Candelaria, El Manteco and El Merey) as the minerals are fullydepleted 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 such 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 and Conchitina Segunda

The Conchitina mining concession previously belonged to Cuarzos Industriales S.A.U., which acquired the mining concession in 1979. Ferroglobe acquired such 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. has 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 is that both mining rights apply over a unique quartz deposit. Although the approval has not been formally granted by the authority, Ferroglobe is not legally prevented from commencing mining operations in the area because the relevant authority has not issued an express declaration of expiry of the Conchitina concession. Cuarzos Industriales S.A.U. is the owner of the properties currently mined at both Conchitina and Conchitina Segunda. The surface area covered by Conchitina and Conchitina Segunda 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 renewal 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

SamQuarz

The SamQuarz mining rights were transferred from the original owners, Glass South Africa Holdings (Pty) Ltd and Samancor Limited, to SamQuarz (Pty) Ltd in 1997. Our FerroAtlántica division acquired control of SamQuarz, along with the SamQuarz mining rights, in 2012. In 2009,

the Minister of Mineral Resources converted the then-existing SamQuarz mining rights into new mining rights due to expire after 30 years in 2039. At the end of 2014, SamQuarz mining rights were transferred from SamQuarz (Pty) Ltd to its sole shareholder, Thaba Chueu Mining. SamQuarz (Pty) Ltd is the owner of the properties currently mined in Delmas. The total surface area covered by SamQuarz mine is 118.1 hectares.

Mahale

Mahale is state-owned land, lawfully occupied by the Mahale community. Thaba Chueu Mining (Pty.), Ltd., a subsidiary of Ferroglobe, 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 was registered at the mining titles deeds office in the beginning of 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 Thaba Chueu Mining (Pty.), Ltd. 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 Thaba Chueu Mining (Pty.), Ltd. by the Water Affairs Department in order to allow the company to use the water at the site, provided usage does not exceed 10,000 cubic metres per month.

Roodeport

Roodeport mining right is held by Silicon Smelters (Pty.), Ltd., Ferroglobe's subsidiary, and will expire in 2028. In 2009, Silicon Smelters (Pty.), Ltd. applied for a conversion of the mining right into a new mining right under the Mineral and Petroleum Resources Development Act (the ''MPRDA''), which entered into force in 2004. Although the license has not yet been approved by the competent authority, the Company is permitted to mine while waiting for the finalization of the application. The license could be finalized before the end of 2017, subject to Silicon Smelters (Pty) Ltd meeting the following requirements:

- submission of a Mining Works Programme;
- submission of a Social Labour Plan;
- approval of a Shareholders Agreement or Black Economic Empowerment Agreement;
- submission of mining plans; and
- the passing of a board resolution appointing a person to sign on behalf of the Company.

Pursuant to the mining right, Silicon Smelters (Pty.), Ltd. is entitled to mine quartz as long as it is economically viable (i.e., for the duration of the mine). The total surface area covered by Roodeport mine is 19.5 hectares. The mining area covers the cobble and block areas. The land in which Roodeport mine is located is owned by Alpha Sand, which also conducts all mining operations as a contractor for Silicon Smelters (Pty.), Ltd. An agreement is in place whereby Alpha Sand operates the mine and Silicon Smelters (Pty.), Ltd. purchases the quartz mined from Alpha Sand based on the quartz requirements of Silicon Smelters (Pty.), Ltd. 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 the Fort Klipdam is located is owned by Silicon Smelters (Pty.), Ltd. Silicon Smelters (Pty.), Ltd. filed a mining right application that was rejected on the basis of the alleged inadequacy of the mine social and labor plan (SLP). An appeal has been filed by Silicon Smelters (Pty.), Ltd. Pending a decision on the appeal, mining operations may only be conducted on an area located outside the area covered by the mining right, pursuant to three mining permits granted to Silicon Smelters (Pty.), Ltd that will expire in 2017. The total surface area covered by the Fort Klipdam mine, including both the mining permits and the mining right, is 640.9 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

Of the overall Soleyron mine area, FerroPem, S.A.S., a subsidiary of Ferroglobe, owns 7.5 hectares. 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 the 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 €146,300. 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, 2016, we had four active coal mines (one surface mine and three underground mines) 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, 2016, we estimate our proven and probable reserves to be approximately 16,356,000 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 is 65%.

Quartzite

We have an open-pit quartz mining operation in Billingsly, Alabama, which includes two 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.

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 shall dispose of all minerals and products derived from exploitation of the mineral at competitive market prices, which shall mean, 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 programme 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 programmes 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 programme, 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.

Mauritania

In 2013, we signed an option to purchase two exploration permits of Quartz relating to 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 mining rights of both exploration permits (Vadel 1 and Vadel 2 Mines) on June 30, 2016, Ferroglobe exercised the purchase option. Vadel 1 and 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 project is under construction and we will start the production in Vadel 2 in 2017 and in Vadel 1 in 2018.

Customers and Markets

Ferroglobe's Spanish hydroelectric operations deliver and all the electricity produced to the Spanish national grid for sale in the Spanish wholesale market. We have entered into a definitive agreement with respect to the disposal of our hydroelectric power operations in Spain with an experienced and reputable owner and operator of renewable energy businesses, pursuant to which we expect to receive gross proceeds of €255 million (approximately $270 million) and net cash proceeds of approximately $165 million. The closing of the transaction remains subject to certain conditions, including receipt of applicable governmental approvals. Additionally, we are pursuing a strategic disposal of our hydroelectric power operations in France, from which we expect to receive gross and net cash proceeds of approximately $21 million.

The following table details the breakdown of Ferroglobe's revenues from its electrometallurgy operations by geographic end market for the years ended December 31, 2016, 2015 and 2014.

	Year ended December 31,		
($ millions)	2016	2015	2014
United States of America	563.6	208.4	201.3
Europe			
Spain	181.0	194.9	257.0
Germany	241.0	231.0	238.6
Italy	90.3	120.0	146.2
Rest of Europe	236.7	314.1	302.2
Total revenues in Europe	749.1	860.0	944.0
Rest of the World	243.0	221.6	271.8
Total	**1,555.7**	**1,290.0**	**1,417.1**

For the year ended December 31, 2016, Ferroglobe's ten largest customers accounted for approximately 42.23% of Ferroglobe's consolidated revenue and sales corresponding to Dow Corning Corporation represented 13.69% of the Company's sales. The Company had one customer, Dow Corning Corporation that accounted for more than 10% of consolidated revenue during the year ended December 31, 2016. Ferroglobe's sales to these customers are mainly governed by contracts that are currently in force.

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, 2016, Ferroglobe's ten largest customers accounted for approximately 42.23% of Ferroglobe's consolidated revenue. For the year ended December 31, 2016, approximately 48% of our metallurgical segment sales were to customers in Europe, approximately 36.23% were to customers in the United States and approximately 15.62.% 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. Historically, we have targeted to contract approximately 80% of our silicon metal and manganese-based ferroalloys production and approximately 75% of our silicon-based ferroalloy production in the fourth quarter for the following calendar year. Our silicon metal is typically sold under annual contracts, whereas our manganese-based ferroalloys and siliconbased ferroalloys tend to be sold under both annual and quarterly contracts. Approximately 50% of contracted production has fixed prices whereas the other 50% are indexed to benchmarks.

The remaining 20% of our silicon metal and manganese-based ferroalloys production and 25% of our silicon-based ferroalloy production are sold 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 2017 with short terms in order to benefit from expected price increases. We are also in the process of moving away from index-based contracts in favor of fixed prices.

Sales and Marketing Activities

Ferroglobe generally sells the majority of its products under annual contracts for silicone producers, and between three months to one year for steel and 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. Some of Ferroglobe's customer contracts contain provisions relating to the purchase of minimum volumes of products.

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. Prior to the Business Combination with Globe, almost all sales in the United States were intermediated through local exclusive agents pursuant to standardized contractual arrangements. Some sales to primary and secondary aluminum manufacturers and silicone producers were direct. In Italy and the United Kingdom, sales of products other than silicon metal are intermediated through local exclusive agents.

Ferroglobe maintains credit insurance for the majority of its customer receivables to mitigate collection risk.

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 Corning, 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.

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 and Elkem.

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

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, its metallurgical coal mines in the United States and tree plantations in South Africa to obtain wood with which to produce charcoal, 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. Our FerroAtlántica division's research and development division coordinates all the research and development activities within Ferroglobe. Ferroglobe also has cooperation agreements in place with various universities and research institutes in Spain, France and other countries around the world. For the years ended December 31, 2016, 2015 and 2014, Ferroglobe spent $6.2 million, $11.1 million, $11.2 million, respectively, on research and development projects and activities. 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 in Spain and France, 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 for a feasibility study and basic engineering for an upgraded metallurgical grade (''UMG'') solar silicon manufacturing plant. Purchases under this project were approximately €3.0 million for 2016. On December 20, 2016, Ferroglobe entered into an agreement with Aurinka and Blue Power (the ''Solar JV Agreement'') providing for the formation and operation of a joint venture with the purpose of UMG solar silicon, subject to the satisfaction of certain conditions precedent. Under the Solar JV Agreement, Ferroglobe will indirectly own 75% of the operating companies to be formed as part of the joint venture and 51% of the company to be 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, and subject to the satisfaction of certain conditions precedent, FerroAtlántica has committed to incur capital expenditures in connection with the joint venture of approximately $118 million over the first three years, which constitutes the first phase of the project contemplated by the Solar JV Agreement. 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. To the extent the project continues into further phases, we would expect to commit, in the future and subject to appropriate approval and authorization, to incur approximately $100 million in joint venture-related capital expenditures in the fourth year, and approximately $77 million over the following three years. In connection with the Solar JV Agreement, FerroAtlántica has obtained two loans, with principal amounts of approximately €45 million and €27 million, respectively, from the Spanish Ministry of Industry and Energy for the purpose of building and operating the UMG solar silicon plant.

Capital Expenditures

Ferroglobe's capital expenditures for the years ended December 31, 2016, 2015 and 2014 were $71.1 million, $68.5 million and $45.4 million, 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 2017 to equal approximately $65 million, excluding any capital expenditures related to our hydroelectric power operations in Spain and France, which we may sell in 2017, or to our solar grade silicon project. We believe we have the ability to reduce our capital expenditures by, as needed, idling individual electrometallurgy facilities. Additionally, subject to the satisfaction of certain conditions precedent, we have committed to incur approximately $118 million of capital expenditures in connection with our solar grade silicon joint venture over an initial phase estimated for up to three years. While we would expect to commit to further amounts in connection with this joint venture in the future if the project continues to subsequent phases, which is subject to agreement and approval with our joint venture partners, we have not yet committed to any expenditures with respect to further phases. Capital expenditures in connection with our solar grade silicon joint venture are financed in part by two loans 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.''

Ferroglobe finances capital expenditures mainly from cash generated by its operating activities, and to a lesser extent, where applicable, from its existing credit facilities.

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.

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 complete 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 Ferroglobe may cause or that relates to its current or former operations or properties. Environmental, health and safety laws are likely to become more stringent in the future. Ferroglobe's 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 budgeted or reserved amounts and adversely affect Ferroglobe's business, results of operations and financial condition.

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 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.

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.

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 health and safety of Ferroglobe's employees, the generation of electricity and the use of water and river basins. These laws and regulations require Ferroglobe to obtain from governmental authorities permits to conduct its activities, which permits may be subject to modification or revocation by these authorities.

Additionally, Ferroglobe's energy operations are subject to government regulation. In Spain, the regulatory framework applicable to electricity producers underwent significant changes in 2013. The regulatory framework previously applicable to renewable energies was abolished, and a new regulatory framework was established through the enactment of Royal Decree-Law 9/2013 of July 13, taking certain urgent measures to guarantee the financial stability of the Spanish electrical system. The development of this new framework continued with the passing of the new Electricity Industry Law 24/2013 in Spain in December 2013, and was completed with the enactment of Royal Decree 413/2014 of June 6, which regulates electricity generation activities using renewable energy sources, cogeneration and waste, and Order IET/1045/2014 of June 16, approving the compensation parameters for standard facilities applicable to certain production facilities based on renewable energy sources, co-generation and waste. This regulation established a new compensation scheme based on two concepts: remuneration for investments based on installed capacity, and remuneration for operation based on the energy produced. The first one guarantees a ''reasonable return'' on the investments, and the second one covers the operating cost of those technologies for which operating cost exceeds market revenues. 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. It is expected that new regulations will allow Ferroglobe to continue to participate in ''ancillary services'' markets.

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.

A sunset review of the U.S. antidumping 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 the United States may be adversely affected.

In March 2017, Globe filed a petition with the U.S. Department of Commerce and the U.S. International Trade Commission covering imports of silicon metal from Australia, Brazil, Kazakhstan and Norway. If the petition is unsuccessful, our sales in the United States may be adversely affected.

In December 2016, Ferroglobe and its subsidiaries filed a complaint with the Canada Border Services Agency against imports of silicon metal from Brazil, Kazakhstan, Laos, Malaysia, Norway, Russia, and Thailand. If the complaint is unsuccessful, our sales in Canada may be adversely affected.

Seasonality

Electrometallurgy

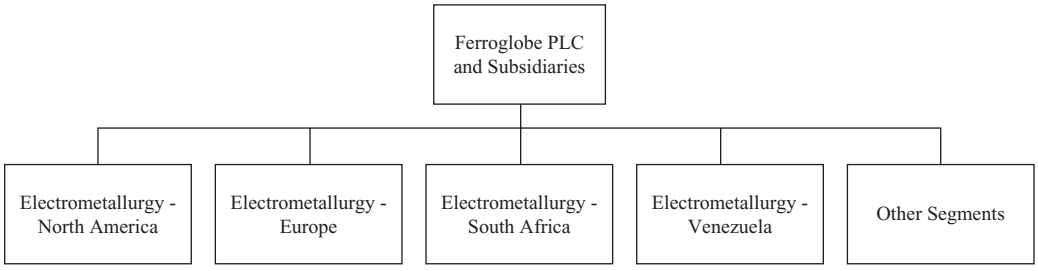
Due to the cyclicality of energy prices in certain jurisdictions and the energy-intensive nature of the production processes for silicon metal, manganese- and silicon-based alloys and specialty metals, Ferroglobe does not operate its electrometallurgy plants during certain periods or times of day when 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.

The seasonality of Ferroglobe's operations is reflected in its borrowings, with its subsidiaries repaying borrowings between December and March, and increasing borrowings from April through November.

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 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, 2016 and 2015 and for the years ended December 31, 2016, 2015 and 2014, 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.''

The Consolidated Financial Statements of Ferroglobe included in this annual report were translated from Euro (functional currency) to U.S. Dollars. In accordance with IAS 21 — The Effects of Changes in Foreign Exchange Rates, Ferroglobe's consolidated income statements for the years ended December 31, 2016, 2015 and 2014 have been translated from Euro into U.S. Dollars using the rate of $1.1069, $1.1099 and $1.3285, respectively, to one Euro, and Ferroglobe's consolidated balance sheets as of December 31, 2016 and 2015 have been translated from Euro into U.S. Dollars using the rate of $1.0541 and $1.0887, respectively, to one Euro.

The Company's business started with the consummation of the Business Combination on December 23, 2015. FerroAtlántica is the Company's ''Predecessor'' for accounting purposes. Therefore, the results of the Company for the 2015 fiscal year were composed of the results of:

- 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 data and results of fiscal years prior to 2015 correspond exclusively to the Predecessor, FerroAtlántica, unless otherwise expressly stated.

The statement of financial position reflects the balance sheet of the Company as of December 31, 2016 and 2015.

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.

Manganese-based alloy prices have shown a significant correlation with the price of manganese ore, which allows us to pass increases in the cost of manganese ore through to our customers, but also results in a decrease in prices for our manganese-based alloys when the price of manganese ore decreases. During 2015, we saw two different trends. The first part of the year came with a high demand due to the performance of the steel industry, with sustained support in prices for the manganese alloys. Starting June 2015, the trend evolved to negative, with an important decrease in prices of all raw materials and specifically manganese ore. This had an impact on the evolution of prices. In the second half of 2016, manganese ore prices increased substantially, followed with a certain time lag by a significant increase in manganese alloys prices.

We have experienced a weakened economic environment in national and international metals markets, including a sharp decrease in silicon metal prices in all major markets since late 2014, though we have experienced an improvement in silicon metal prices since the fourth quarter of 2016.

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, wood and charcoal. Manganese ore is the largest component of the cost base for manganese-based alloys. In 2016, approximately 95% of Ferroglobe's total $77.3 million expense with respect to manganese ore fell under contractual agreements with producers of manganese ore with terms of one to three years, while the remaining manganese ore was procured from the international spot market. Coal meeting certain standards for ash content and other physical properties is used as a major carbon reductant in silicon-based alloy production. In 2016, coal represented a $150.0 million expense for Ferroglobe. 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 (Pty.), Ltd. Ferroglobe's wood expense amounted to $57.9 million in 2016. The FerroAtlántica subsidiaries of Ferroglobe source approximately 55% of their quartz needs from FerroAtlántica's mines in Spain and South Africa, and, the Globe subsidiaries source approximately 75% of their quartz needs from Globe's mines in the United States and Canada. Total quartz consumption in 2016 represented an expense of $100.8 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 production during periods when energy prices are lower. In 2016, Ferroglobe's total power consumption was 8,468 gigawatt hours with power contracts that vary across its operations. In Spain and South Africa, power prices are mostly spot or daily prices with important seasonal fluctuations, whereas in France and Venezuela, Ferroglobe has power contracts that provide for flat or near-flat rates for most of the year.

In Spain, 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 uses derivative financial instruments 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 alternative arrangements with Electricité de France for 2017, and is currently negotiating long-term supply contracts with suppliers in the market place. Additionally, a new regulation enacted by the National Assembly and the Government through Laws and Decrees allows FerroPem S.A.S. to benefit from reduced access tariffs plus rebates based on interruptibility. 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 due to the Tarif Vert. We believe that the new arrangements will provide power prices comparable to past levels and with high degree of predictability going forward.

In Venezuela, FerroVen, S.A. has access to low and stable power prices denominated in U.S. Dollars through a long-term contract with the local power supplier, as its factories are located in the

proximity of five hydroelectric power plants. In South Africa, energy prices are regulated by the National Energy Regulator (NERSA) and price increases are publicly announced in advance.

In the United States, we enter into long-term electric power supply contracts. Our power supply contracts have in the past resulted in stable, long-term commitments of power at what we believe to be reasonable rates. In West Virginia, we have a contract with Brookfield Energy to provide approximately 45% of our power needs, from a dedicated hydroelectric facility, at a fixed rate through December 2021. The rate of our power needs in West Virginia, Ohio and Alabama are primarily sourced through special contracts that provide historically competitive rates and the remainder is sourced 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, effective June 1, 2016.

Foreign currency fluctuation

As a result of the Business Combination, 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 Venezuelan and 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.''

The current loss of value of the Euro versus the U.S. Dollar has resulted in a significant price gap between U.S. Dollar- and Euro-denominated spot market prices for silicon metal in particular, which enhances the competitiveness of our European production units in the international markets.

Regulatory changes

Ferroglobe's energy operations are subject to government regulation. In Spain, the regulatory framework applicable to electricity producers underwent significant changes in 2013. The regulatory framework previously applicable to renewable energies was abolished, and the foundation for a new framework was established through the enactment of Royal Decree-Law 9/2013. The development of this new framework continued with the passing of the Electricity Industry Law in Spain in December 2013, and was completed with the enactment of Royal Decree 413/2014 and Order IET/1045/2014.

As a result, since July 2013, the subsidiary FerroAtlántica, S.A. has sold the electricity it generates at market prices, optimizing its generation by operating during peak price hours and participating in the ''ancillary services'' markets 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. It is expected that new regulations will allow FerroAtlántica to continue to participate in ''ancillary services'' markets. New power supply arrangements that have been entered into in 2016 for our French plants have managed to avoid this seasonal interruption.

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 as issued by the IASB. 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 income taxes, business combinations, inventories, goodwill, and impairment of long-lived assets. 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. 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, 2016, in connection with our annual goodwill impairment test, the Company recognized an impairment charge of $193,000,000 related to the partial impairment of goodwill in North America, that was recorded as a result of Business Combination, 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 its North American 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

In order to ascertain whether its assets have become impaired, Ferroglobe 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, 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 pre-tax 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 2016, the Company determined due to market conditions that our facility in Venezuela was to be idled. Since the cash flows from the cash generating unit were uncertain, the Company tested the long-lived assets for impairment. The recoverable amount of the cash generating unit was determined based on the fair value of the assets less costs to dispose. The Company concluded that the costs to dispose exceed the fair value of the assets, primarily due to political and financial instability in Venezuela. As a result, the Company fully impaired the long-lived assets and took an impairment charge of $58,472,000 for property, plant and equipment.

During 2016, the Company recognized an impairment charge of $9,176,000 related to the Company's mining assets in South Africa, which was comprised of goodwill impairment of $1,612,000, impairment of property, plant and equipment of $7,334,000 (including associated translation differences) and impairment of other intangible assets of $230,000.

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 — Ferroglobe Year Ended December 31, 2016 Compared to Ferroglobe Year Ended December 31, 2015

($ thousands)	Year ended December 31, 2016	2015
Sales	1,555,657	1,289,886
Cost of sales	(1,043,000)	(817,875)
Other operating income	25,712	15,500
Staff costs	(293,032)	(202,585)
Other operating expense	(234,326)	(190,034)
Depreciation and amortization charges, operating allowances and write-downs	(121,346)	(62,201)
Operating (loss) profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**(110,335)**	**32, 691**
Impairment losses	(267,449)	(52,042)
Net gain (loss) due to changes in the value of assets	1,891	(912)
Loss on disposal of non-current assets	(340)	(2,208)
Other loss	(40)	(347)
OPERATING LOSS	**(375,593)**	**(22,818)**
Finance income	1,534	1,095
Finance costs	(24,585)	(23,738)
Exchange differences	(3,513)	35,904
LOSS BEFORE TAXES	**(402,157)**	**(9,557)**
Income tax benefit (expense)	46,609	(48,719)
LOSS FROM CONTINUING OPERATIONS	**(355,548)**	**(58,276)**
Loss for discontinued operations[(3)]	(3,065)	(196)
LOSS FOR THE YEAR	**(358,613)**	**(58,472)**
Loss attributable to non-controlling interests	20,186	15,204
LOSS ATTRIBUTABLE TO FERROGLOBE	**(338,427)**	**(43,268)**

The financial information for the year ended December 31, 2016 includes the consolidated results for the full year ended December 31, 2016, whereas the financial information for the year ended December 31, 2015 includes the results of Globe for only the eight -day period ended December 31, 2015 subsequent to the Business Combination on December 23, 2015.

Sales

Sales increased $265,771,000 or 20.6%, from $1,289,886,000 for the year ended December 31, 2015 to $1,555,657,000 for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe sales in 2016 of $545,264,000 as compared to the inclusion of only eight days of Globe sales in 2015. This increase was offset by a 20.3% decrease in average selling prices (prices based in euros) of all primary products and a 0.4% decrease in sales volumes at FerroAtlántica.

Excluding Globe, average selling prices (in local currency) for silicon metal, silicon-based alloys and manganese alloys pricing decreased by 16.0%, 9.2% and 18.2%, respectively, primarily due to lower European market index pricing.

Excluding Globe, silicon metal sales volume decreased 7.5% primarily due to lower demand driven by pricing pressure from imports. This decrease was partially offset by slight increases in sales volumes of silicon-based alloys and manganese alloys, of 3.5% and 2.4%, respectively.

In summary, since late 2014, we have experienced a sharp decrease in silicon metal prices, our main product produced and sold, which has adversely affected our sales for the year ended December 31, 2016, as compared to the sales of FerroAtlántica and Globe for the year ended December 31, 2015. This effect was particularly pronounced in relation to the sales of our European business.

Cost of sales

Cost of sales increased $225,125,000, or 27.5%, from $817,875,000 for the year ended December 31, 2015 to $1,043,000,000 for the year ended December 31, 2016, primarily due to the inlcusion of a full year of Globe cost of sales in 2016 of $340,617,000 as compared to the inclusion of only eight days of Globe cost of sales in 2015. This increase was offset by a 14.2% decrease in the cost of sales of FerroAtlántica due to manufacturing cost improvement initiatives, including lower raw material and energy costs.

Other operating income

Other operating income increased $10,212,000, or 65.9%, from $15,500,000 for the year ended December 31, 2015 to $25,712,000 for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe other operating income in 2016 of $2,986,000 as compared to the inclusion of only eight days of Globe other operating income in 2015. In addition, the increase in other operating income is attributable to an increase in sales of fines, silica fume and other by-products.

Staff costs

Staff costs increased $90,447,000, or 44.6%, from $202,585,000 for the year ended December 31, 2015 to $293,032,000 for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe staff costs in 2016 of $121,251,000 as compared to the inclusion of only eight days of Globe staff costs in 2015. This increase was offset by a decrease in FerroAtlántica staff costs of approximately $30,000,000 due to a decrease in variable-based compensation expense reflecting annual company performance.

Other operating expense

Other operating expense increased $44,292,000, or 23.3%, from $190,034,000 for the year ended December 31, 2015 to $234,326,000 for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe other operating expense in 2016 of $63,065,000 as compared to the inclusion of only eight days of Globe other operating expense in 2015. This increase was offset by a decrease in due diligence expenses related to the Business Combination in 2015.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs increased $59,145,000 or 95.1%, from $62,201,000 for the year ended December 31, 2015 to $121,346,000 for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe

depreciation and amortization charges, operating allowances and write-downs in 2016 of $73,525,000 as compared to the inclusion of only eight days of Globe depreciation and amortization charges, operating allowances and write-downs in 2015.

Impairment losses

Net impairment losses increased $215,407,000, from a loss of $52,042,000 for the year ended December 31, 2015 to a loss of $267,449,000 for the year ended December 31, 2016. The increase in impairment losses is primarily due to the impairment of goodwill in relation to our North American assets of $193,000,000, the impairment of non-current operational assets located in Venezuela, South Africa and France, totaling $58,472,000, $9,176,000, and $1,178,000, respectively, and the impairment of non-current financial assets amounting $5,623,000.

Finance income

Finance income increased $439,000, or 40.1%, from $1,095,000 for the year ended December 31, 2015 to $1,534,000 for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe finance income in 2016 of $676,000 as compared to the inclusion of only eight days of Globe finance income in 2015.

Finance costs

Finance costs increased $847,000, or 3.6%, from $23,738,000 for the year ended December 31, 2015 to $24,585,000 for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe finance costs in 2016 of $5,714,000 as compared to the inclusion of only eight days of Globe finance income in 2015. This increase was offset by a reduction in FerroAtlántica's outstanding debt and, therefore incurred lower finance costs, as well as a decrease in interest rates year-over-year.

Exchange differences

Exchange differences decreased $39,417,000, from a gain of $35,904,000 for the year ended December 31, 2015 to a loss of $3,513,000 for the year ended December 31, 2016, partially due to the inclusion of a full year of Globe exchange differences in 2016 of $4,567,000 related to the devaluation of the Argentine Peso, as compared to the inclusion of only eight days of Globe exchange differences in 2015.

Income tax

Income tax expense decreased $95,328,000, or 195.7%, from an income tax expense of $48,719,000 for the year ended December 31, 2015 to an income tax benefit of $46,609,000 for the year ended December 31, 2016. This decrease is primarily attributable to the inclusion of a full year of Globe income tax benefit in 2016 of $30,598,000 as compared to the inclusion of eight days of Globe income tax expense in 2015. In addition, FerroAtlántica operations generated losses in 2016, which further increased the income tax benefit for the year ended December 31, 2016.

Segment operations

During 2016, upon further evaluation of the management reporting structure as a result if the integration of the operations of FerroAtlántica and Globe we have concluded that our operating and reportable segments have changed since the prior year. The comparative prior periods have been restated to conform to the 2016 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;
- Electrometallurgy — Venezuela; and
- Other segments.

Electrometallurgy — North America

($ thousands)	Year ended December 31, 2016	2015
Sales	521,192	10,062
Cost of sales	(325,254)	(6,200)
Other operating income	362	17
Staff costs	(82,032)	(1,983)
Other operating expense	(64,606)	(276)
Depreciation and amortization charges, operating allowances and write-downs	(73,530)	(1,183)
Operating (loss) profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**(23,868)**	**437**

The Electrometallurgy — North America segment is comprised of only Globe subsidiaries. As a result, the segment information for the year ended December 31, 2016 includes the segment information for the full year ended December 31, 2016, whereas the segment information for the year ended December 31, 2015 includes the segment information for only the eight-day period ended December 31, 2015 subsequent to the Business Combination on December 23, 2015.

Sales

Sales increased $511,130,000, from $10,062,000 for the year ended December 31, 2015 to $521,192,000 for the year ended December 31, 2016, primarily due to the inclusion of the full year of sales in 2016 as compared to the inclusion of only eight days of sales in 2015 following the Business Combination. On a pro-forma basis, sales for the segment decreased $165,655,000, or 24%, from $686,847,000 in 2015 to $521,192,000 in 2016. The decrease was primarily attributable to a 12% decrease in average selling prices coupled with a 15% decrease in tons sold. Silicon metal pricing decreased 14%, primarily due to lower index pricing which resulted in lower pricing on annual calendar 2016 contracts and index-based contracts. Silicon-based alloys pricing decreased 10% as a result of lower index pricing. Silicon metal volume decreased 10%, primarily due to lower demand driven by pricing pressure from imports . Silicon-based alloys volume decreased 24% due to a weaker end market and lower customer demand.

Cost of sales

Cost of sales increased by $319,054,000, from $6,200,000 for the year ended December 31, 2015 to $325,254,000 for the year ended December 31, 2016. On a pro-forma basis, cost of sales decreased in line with the 15% decrease in sales volumes, offset by higher stand-down costs

associated with the idling of the Selma, Alabama plant in February 2016 without any corresponding production.

Staff costs

Staff costs increased by $80,049,000, from $1,983,000 for the year ended December 31, 2015 to $82,032,000 for the year ended December 31, 2016. On a pro forma basis, staff costs decreased by approximately 18%, due to lower variable-based compensation expense reflecting annual company performance year-over-year.

Other operating expense

Other operating expense increased by $64,330,000, from $276,000 for the year ended December 31, 2015 to $64,606,000 for the year ended December 31, 2016, primarily due to a full year of other operating expense in 2016 as compared to only eight days of Globe other operating expense in 2015. On a pro forma basis, other operating expense decreased due to lower non-recurring transaction costs during 2015 related to the Business Combination.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs increased by $72,347,000 from $1,183,000 for the year ended December 31, 2015 to $73,530,000 for the year ended December 31, 2016. On a pro forma basis, depreciation and amortization charges, operating allowances and write-downs increased by approximately 50%. This increase is attributable to the increased depreciable asset balance during 2016 as a result of the use of the acquisition-method treatment of Globe's non-current assets associated with the Business Combination, as all acquired assets and liabilities were stepped up to fair value as of the closing date of the Business Combination.

Electrometallurgy — Europe

	Year ended December 31,	
($ thousands)	2016	2015
Sales	949,547	1,174,968
Cost of sales	(672,026)	(811,114)
Other operating income	25,908	52,211
Staff costs	(132,440)	(148,652)
Other operating expense	(118,269)	(142,867)
Depreciation and amortization charges, operating allowances and write-downs	(31,730)	(35,255)
Operating profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**20,990**	**89,291**

Sales

Sales decreased $225,421,000, or 19.2%, from $1,174,968,000 for the year ended December 31, 2015 to $949,547,000 for the year ended December 31, 2016, primarily due to an 18.5% decrease in average selling prices for all primary products as well as a foreign exchange impact which decreased sales by $2,574,000.

Average selling prices (in local currency) for silicon metal, silicon-based alloys and manganese alloys pricing decreased 20.4%, 22.6% and 12.3%, respectively, primarily due to lower European market index pricing. The sales volume of primary products was relatively consistent year-over-year.

Cost of sales

Cost of sales decreased $139,088,000, or 17.1%, from $811,114,000 for the year ended December 31, 2015 to $672,026,000 for the year ended December 31, 2016, primarily due to manufacturing cost improvement initiatives, including lower raw material and energy costs. In addition, there was a favorable foreign exchange impact, which decreased Euro-denominated costs by $1,821,000.

Other operating income

Other operating income decreased $26,303,000, or 50.4%, from $52,211,000 for the year ended December 31, 2015 to $25,908,000 for the year ended December 31, 2016, primarily due to intercompany charges to the parent company during 2015 for its share of non-recurring transaction costs related to the Business Combination, which FerroAtlántica paid.

Staff costs

Staff costs decreased $16,212,000 or 10.9%, from $148,652,000 for the year ended December 31, 2015 to $132,440,000 for the year ended December 31, 2016, primarily due to a decrease in the bonus and other social benefits in France and in Spain to reflect the Company's annual performance.

Other operating expense

Other operating expense decreased $24,598,000, or 17.2%, from $142,867,000 for the year ended December 31, 2015 to $118,269,000 for the year ended December 31, 2016, primarily due to a reduction of non-recurring transaction costs of approximately $27,000,000 related to the Business Combination in 2015.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $3,525,000, or 10.0%, from $35,255,000 for the year ended December 31, 2015 to $31,730,000 for the year ended December 31, 2016, primarily due to a decrease in write-downs of trade receivables allowances of $2,115,000 as we reduced exposure to customers that entered delinquency in 2015. In addition, there was a $1,410,000 decrease in depreciation as a result of lower capital expenditures year-over-year.

Electrometallurgy — South Africa

($ thousands)	Year ended December 31, 2016	2015
Sales	142,160	219,890
Cost of sales	(99,124)	(134,978)
Other operating income	3,422	5,070
Staff costs	(23,589)	(24,663)
Other operating expense	(28,834)	(29,237)
Depreciation and amortization charges, operating allowances and write-downs	(4,732)	(7,744)
Operating (loss) profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**(10,697)**	**28,338**

Sales

Sales decreased $77,730,000, or 35.3%, from $219,890,000 for the year ended December 31, 2015 to $142,160,000 for the year ended December 31, 2016, primarily due to a 17.1% decrease in silicon metal sales volumes due to the decline in exports to North America. In addition, there was an 18.8% decrease in silicon-based alloy sales volumes due to a weak domestic market. Average selling prices of all primary products decreased 30% in 2016 compared to 2015 due to a decrease in index pricing. This decrease was offset by a foreign exchange impact which increased sales by $18,761,000.

Cost of sales

Cost of sales decreased $35,854,000, or 26.6%, from $134,978,000 for the year ended December 31, 2015 to $99,124,000 for the year ended December 31, 2016, primarily due to a 17.1% decrease in silicon metal sales volumes from 2015 to 2016 as well as a 33.4% decrease in silicon-based alloy sales volumes. This decrease was offset by a foreign exchange impact which increased cost of sales by $13,082,000.

Other operating income

Other operating income decreased $1,648,000, or 32.5%, from $5,070,000 for the year ended December 31, 2015 to $3,422,000 for the year ended December 31, 2016, primarily due to a decrease in by-product sales as a result of a weak domestic market as well as a reduction of other services provided to third parties.

Staff costs

Staff costs decreased $1,074,000 or 4.4%, from $24,663,000 for the year ended December 31, 2015 to $23,589,000 in for the year ended December 31, 2016, primarily due to a $4,187,000 reduction of bonus and other social benefits to reflect the Company's annual performance. This decrease was offset by a foreign exchange impact which increased staff costs by $3,113,000.

Other operating expense

Other operating expense decreased $403,000, or 1.4%, from $29,237,000 for the year ended December 31, 2015 to $28,834,000 for the year ended December 31, 2016, primarily due to lower variable, selling, and administrative costs during 2016 when the plant was idled or operating at a

reduced production level. This decrease was offset by a foreign exchange impact which increased other operating expense by $3,805,000.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $3,012,000, or 38.9%, from $7,744,000 for the year ended December 31, 2015 to $4,732,000 for the year ended December 31, 2016. This change is primarily attributable to a $1,572,000 decrease in Receivable allowances and a decrease in depreciation of $2,064,000 due to lower capital expenditures year-over-year. This decrease was offset by a foreign exchange impact which increased depreciation and amortization charges by $624,000.

Electrometallurgy — Venezuela

($ thousands)	Year ended December 31, 2016	2015
Sales	30,430	69,956
Cost of sales	(34,643)	(57,647)
Other operating income	27	44
Staff costs	(5,656)	(20,922)
Other operating expense	(6,747)	(28,677)
Depreciation and amortization charges, operating allowances and write-downs	(4,118)	(9,396)
Operating loss before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**(20,707)**	**(46,642)**

Sales

Sales decreased $39,526,000, or 56.5%, from $69,956,000 for the year ended December 31, 2015 to $30,430,000 for the year ended December 31, 2016, primarily due to a 27% decrease in average sales prices as global market index pricing fell year-over-year.

In addition, in June 2016, due to the uncertainty of the cash flow generating capacity of FerroVen as a result of the economic, political and social instability of Venezuela, FerroVen's management decided to continue operations at the local level only until free market conditions are reestablished.

Cost of sales

Cost of sales decreased $23,004,000, or 39.9%, from $57,647,000 for the year ended December 31, 2015 to $34,643,000 for the year ended December 31, 2016, primarily due to the 41% decrease in sales volumes described above. In addition, the devaluation of the Venezuelan Bolivar further reduced cost of sales.

Staff costs

Staff costs decreased $15,266,000, or 73.0%, from $20,922,000 for the year ended December 31, 2015 to $5,656,000 for the year ended December 31, 2016, primarily due to the devaluation of the Venezuelan Bolivar as all employees are paid in the local currency.

Other operating expense

Other operating expense decreased $21,930,000, or 76.5%, from $28,677,000 for the year ended December 31, 2015 to $6,747,000 for the year ended December 31, 2016, primarily due to the devaluation of the Venezuelan Bolivar as most local suppliers are paid in the local currency. In addition, there was a decrease in variable, selling, and administrative costs during 2016 due to the reduction in production volumes year-over-year.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $5,278,000, or 56.2%, from $9,396,000 for the year ended December 31, 2015 to $4,118,000 for the year ended December 31, 2016. Due to the uncertainty of the cash flow generating capacity of FerroVen, as described above, FerroVen fully impaired its fixed assets at June 30, 2016. Therefore, only six months of depreciation is included in depreciation and amortization charges, operating allowances and write-downs for the year ended December 31, 2016.

Other segments

	Year ended December 31,	
($ thousands)	2016	2015
Sales	59,907	59,167
Cost of sales	(45,269)	(30,394)
Other operating income	4,686	2,065
Staff costs	(52,921)	(9,652)
Other operating expense	(31,217)	(38,670)
Depreciation and amortization charges, operating allowances and write-downs	(8,700)	(13,096)
Operating profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**(73,514)**	**(30,580)**

Sales

Sales increased $740,000, or 1.3%, from $59,167,000 for the year ended December 31, 2015 to $59,907,000 for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe sales in 2016 of $23,532,000 as compared to the inclusion of only eight days of Globe sales in 2015. This increase was offset by a decrease in sales from idled facilities, most significantly, MangShi, which was idled in November 2015.

Cost of sales

Cost of sales increased $14,875,000, or 48.9%, from $30,394,000 for the year ended December 31, 2015 to $45,269,000 for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe cost of sales in 2016 as compared to the inclusion of only eight days of Globe cost of sales in 2015. In addition, inventory write-offs of approximately $2,500,000 at MangShi were recorded to cost of sales during 2016.

Other operating income

Other operating income increased $2,621,000, or 126.9%, from $2,065,000 for the year ended December 31, 2015 to $4,686,000 for the year ended December 31, 2016, primarily due to the inlcusion of a full year of Globe other operating income in 2016 of $1,647,000 as compared to the inclusion of only eight days of Globe other operating income in 2015.

Staff costs

Staff costs increased $43,269,000 or 448.3%, from $9,652,000 for the year ended December 31, 2015 to $52,921,000 for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe staff costs in 2016 of $38,427,000 as compared to the inclusion of only eight days of Globe sales in 2015. In addition, staff costs for the year ended December 31, 2016 include Alan Kestenbaum's severance payment of approximately $21,000,000, as well as other payments, and the accelerated vesting of equity awards made in connection with his resignation pursuant to the terms of the Employment Agreement.

Other operating expense

Other operating expense decreased $7,453,000, or 19.3%, from $38,670,000 for the year ended December 31, 2015 to $31,217,000 for the year ended December 31, 2016, primarily due to lower due diligence and development expenses year-over-year as a result of the abandonment of the FerroQuébec, Inc. project in late 2015.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $4,396,000, or 33.6%, from $13,096,000 for the year ended December 31, 2015 to $8,700,000 for the year ended December 31, 2016, primarily due to the inclusion of a full year of Globe depreciation and amortization charges, operating allowances and write-downs in 2016 as compared to the inclusion of only eight days of Globe depreciation and amortization charges, operating allowances and write-downs in 2015. This increase was offset by a decrease in depreciation as the Property, plant and equipment at MangShi was impaired in 2015 and no longer depreciated.

Results of Operations — Ferroglobe Year Ended December 31, 2015 Compared to FerroAtlántica Year Ended December 31, 2014

($ thousands)	Year ended December 31, 2015	2014
Sales	1,289,886	1,417,079
Cost of sales	(817,875)	(887,772)
Other operating income	15,500	6,694
Staff costs	(202,585)	(213,829)
Other operating expense	(190,034)	(148,553)
Depreciation and amortization charges, operating allowances and write-downs	(62,201)	(69,131)
Operating profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**32,691**	**104,488**
Impairment losses	(52,042)	(399)
Net loss due to changes in the value of assets	(912)	(9,472)
(Loss) gain on disposal of non-current assets	(2,208)	555
Other loss	(347)	(60)
OPERATING (LOSS) PROFIT	**(22,818)**	**95,112**
Finance income	1,095	4,596
Finance costs	(23,738)	(28,415)
Exchange differences	35,904	7,800
(LOSS) PROFIT BEFORE TAXES	**(9,557)**	**79,093**
Income tax expense	(48,719)	(57,652)
(LOSS) PROFIT FROM CONTINUING OPERATIONS	**(58,276)**	**21,441**
(Loss) Profit for discontinued operations	(196)	10,290
(LOSS) PROFIT FOR THE YEAR	**(58,472)**	**31,731**
Loss attributable to non-controlling interests	15,204	6,706
(LOSS) PROFIT ATTRIBUTABLE TO FERROGLOBE	**(43,268)**	**38,437**

Sales

Sales decreased $127,193,000, or 9.0%, from $1,417,079,000 for the year ended December 31, 2014 to $1,289,886,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates which lowered sales by $254,049,000. This decrease was partially offset by a 14% increase in the average selling prices of silicon metal (in local currency) as well as a 1.4% increase in silicon metal sales volumes.

Cost of sales

Cost of sales decreased $69,897,000, or 7.9%, from $887,772,000 for the year ended December 31, 2014, to $817,875,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates, which lowered cost of sales by $161,084,000. This decrease was offset by an increase in costs of production in Venezuela and France (in local currencies) due to

the increase in energy prices and the increase in the price of some raw materials and others production costs.

Other operating income

Other operating income increased $8,806,000, or 131.6%, from $6,694,000 for the year ended December 31, 2014 to $15,500,000 for the year ended December 31, 2015, primarily due to $5,685,295 of grants (deferred income) received related to due to CO 2 emissions by FerroAtlántica.

Staff costs

Staff costs decreased $11,244,000, or 5.3%, from $213,829,000 for the year ended December 31, 2014 to $202,585,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates which lowered staff costs by $39,900,000. This decrease was partially offset by an increase in social benefits for employees in Venezuela as well as increased bonuses and other social benefits to employees in France.

Other operating expense

Other operating expense increased $41,481,000, or 27.9%, from $148,553,000 for the year ended December 31, 2014 to $190,034,000 for the year ended December 31, 2015, primarily due to non-recurring transaction costs related to the Business Combination in 2015.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $6,930,000, or 10.0%, from $69,131,000 for the year ended December 31, 2014 to $62,201,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates, which lowered depreciation and amortization charges by $12,251,000. This decrease was partially offset by an increase of $3,848,000 in trade receivables allowances as certain customers entered delinquency, and a $1,473,000 increase in depreciation due to the increase of capital expenditure.

Impairment losses

Net impairment losses increased $51,643,000, from a loss of $399,000 for the year ended December 31, 2014 to a loss of $52,042,000 for the year ended December 31, 2015. During 2015, the Company impaired the long-lived assets at our Chinese subsidiaries, Ganzi and MangShi, and our Canadian subsidiary, FerroQuébec. The Ganzi and FerroQuébec impairments of $9,282,000 and $4,707,000, respectively, were made after the Company decided to no longer pursue these projects that were still in their development stage at the time. The MangShi impairment of $36,985,000 was made when the Company idled the plant indefinitely and marketed the business for sale in response to the global downturn in silicon metal pricing and demand.

Net gains/losses due to change in the value of assets

Net gains/losses due to change in the value of assets decreased $8,560,000, or 90.4%, from a loss of $9,472,000 for the year ended December 31, 2014 to a loss of $912,000 for the year ended December 31, 2015, as there were significant non-recurring losses due to the change in the value of assets in 2014 as compared to minimal losses in 2015.

Gains/losses due to disposal of non-current assets

Gains/losses due to disposal of current financial assets decreased $2,763,000, or 497.8%, from a gain of $555,000 for the year ended December 31, 2014 to a loss of $2,208,000 for the year ended December 31, 2015, resulting from the sale of certain fixed assets at our Chinese subsidiary, Ganzi, during the year ended December 31, 2015 (mainly, land and technical constructions).

Finance income

Finance income decreased $3,501,000, or 76.2%, from $4,596,000 for the year ended December 31, 2014 to $1,095,000 for the year ended December 31, 2015, due to a significant decrease in the intercompany financial position with FerroAtlántica Group's former parent, Grupo Villar Mir, which position was canceled in full by the end of 2014. As at December 31, 2013, there were $56.0 million in loans from FerroAtlántica Group to Grupo Villar Mir outstanding. FerroAtlántica Group made several additional loans in a total amount of $90.7 million to Grupo Villar Mir between July 2014 and December 2014, which is when the intercompany financial position was canceled in full against a portion of the dividends distributed by FerroAtlántica Group to its former sole shareholder.

Finance costs

Finance costs decreased $4,677,000, or 16.5%, from $28,415,000 for the year ended December 31, 2014 to $23,738,000 for the year ended December 31, 2015, as a result of reduction in the average indebtedness at FerroAtlántica's major subsidiaries throughout 2015 as compared to throughout 2014.

Exchange differences

Exchange differences increased $28,104,000, from $7,800,000 for the year ended December 31, 2014 to $35,904,000 for the year ended December 31, 2015, primarily due to the devaluation of the Venezuelan Bolivar in December 2015 (from VEF/USD 49.99 to VEF/USD 199) that originated a positive exchange difference of $18,500,000.

Income tax

Income tax decreased $8,933,000, or 15.5%, from $57,652,000 for the year ended December 31, 2014 to $48,719,000 for the year ended December 31, 2015. This decrease is principally due to tax expense in Venezuela decreasing $19,423,000, to $16,877,000 in 2015 from $36,300,000 in 2014. The decrease in Venezuela tax is driven by Ferro Atlántica's tax position in Venezuela and the impact of the devaluation of the Venezuelan Bolivar in 2015 from VEF/USD 49.99 to VEF/USD199. The decrease in Venezuela tax expense is partially offset by the revaluation of the tax value of certain assets.

Segment Operations

Electrometallurgy — North America

($ thousands)	Year ended December 31, 2015	2014
Sales	10,062	—
Cost of sales	(6,200)	—
Other operating income	17	—
Staff costs	(1,983)	—
Other operating expense	(276)	—
Depreciation and amortization charges, operating allowances and write-downs	(1,183)	—
Operating profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**437**	**—**

The Electrometallurgy — North America segment is comprised of only Globe subsidiaries. As a result, the 2015 segment information includes information relating only to the eight day period ended December 31, 2015, following the Business Combination on December 23, 2015; segment information for the year ended December 31, 2014 is not available. Therefore, there can be no meaningful discussion of sales, costs, or profitability in relation to these periods.

Electrometallurgy — Europe

($ thousands)	Year ended December 31, 2015	2014
Sales	1,174,968	1,275,497
Cost of sales	(811,114)	(880,851)
Other operating income	52,211	21,764
Staff costs	(148,652)	(165,796)
Other operating expense	(142,867)	(115,068)
Depreciation and amortization charges, operating allowances and write-downs	(35,255)	(43,080)
Operating profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**89,291**	**92,466**

Sales

Sales decreased $100,529,000, or 7.9%, from $1,275,497,000 for the year ended December 31, 2014 to $1,174,968,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates which lowered sales by $231,416,000. This decrease was partially offset by a 12% increase in the average selling prices of silicon metal (in Euros) as well as a 2% increase in silicon metal sales volumes.

Cost of sales

Cost of sales decreased $69,737,000, or 7.9%, from $880,851,000 for the year ended December 31, 2014 to $811,114,000 for the year ended December 31, 2015, primarily due to a

change in foreign exchange rates which lowered cost sales by $159,753,000. This decrease was partially offset by an increase in manufacturing costs due to the increase in energy prices and the price of some raw materials and other production costs.

Other operating income

Other operating income increased $30,447,000, or 139.9%, from $21,764,000 for the year ended December 31, 2014 to $52,211,000 for the year ended December 31, 2015, primarily due to intercompany charges to the parent company in 2015 for its share of non-recurring transaction costs related to the Business Combination, which FerroAtlántica paid.

Staff costs

Staff costs decreased $17,144,000 or 10.3%, from $165,796,000 for the year ended December 31, 2014 to $148,652,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates which lowered staff costs by $29,278,000. This decrease was partially offset by an increase in bonuses and social benefits for employees in France.

Other operating expense

Other operating expense increased $27,799,000, or 24.2%, from $115,068,000 for the year ended December 31, 2014 to $142,867,000 for the year ended December 31, 2015, primarily due to non-recurring transaction costs related to the Business Combination. Most of the transaction costs related to the Business Combination were reinvoiced to the former parent company, Grupo Villar Mir, as of December 31, 2016, as mentioned above.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $7,825,000, or 18.2%, from $43,080,000 for the year ended December 31, 2014 to $35,255,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates which lowered depreciation and amortization charges, operating allowances and write downs by $6,944,000.

Electrometallurgy — South Africa

	Year ended December 31,	
($ thousands)	2015	2014
Sales	219,890	239,023
Cost of sales	(134,978)	(149,800)
Other operating income	5,070	1,527
Staff costs	(24,663)	(30,974)
Other operating expense	(29,237)	(27,135)
Depreciation and amortization charges, operating allowances and write-downs	(7,744)	(6,993)
Operating profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**28,338**	**25,648**

Sales

Sales decreased $19,133,000, or 8.0%, from $239,023,000 for the year ended December 31, 2014 to $219,890,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates which lowered sales by $43,308,000, as well as an 8% decrease in sales volumes. This decrease was partially offset by a 1.2% increase in average sales prices.

Cost of sales

Cost of sales decreased $14,822,000, or 9.9%, from $149,800,000 for the year ended December 31, 2014 to $134,978,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates which lowered sales by $26,585,000. This decrease was partially offset by a year-over-year increase cost of production due to higher energy costs.

Other operating income

Other operating income increased $3,543,000, or 232.0%, from $1,527,000 for the year ended December 31, 2014 to $5,070,000 for the year ended December 31, 2015, mainly due to the increase of the domestic market of the by-products produced and sold as well as an increase of other services provided to third parties.

Staff costs

Staff costs decreased $6,311,000 or 20.4%, from $30,974,000 for the year ended December 31, 2014 to $24,663,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates which lowered staff costs by $4,857,000, as well as a year-over-year reduction of bonus and other social benefits to employees.

Other operating expense

Other operating expense increased $2,102,000, or 7.7%, from $27,135,000 for the year ended December 31, 2014 to $29,237,000 for the year ended December 31, 2015, primarily due to a $7,860,000 increase in variable overhead costs indirectly related to production as production increased year-over-year. This increase was offset by a change in foreign exchange rates which lowered other operating expense by $5,758,000.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs increased $751,000, or 10.7%, from $6,993,000 for the year ended December 31, 2014 to $7,744,000 for the year ended December 31, 2015, due to higher capital expenditures during 2015.

Electrometallurgy — Venezuela

($ thousands)	Year ended December 31, 2015	2014
Sales	69,956	97,718
Cost of sales	(57,647)	(62,857)
Other operating income	44	416
Staff costs	(20,922)	(11,517)
Other operating expense	(28,677)	(14,530)
Depreciation and amortization charges, operating allowances and write-downs	(9,396)	(9,322)
Operating loss before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**(46,642)**	**(92)**

Sales

Sales decreased $27,762,000, or 28.4%, from $97,718,000 for the year ended December 31, 2014 to $69,956,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates which lowered sales by $13,778,000. In addition, there was a 9.8% decrease in average sales prices due to the increase in domestic market sales volumes, where average sales prices are lower in comparison to average export prices, as well as a 20.6% decrease in sales volumes due to the reduction in exports.

Cost of sales

Cost of sales decreased $5,210,000, or 8.3%, from $62,857,000 for the year ended December 31, 2014 to $57,647,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates, which lowered cost of sales by $11,354,000. This decrease was partially offset by an increase in production costs, mainly due to higher energy costs.

Staff costs

Staff costs increased $9,405,000 or 81.7%, from $11,517,000 for the year ended December 31, 2014 to $20,922,000 for the year ended December 31, 2015, primarily due to an increase in social benefits for employees in Venezuela. The remaining variation is primarily due to the effect of the devaluation of the Venezuelan Bolivar, the currency in which the entity pays its employees, and the effect of the increase of inflation in Venezuela on employee salaries and other benefits.

Other operating expense

Other operating expense increased $14,147,000, from $14,530,000 for the year ended December 31, 2014 or 97.4%, to $28,677,000 for the year ended December 31, 2015, primarily due to the effect of the devaluation of the Venezuelan Bolivar as most local suppliers are paid in the local currency, as well as an increase in the prices of the services included in other operating expenses due to the increase of inflation in Venezuela.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs increased $74,000, or 0.8%, from $9,322,000 for the year ended December 31, 2014 to $9,396,000 for the year ended December 31, 2015, due to higher capital expenditures in 2015.

Other segments

($ thousands)	Year ended December 31, 2015	2014
Sales	59,167	93,552
Cost of sales	(30,394)	(36,382)
Other operating income	2,065	3,436
Staff costs	(9,652)	(9,756)
Other operating expense	(38,670)	(28,169)
Depreciation and amortization charges, operating allowances and write-downs	(13,096)	(14,797)
Operating profit before impairment losses, net gains/losses due to changes in the value of assets, gains/losses on disposals of non-current assets and other loss	**(30,580)**	**7,884**

Sales

Sales decreased $34,385,000, or 36.8%, from $93,552,000 for the year ended December 31, 2014 to $59,167,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates which lowered sales by $11,653,000. In addition, sales from the Mexican trading subsidiary decreased significantly year-over-year due to its domestic market condition.

Cost of sales

Cost of sales decreased $5,988,000, or 16.5%, from $36,382,000 for the year ended December 31, 2014 to $30,394,000 for the year ended December 31, 2015, primarily due to a change in foreign exchange rates which lowered sales by $5,986,000.

Other operating income

Other operating income decreased $1,371,000, or 39.9%, from $3,436,000 for the year ended December 31, 2014 to $2,065,000 for the year ended December 31, 2015, due to non-recurring revenues and chargebacks in 2014 that were not given in 2015.

Staff costs

Staff costs decreased $104,000 or 1.1%, from $9,756,000 for the year ended December 31, 2014 to $9,652,000 for the year ended December 31, 2015.

Other operating expense

Other operating expense increased $10,501,000, or 37.3%, from $28,169,000 for the year ended December 31, 2014 to $38,670,000 for the year ended December 31, 2015, primarily due to non-recurring transaction costs related to the Business Combination in 2015.

Depreciation and amortization charges, operating allowances and write-downs

Depreciation and amortization charges, operating allowances and write-downs decreased $1,701,000, or 11.5%, from $14,797,000 for the year ended December 31, 2014 to $13,096,000 for the year ended December 31, 2015, mainly due to the decrease in depreciation as a result of the decrease in the balance of depreciable fixed assets.

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, 2016, 2015 and 2014, although we experienced the impact of Venezuelan inflation in 2016, 2015 and 2014 on FerroVen, S.A.'s production costs in these years, which resulted in a loss of competitiveness.

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, among other factors. We have experienced a weakened economic environment in national and international metals markets, including a sharp decrease in silicon metal prices in all major markets since late 2014, though we have experienced an improvement in silicon metal prices since the fourth quarter of 2016. The weakened economic environment has adversely affected our profitability for the year ended December 31, 2016, with a particularly pronounced effect on the profitability of our European business over this period.

B. Liquidity and Capital Resources

Sources of Liquidity

Ferroglobe finances its capital requirements with operating cash flows and long-term bank borrowings. Its primary short-term liquidity needs are to fund its capital expenditure commitments and operational needs and dividend policy 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.

Ferroglobe finances its operations through: (i) cash flows from operations, which totaled $121,169,000 in 2016, compared to $145,449,000 in 2015, (ii) corporate financing through each of Ferroglobe's main subsidiaries in the currency in which it operates, which totaled $518,200,000 in 2016, compared to $306,174,000 in 2015, and (iii) liquidity facilities taken out by Ferroglobe under bilateral agreements with banks to provide Ferroglobe with flexibility in its cash management activities, which totaled $305,000,000 in 2016, compared to $216,657,830 in 2015.

In 2016, operating activities generated $121,169,000 in cash. Investing activities used a total of $84,281,000 of cash. Financing activities resulted in a total inflow of $49,917,000 in cash. See ''Cash Flow Analysis'' below for additional information.

As of December 31, 2016, Ferroglobe had cash and cash equivalents from continuing operations and discontinuing operations of $196,931,000 and $51,000, respectively. As of December 31, 2015, Ferroglobe had cash and cash equivalents of $116,666,000, all of which were from continuring operations. Cash and cash equivalents are held primarily held in U.S. Dollars and Euro.

At December 31, 2016, Ferroglobe's total gross financial debt was $514,587,000, compared to $516,976,000 at December 31, 2015. Of the total gross financial debt at December 31, 2016, $5,237,000 ($103,197,000 at December 31, 2015) related to finance leases that are treated as debt under IFRS. Of the remaining $509,350,000 of debt at December 31, 2016 ($413,779,000 at December 31, 2015), bank borrowings and other financial liabilities accounted for $508,651,000 ($406,230,000 at December 31, 2015) and other financial liabilities, consisting of interest rate swaps, accounted for the remaining $699,000 ($7,549,000 at December 31, 2015). See notes 16, 17 and 18

to the Consolidated Financial Statements of Ferroglobe included in this annual report for additional information on Ferroglobe's indebtedness at December 31, 2016.

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, 2016, Ferroglobe's current assets totaled $861,675,000 while current liabilities totaled $626,756,000, resulting in a positive working capital position of $234,919,000.

We may experience increases in our working capital position in 2017 to the extent that we restart production at any of our idled facilities.

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, 2016, 2015 and 2014 were $71.1 million, $68.5 million and $45.4 million, 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 2017 to equal approximately $65 million, excluding any capital expenditures related to our hydroelectric power operations in Spain and France, which we may sell in 2017, or to our solar grade silicon project. We believe we have the ability to reduce our capital expenditures by, as needed, idling individual electrometallurgy facilities. Additionally, subject to the satisfaction of certain conditions precedent, we have committed to incur approximately $118 million of capital expenditures in connection with our solar grade silicon joint venture over an initial phase estimated for up to three years. Further investment in the joint venture will be determined as the joint venture progresses. Capital expenditures in connection with our solar grade silicon joint venture are financed in part by two loans 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 — Ferroglobe Year Ended December 31, 2016 Compared to FerroAtlántica's Year Ended December 31, 2015

The following table summarizes Ferroglobe's primary sources (uses) of cash for the periods indicated:

	Year ended December 31,	
($ thousands)	2016	2015
Cash and cash equivalents at beginning of period	116,666	48,651
Cash flows from operating activities	121,169	145,449
Cash flows from investing activities	(84,281)	17,966
Cash flows from financing activities	49,917	(87,593)
Exchange differences on cash and cash equivalents in foreign currencies	(6,489)	(7,807)
Cash and cash equivalents at end of period	196,982	116,666
Cash and cash equivalents at end of period from continued operations	196,931	116,666
Cash and cash equivalents at end of period from discontinued operations	51	—

The following table sets forth the dividends paid by Ferroglobe for the year ended December 31, 2016.

	Year ended December 31, 2016
($ thousands)	
Cash payment	54,988
Cash dividends	54,988

Cash flows from operating activities

Cash flows from operating activities decreased by $24,281,000, from $145,449,000 for the year ended December 31, 2015, to $121,169,000 for the year ended December 31, 2016. The decrease was due to a decrease in inventories of $108,207,000, a decrease in trade receivables of $56,297,000 and an increase in accounts payable of $28,572,000 as compared to the prior year period as a result of various working capital initiatives. This was offset by the $32,500,000 settlement payment in connection with the litigation related to the Business Combination that was paid during the year ended December 31, 2016 and lower profits from operations as compared to the prior year period.

Cash flows from investing activities

Cash flows from investing activities decreased by $102,247,000 from an inflow of $17,966,000 for the year ended December 31, 2015 to an outflow of $84,281,000 for the year ended December 31, 2016. The decrease is primarily attributable to a cash inflow of $77,709,000, which represents the cash and cash equivalents balance of Globe on the date of the Business Combination in 2015. In addition, capital expenditures increased as a result of including the full year of Globe's capital expenditures of $27,577,000 during 2016, which was offset by an overall reduction in capital expenditures on a pro-forma basis reflecting the market conditions during 2016.

Cash flows from financing activities

Cash flows from financing activities increased by $137,510,000 from an outflow of $87,593,000 for the year ended December 31, 2015 to an inflow of $49,917,000 for the year ended December 31, 2016. The increase is mainly attributable to $118,945,000 of net bank borrowings during the year ended December 31, 2016 compared to $55,390,000 of net bank payments during the year ended December 31, 2015. The increase in net bank borrowings compared to the prior year period was to meet liquidity needs as a result of lower profits from operations. This was partly offset by a $33,509,000 increase in cash dividends paid to shareholders during the year ended December 31, 2016.

Cash Flow Analysis — Year Ended December 31, 2015 Compared to FerroAtlántica's Year Ended December 31, 2014

The following table summarizes Ferroglobe's primary sources (uses) of cash for the periods indicated:

	Year ended December 31,	
(US$ thousands)	2015	2014[(1)]
Cash and cash equivalents at beginning of period	48,651	62,246
Cash flows from operating activities	145,449	191,420
Cash flows from investing activities	17,966	(155,293)
Cash flows from financing activities	(87,593)	(50,913)
Exchange differences on cash and cash equivalents in foreign currencies	(7,807)	1,190
Cash and cash equivalents at end of period from continued operations	**116,666**	**48,650**

(1) Financial data for the Predecessor, FerroAtlántica.

The following table sets forth the dividends paid by FerroAtlántica to Grupo VM in the year ended December 31, 2015.

	Year ended December 31, 2015
(US$ thousands)	
Cash payment	21,479
Cash dividends	**21,479**

Cash flows from operating activities

Cash flows from operating activities decreased by $45,971,000, to $145,449,000 in the year ended December 31, 2015, from $191,420,000 during the year ended December 31, 2014. The decrease was due to lower profit from operations, a $6.7 million decrease in financial interest expense, and negative short-term variations totaling $38.1 million and a $13.0 million increase in income tax paid, partly offset by a $92.7 million increase in funds from operating working capital changes.

Cash flows from investing activities

Cash flows from investing activities increased by $173,259,000 to $17,966,000 in the year ended December 31, 2015, from an outflow of $155,293,000 in the year ended December 31, 2014. The additional cash inflow is primarily due to cash received from the Business Combination of $77.7 million, a $15.3 million increase in disposals, a $95.4 million decrease in cash outflows

relating to investment in non-current financial assets and a decrease of $7.7 million in payments relating to other investment activities, partly offset by a $19.1 million increase in capital expenditures and a $3.8 million decrease in interest received.

Cash flows from financing activities

Cash flows from financing activities decreased by $36,680,000 to an outflow of $87,593,000 in the year ended December 31, 2015, from an outflow of $50,913,000 in the year ended December 31, 2014. The decrease is mainly attributable to a decrease in $95.8 million in bank debts emissions (issuances) and a $10.7 million increase in other negative financing variations, partly offset by a decrease in $51.2 million in bank debts reimbursements (repayments) and $18.6 million decrease in cash dividends paid in 2015.

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 main sources of financing are long-term corporate financing through each of Ferroglobe's main subsidiaries and in the currency in which they operate and liquidity facilities taken out by Ferroglobe under bilateral agreements with banks to provide Ferroglobe with flexibility in its cash management activities. In the case of Venezuela, given the complexity of the Venezuelan financial market and the restrictions on capital flows, long-term financing is structured through intercompany loan agreements, whereas working capital needs are met with local currency bilateral agreements without recourse to Ferroglobe. Ferroglobe's general policy is for each main subsidiary to be financed without recourse to or guarantees provided by Ferroglobe.

As described in the previous paragraph, some 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.

Details and description of Ferroglobe's bank borrowing and financial leasing as at December 31, 2016 are described in notes 16 and 17 of the Consolidated Financial Statements included elsewhere in this annual report. These credit facilities contain certain customary representations, warranties and covenants, and certain of them contain maintenance financial covenants.

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

Ferroglobe focuses on continually developing its technology in an effort to improve its products and production processes. Our FerroAtlántica division's research and development division coordinates all the research and development activities within Ferroglobe. Ferroglobe also has cooperation agreements in place with various universities and research institutes in Spain, France and other countries around the world. For the years ended December 31, 2016, 2015 and 2014, Ferroglobe spent $6.2 million, $8.8 million and $5.4 million, respectively, on research and development projects and activities. 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 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 in Spain and France, 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 for a feasibility study and basic engineering for an upgraded metallurgical grade (''UMG'') solar silicon manufacturing plant. Purchases under this project were approximately €3,000,000 for 2016. On December 20, 2016, Ferroglobe entered into an agreement with Aurinka and Blue Power (the ''Solar JV Agreement'') providing for the formation and operation of a joint venture with the purpose of UMG solar silicon, subject to the satisfaction of certain conditions precedent. Under the Solar JV Agreement, Ferroglobe will indirectly own 75% of the operating companies to be formed as part of the joint venture and 51% of the company to be 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.

Pursuant to the Solar JV Agreement, and subject to the satisfaction of certain conditions precedent, FerroAtlántica has committed to incur capital expenditures in connection with the joint venture of approximately $118 million over the first three years, which constitutes the first phase of the project contemplated by the Solar JV Agreement. 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. To the extent the project continues into further phases, we would expect to, in the future and subject to appropriate approval and authorization, commit to incur approximately $100 million in joint venture-related capital expenditures in the fourth year, and approximately $77 million over the following three years. In connection with the Solar JV Agreement, FerroAtlántica has obtained two loans, principal amounts approximately €45 million and €27 million, respectively, from the Spanish Ministry of Industry and Energy for the purpose of building and operating the UMG solar silicon plant.

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, 2016 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, 2016.

	Payments Due by Period				
	Total	Less than 1 year	1 - 3 years	3 - 5 years	More than 5 years
	(Expressed in thousands of $)				
Long-term debt obligations	495,855	240,585	179,472	21,656	54,142
Capital expenditures	121,116	26,716	94,400	—	—
Finance leases	86,620	12,359	24,943	25,817	23,501
Power purchase commitments[1]	32,827	32,827	—	—	—
Purchase obligations[2]	19,956	19,956	—	—	—
Operating lease obligations	9,658	1,788	2,772	2,783	2,315
Total	**766,032**	**334,231**	**301,587**	**50,256**	**79,958**

(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 $1,167,000 to our pension plans for the year ended December 31, 2017.

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 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

Our activities are undertaken through our segments and are exposed to market risk, credit risk, liquidity risk and capital risk. Risk management is the responsibility of our financial department in accordance with mandatory internal management rules. The internal management rules provide written policies for the management of overall risk, as well as for specific areas, such as exchange rate risk, credit risk, interest rate risk, liquidity risk, use of hedging instruments and derivatives, and the investment of excess cash.

Market risk

We are exposed to market risk, such as movement in foreign exchange rates, interest rates, changes in the prices of assets and raw material purchased (principally coal and manganese). All of these market risks arise in the normal course of business and we do not carry out speculative operations.

Foreign exchange rate risk

Foreign exchange risks arise (i) from commercial transactions to be settled in the future, for which assets and liabilities are not denominated in the functional currency of the entity and (ii) from financial liabilities denominated in a different currency from the functional currency of the subsidiary.

Risks from commercial transactions

To manage foreign exchange risks arising from commercial transactions, we purchase forward purchase/sale contracts. Such contracts provide protection related to the fair value of future cash flow. Most projected transactions which are not denominated in our functional currency qualify as highly probable forecast transactions for hedge accounting purposes. The main exchange rate exposures relate to the U.S. Dollar and the Euro. Our foreign exchange risks mainly relate to our operations in connection with purchases and sales in a currency other than the functional currency, mostly affecting the U.S. Dollar against the Euro. These purchases and sales, other than in the functional currency, are hedged through our purchase of future currency sale/purchase contracts. Specifically, an appreciation of the U.S. Dollar against the Euro would result in a decrease/increase of our purchase costs/sale price in the Income Statement, which would be compensated by the derivatives purchased, to the extent that the transactions have been hedged. We would recognize a net gain or loss in the Income Statement from the net assets or liabilities that remain unhedged.

During the year ended December 31, 2016, the Company arranged forward foreign currency purchase and sale transactions with various banks amounting $4,018,000 and $29,836,000 respectively ($18,535,000, $28,679,000 and ZAR 371,973,000 in 2015).

The changes in the market value of the foreign currency derivatives arranged by the Company depend mainly on the changes in the U.S. Dollar/Euro spot rate and on the evolution of forward points curve. The fair market value of these derivatives was not significant at December 31, 2016 and 2015.

The details of the sensitivity analysis (changes in the market value at December 31, 2016) of the foreign currency derivatives is as follows:

	Millions of U.S. Dollars	
Sensitivity to the EUR/USD Exchange Rate	2016	2015
+10% (appreciation of the Euro)	2.5	1.1
−10% (depreciation of the Euro)	(2.5)	(0.4)

Foreign currency derivatives mainly cover monetary items in the statement of financial position and, therefore, the exchange differences are offset by the differences in value of the derivatives in profit or loss for the year.

Venezuela

In recent years, there have been various developments in the Venezuelan economy that have affected our FerroAtlántica division's financial results, including annual and cumulative inflation over the last three years, restrictions in the official foreign exchange markets and, lastly, the devaluations of the Venezuelan currency over the last three years.

Most of FerroVen, S.A.'s procurement and sale transactions are denominated in U.S. Dollars, which is FerroVen, S.A.'s functional currency. In effect, FerroVen, S.A.'s parent, FerroAtlántica, procures and imports into Venezuela most of FerroVen, S.A.'s key raw materials and equipment, which FerroVen, S.A. pays for in kind with its finished goods. FerroVen, S.A. exports finished products to other foreign clients as well, including other subsidiaries of our FerroAtlántica division, at prices denominated in U.S. Dollars. FerroVen, S.A. also makes sales to domestic clients in Venezuelan Bolívares, though at prices that are partly indexed to the U.S. Dollar. Further, though several of FerroVen, S.A.'s domestic expenses are in Venezuelan Bolívares, the price of the most important input, energy, is indexed to the U.S. Dollar.

As a result of the above, FerroVen, S.A. has a net short position with respect to Venezuelan Bolívares. The cash inflow of U.S. Dollars FerroVen, S.A. receives from exports is exchanged into Venezuelan Bolívares using the advantageous exchange rates available to exporting companies in Venezuela under the Complementary System for Administration of Foreign Currencies (''SICAD''), as well as the Marginal Currency System (''SIMADI''). Thus, the sharp decline in value of the Venezuelan Bolívar over the last three years has not had a direct negative impact on FerroVen, S.A.'s expenses and income. Rather, it has decreased FerroVen, S.A.'s expenses over this period.

On February 8, 2013, the Venezuelan Government announced the devaluation of the official Venezuelan Bolívar/U.S. Dollar exchange rate. The official exchange rate of VEF 4.30 to one U.S. Dollar was changed to VEF 6.30 to one U.S. Dollar, giving rise to an exchange loss in the consolidated income statement of approximately $4.7 million, as current assets valued in Bolívares were higher than current liabilities valued in Bolívares at the time of the devaluation. This 46% devaluation was insufficient to offset the impact of local inflation of 58.2% on domestic prices.

During 2014, SICAD II, a new exchange regime with a more widespread application, was put into place by the Venezuelan Government. The exchange rate at December 31, 2014 pursuant to SICAD II was 49.988 VEF per U.S. Dollar, giving rise to an exchange gain in our FerroAtlántica division's consolidated income statement of approximately $7.5 million, as current assets valued in Bolívares were lower than current liabilities valued in Bolívares at the time of the devaluation. The devaluation of 694% represented by the SICAD II exchange rate more than offset the impact of local inflation on domestic prices of 68.5%, resulting in positive impacts on staff costs and other operating expense, which, in turn, had a positive impact on cash flows, and a negative impact on tax expense, which had no impact on cash flows.

Our Venezuelan operations had assets of $18,861,000 and $96,337,000 in 2016 and 2015, respectively, which represented 0.9% and 4.0%, respectively, of our total assets. Our Venezuelan operations had sales of $30,430,000 in 2016, of which $5,993,000 were domestic sales and $24,437,000 were exports and $69,956,000 in 2015, of which $24,111,000 were domestic sales and $42,560,000 were exports.

In January 2014, Venezuela enacted the Organic Law on Fair Prices, which limits profit margins on the sale of goods and services to a maximum of 30% of operating costs for all persons engaging in economic activity in Venezuela. Since FerroVen, S.A. sells most of its finished goods for export, the Organic Law on Fair Prices has not had a material impact on our results.

In 2016, the Venezuelan government announced a new exchange rate for export companies of 199 VEF to one U.S. Dollar (''SIMADI''). For additional information, see ''Item 5.B. — Operating and Financial Review and Prospects — Liquidity and Capital Resources.''

Interest rate risk

Interest rate risks arise mainly from our financial liabilities at floating interest rates. Ferroglobe actively manages its risks exposure to interest rate risk, to mitigate its exposure to changes in interest rates arising from the borrowings arranged with floating interest rates. In corporate financing arrangements, hedges are generally arranged for the total amount and term of the respective financing, through option contracts and/or swaps. In this regard, the main exposure for Ferroglobe to interest rate risk is that relating to the floating interest rate tied to EURIBOR. To mitigate interest rate risk, the Ferroglobe primarily uses swaps, which, in exchange for a fee, offer protection against an increase in interest rates.

In relation to our interest rate swaps positions, an increase in EURIBOR above the contracted fixed interest rate would create an increase in our financial expense, which would be positively mitigated by our hedges, reducing our financial expenses to our contracted fixed interest rate. However, an increase in EURIBOR that does not exceed the contracted fixed interest rate would not be offset by our derivative position and would result in a net financial loss recognized in our consolidated net income statement. Conversely, a decrease in EURIBOR below the contracted fixed interest rate would result in lower interest expense on our variable rate debt, which would be offset by a negative impact from the mark-to-market of our hedges, increasing our financial expenses up to our contracted fixed interest rate, thus resulting in a likely neutral effect.

In addition to the above, our results of operations can be affected by changes in interest rates with respect to the unhedged portion of our indebtedness that bears interest at floating rates. Changes in the market value of the interest rate derivatives arranged by the Company depend on the changes in the EURIBOR yield curve and long-term swaps. The market value of these derivatives at December 31, 2016 was $699,000 ($7,549,000 in 2015).

The percentage of bank borrowings tied to fixed rates and percentage of bank borrowings secured with hedge is as follows:

	2016	2015
Percentage of bank borrowings tied to fixed rates	15%	1%
Percentage of bank borrowings secured with hedge	3%	32%

Since June 30, 2015, hedges became ineffective under hedge accounting and, as a result, the changes in market value of these derivatives are recognized in full in the consolidated income statement.

The Company performed a sensitivity analysis of the amounts of the floating rate borrowings as of March 31, 2017, as most of the gross debt as of December 31, 2016 were repaid in February, which indicated that an increase of 1% in interest rates would give rise to additional borrowing costs of $1,800,000 in 2017.

Credit risk

Trade and other receivables, current financial investments and cash are the main financial assets of the Company and present the greatest exposure to credit risk in the event that a third party does not comply with its obligations.

Most of our receivables relate to international companies operating in a range of industries and countries with high solvency. The Company sometimes insures its trade receivables with insurance companies to mitigate the credit risk of its clients whenever there is credit available in the insurance market. In addition, we rely on written confirmation for the non-recourse purchase of accounts receivable (factoring). In these arrangements, we pay a bank fee to assume the credit risk as well as interest charges for the financing component.

In this regard, derecognizing factored accounts receivable is taken only when all the requirements of IAS 39 Financial instruments; Recognition and Measurement are met. Therefore, we consider whether or not the risks and rewards inherent in the ownership of the asset have been transferred, including a comparison of our risk before and after the transfer, considering the amounts and timing of net cash payments to be received. Once the risk to the grantor company has been eliminated or is considered to be substantially reduced, it is considered that the financial asset in fact has been transferred.

The following table shows the percentage of accounts receivable secured through credit insurance for the years ended December 31, 2016 and 2015:

	2016	2015
Percentage of accounts receivable secured through credit insurance	74%	58%

Liquidity risk

The objective of our financing and liquidity policy is to ensure that we maintain sufficient funds to meet our financial obligations as they fall due.

To ensure there are sufficient funds available to repay its debt in relation to its cash-generating capacity, each year the Corporate Financial Department prepares and the Board of Directors reviews the financial budget that details all financing needs and how such financing will be provided. The budget projects the funds necessary for the most significant cash requirements, such as prepayments for capital expenditures, debt repayments and, where applicable, working capital requirements. Ferroglobe generally does not allocate its own equity in projects until the associated long-term financing is obtained.

Ferroglobe uses three main sources of financing:

- *Long-term financing arrangements*, which are generally used to finance the operations of any significant subsidiary. The debt repayment profiles are established based on the capacity of each business to generate funds, allowing for variability depending on the expected cash flows for each business. Each long-term contract usually provides for lines to finance working capital requirements at the operating subsidiary level. This ensures that sufficient financing is available to meet deadlines and maturities, which significantly mitigates liquidity risk.
- *Corporate financing*, which is mainly used to provide liquidity for the operations of the Company as a whole, and to finance start-up projects that require the initial support of the Parent Company.
- The Company arranges firm commitments from leading financial institutions to purchase the receivables through non-recourse factoring arrangements. Under these agreements,

Ferroglobe's companies pay a fee to the bank for assuming its credit risk, plus interest on the financing received. In all cases, the company assumes liability for the validity of the receivables.

Accordingly, Ferroglobe diversifies its sources of financing in order to prevent concentrations that may expose its working capital to liquidity risk.

Capital risk

Ferroglobe manages capital risk to ensure the continuity of its subsidiaries from an equity standpoint by maximizing the return for the sole shareholder and optimizing the equity structure and borrowings on the liability side of the statement of financial position.