FAIRMOUNT SANTROL HOLDINGS INC.
Form 10-K
March 13, 2018

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2017

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
Commission File Number 001-36670

FAIRMOUNT SANTROL HOLDINGS INC.

(Exact name of registrant as specified in its charter)

Delaware	34-1831554
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)

8834 Mayfield Road

Chesterland, Ohio 44026

(Address of Principal Executive Offices) (Zip Code)

(800) 255-7263

(Registrant's Telephone Number, Including Area Code)

Securities registered pursuant to Section 12(g) of the Securities Act:

Title of each class:	Name of each exchange on which registered:
Common Stock, par value $0.01 per share	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Securities Act: None

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

Indicate by check mark if the registrant is not required to file report pursuant to Section 13 or Section 15(d) of the Act.   Yes   No

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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

Large accelerated filer	Accelerated filer
Non-accelerated filer	Smaller reporting company
Emerging growth company	

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).   Yes   No

The aggregate market value of common stock held by non-affiliates of the registrant computed by reference to the last sales price, $3.90 as reported on the New York Stock Exchange, of such common stock as of the closing of trading on June 30, 2017: $580,770,641

Number of shares of Common Stock outstanding, par value $0.01 per share, as of March 9, 2018: 224,630,307

DOCUMENTS INCORPORATED BY REFERENCE

None

Fairmount Santrol Holdings Inc. and Subsidiaries

Annual Report on Form 10-K

For the Fiscal Year Ended December 31, 2017

Table of Contents

Introduction to Part I, Item 1A and Item 3, and Part II, Item 7

We define various terms to simplify the presentation of information in this Annual Report on Form 10-K (this "Report"). Unless we state otherwise or the context otherwise requires, the terms "we," "us," "our," "Fairmount Santrol," "our business" and "our company" refer to Fairmount Santrol Holdings Inc. and its consolidated subsidiaries and predecessor companies. We use Adjusted EBITDA herein as a non-GAAP measure of our financial performance. See further discussion of Adjusted EBITDA at Item 7 – Management's Discussion and Analysis.

FORWARD-LOOKING STATEMENTS

This Report contains forward-looking statements that are subject to risks and uncertainties. All statements other than statements of historical fact included in this Report are forward-looking statements. Forward-looking statements give our current expectations and projections relating to our financial condition, results of operations, plans, objectives, future performance and business. You can identify forward-looking statements by the fact that they do not relate strictly to historical or current facts. These statements may include words such as "anticipate," "estimate," "expect," "project," "plan," "intend," "believe," "may," "will," "should," "can have," "likely" and other words and terms of similar meaning in con with any discussion of the timing or nature of future operating or financial performance or other events. For example, all statements we make relating to our estimated and projected costs, expenditures, cash flows, growth rates and financial results, our plans and objectives for future operations, growth or initiatives, strategies or the expected outcome or impact of pending or threatened litigation are forward-looking statements. All forward-looking statements are subject to risks and uncertainties that may cause actual results to differ materially from those that we expected, including:

- the price of oil and gas and the level of activity in the oil and gas industries;
- the level of cash flows generated to provide adequate liquidity to meet our working capital needs, capital expenditures, and our lease and debt obligations;
- increasing costs or a lack of dependability or availability of transportation services or infrastructure and geographic shifts in demand;
- changes to leased terminal arrangements impacting our distribution network and ability to deliver our products to our customers;
- actions of our competitors, including, but not limited to, their ability to increase production capacity to levels or establish additional production facilities, which cause an imbalance in supply and demand resulting in lower market prices;
- our rights and ability to mine our properties and our renewal or receipt of the required permits and approvals from governmental authorities and other third parties;
- fluctuations in demand and pricing for raw and coated sand-based proppants or the development of either effective alternative proppants or new processes to replace hydraulic fracturing;
- continuing pressure on market-based pricing;
- lower of cost or market inventory adjustments and/or obsolete inventory;
- our ability to protect our intellectual property rights;
- our ability to commercialize Propel SSP® proppants;
- loss of, or reduction in, business from our largest customers;
- our exposure to the credit risk of our customers and any potential material nonpayments, bankruptcies, and/or nonperformance by our customers;
- our transactions in, and operating subsidiaries with, functional currencies other than the U.S. dollar. We are exposed to fluctuations in exchange rates of these currencies compared to the U.S. dollar, which is the primary currency in which we operate. These fluctuations may be significant, and may not be fully mitigated by risk management techniques, such as foreign currency hedging;

- changes in U.S. or international political or economic conditions, could adversely impact our operating results;
- fluctuations in demand for industrial and recreational sand;
- operating risks that are beyond our control, such as changes in the price and availability of transportation, natural gas or electricity; unusual or unexpected geological formations or pressures; cave-ins, pit wall failures or rock falls; or unanticipated ground, grade or water conditions;
- our dependence on our Wedron Silica sand-mining facility for a significant portion of our sales, which currently supplies a large majority of our Northern White™ frac sand and a portion of our Industrial & Recreational Products ("I&R") segment sand sold into our markets;
- the availability of raw materials to support our manufacturing of value-added proppants;
- diminished access to water;
- challenges to our title to our mineral properties and water rights;
- our ability to make capital expenditures to maintain, develop and increase our asset base and our ability to obtain needed capital or financing on satisfactory terms, including financing for existing commitments such as future railcar deliveries;
- the potential impairment of our asset groups, including our mineral reserves, plant, equipment, goodwill, and intangible assets as a result of market conditions;
- substantial indebtedness, lease and pension obligations;
- restrictions imposed by our indebtedness and lease obligations on our current and future operations;
- the accuracy of our estimates of our mineral reserves and our ability to mine them;
- potential disruption of our operations due to severe weather conditions, such as wind storms, ice storms, freezing temperatures, tornadoes, electrical storms, and floods, which occur in areas where we operate;
- a shortage of skilled labor and rising labor costs in the mining industry;
- increases in the prices of, or interruptions in the supply of, natural gas and electricity, or any other energy sources;
- our ability to attract and retain key personnel, including the impact of uncertainties relating to the planned merger with Unimin Corporation ("Unimin");
- our ability to maintain satisfactory labor relations;
- silica-related health issues and corresponding litigation and regulation;
- our ability to maintain effective quality control systems at our mining, processing and production facilities;
- fluctuations in our sales and results of operations due to seasonality and other factors;
- interruptions or failures in our information technology systems;
- failure to comply with the provisions of the Foreign Corrupt Practices Act ("FCPA");
- the impact of a terrorist attack or armed conflict;
- cybersecurity breaches;
- our failure to maintain adequate internal controls;
- extensive and evolving environmental, mining, health and safety, licensing, reclamation and other regulation (and changes in their enforcement or interpretation);

- our ability to acquire, maintain or renew financial assurances related to the reclamation and restoration of mining property;
- legal, regulatory and other matters that may affect our ability to complete the planned merger with Unimin, including the inability to complete the merger due to the failure to obtain stockholder approval or governmental or regulatory clearances;
- our ability to successfully integrate our business with Unimin's business and to achieve anticipated synergies, and the anticipated cost, timing and complexity of integration efforts;
- the future financial performance, anticipated liquidity and capital expenditures of the combined company and other risks related to the operation of the combined company; and
- other factors disclosed in the section entitled "Risk Factors" and elsewhere in this Report.

We derive many of our forward-looking statements from our operating budgets and forecasts, which are based on many detailed assumptions. While we believe that our assumptions are reasonable, we caution that it is very difficult to predict the impact of known factors, and it is impossible for us to anticipate all factors that could affect our actual results. Important factors that could cause actual results to differ materially from our expectations, or cautionary statements, are disclosed under the sections entitled "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" in this Report. All written and oral forward-looking statements attributable to us, or persons acting on our behalf, are expressly qualified in their entirety by these cautionary statements as well as other cautionary statements that are made from time to time in our other SEC filings and public communications. You should evaluate all forward-looking statements made in this Report in the context of these risks and uncertainties.

We caution you that the important factors referenced above may not contain all of the factors that are important to you. In addition, we cannot assure you that we will realize the results or developments we expect or anticipate or, even if substantially realized, that they will result in the consequences or affect us or our operations in the way we expect. The forward-looking statements included in this Report are made only as of the date hereof. We undertake no obligation to update or revise any forward-looking statement as a result of new information, future events or otherwise, except as otherwise required by law.

ITEM 1. BUSINESS

Our Company

Business Overview

We are one of the world's largest providers of sand-based proppant solutions and for nearly 40 years have been a pioneer in the development of high performance proppants used by Exploration & Production ("E&P") companies to enhance the productivity of their oil and gas wells. Additionally, for more than 120 years, we and our predecessor companies have provided high quality sand-based products, strong technical leadership and applications knowledge to end users in the I&R markets.

As one of the industry leaders, our asset base at December 31, 2017 included 893.4 million tons of proven and probable mineral reserves, which we believe is one of the largest reserve bases in the industry. As of March 2018, we have eleven sand processing facilities, ten of which are active, with 17.5 million tons of annual sand processing capacity. We recently restarted our Wexford, Michigan sand processing facility to accommodate increased customer demand. At this time, all of our remaining sand processing facilities are open with the exception of Hager Bay, Wisconsin. In July 2017, we entered into a 40-year lease agreement for approximately 3,250 acres of sand reserves in Kermit, Texas ("Kermit" or "West Texas") to serve demand for proppant in the Permian basin. Facilities on this property are under construction and expected to be commissioned during the second quarter of 2018 with the capacity to produce 3.0 million tons of sand annually. We also have nine coating facilities (six of which are active) with in excess of 2.0 million tons of annual coating capacity.

As one of the nation's longest continuously operating mining organizations, we have developed a strong commitment to environmental stewardship and to the three pillars of Sustainable Development: People, Planet and Prosperity. Our strong commitment to safety is reflected in the health and safety of our employees and is illustrated by our achieving a consistently low recordable incident rate among our similarly sized industrial sand competitors as well as one of the lowest rates for all those reporting in the Industrial Mining Association of North America. Since 2012, our employees have demonstrated our commitment to our communities by donating over 73,000 hours of company-paid volunteer hours, as well as significant personal volunteer hours, into the communities in which we live and operate. We are focused on environmental stewardship, and 28 of our facilities now generate zero waste to landfills. Additionally, we executed upon annual initiatives to reduce our carbon emissions and have planted nearly 540,000 trees since 2012 in order to offset our remaining Tier I and Tier 2 emissions. We believe adhering to sustainable development principles is not only the right thing to do, but also results in a higher level of engagement and commitment from our employees, better relationships with our communities and, as a result, a stronger base from which to pursue profitable growth over the long-term. Abiding by these guiding principles, our corporate motto is "Do Good. Do Well."

Over a period of nearly 40 years, Fairmount Santrol has built a vertically integrated operation that combines mining, sand processing, resin manufacturing and coating operations with a broad logistics network and state-of-the-art research and development capabilities. Our ability to integrate and leverage our asset base to provide comprehensive proppant solutions has allowed us to become a long-term, trusted partner to our customers.

We are capable of Class I railroad deliveries to each of North America's major oil and gas producing basins and also have the flexibility to ship our product via barge, marine terminals and trucks to reach our customers as needed. We operate an integrated logistics platform consisting of 44 proppant distribution terminals and a fleet of approximately 10,569 railcars, which includes 1,723 customer railcars, considering car returns that took place throughout the year and subleases. Our unit train capabilities include four production facilities and twelve in-basin terminals, which reduce freight costs and improve cycle times for our railcar fleet. In order to better align our logistics network with customer demand and to reduce costs, we discontinued activity at four transloading terminals in 2017.

Our operations are organized into two segments based on the primary end markets we serve: (i) Proppant Solutions and (ii) Industrial & Recreational Products. Our Proppant Solutions segment predominantly provides sand-based proppants for use in hydraulic fracturing operations throughout the U.S. and Canada, Argentina, Mexico, China, and northern Europe. Our I&R segment provides raw, coated, and custom blended sands to the foundry, building products, glass, turf and landscape and filtration industries primarily in North America. We believe our two market segments are complementary. Our ability to sell to a wide range of customers across multiple end markets allows us to maximize the recovery of our reserve base within our mining operations and to reduce the cyclicality of our earnings.

In 2017, our Proppant Solutions segment sold 10.3 million tons of proppant with revenues of $834.7 million (87% of total company revenues) and gross profit of $244.0 million. This represents an increase of 60%, 101%, and 821%, respectively, from 2016. Proppants represented approximately 78% and 86% of total company revenues for 2016 and 2015, respectively. For 2017, our I&R segment had sales volume of 2.5 million tons, flat to 2016, with revenues of $125.0 million and gross profit of $56.0 million, which represents an increase of 5% and 15%, respectively, from 2016.

Corporate History

We were incorporated as a Delaware corporation in 1986. Our predecessor companies began operations over 120 years ago. On October 3, 2014, we completed an Initial Public Offering. We are listed under the ticker symbol "FMSA" on the New York Stock Exchange ("NYSE").

Our corporate headquarters is located at 8834 Mayfield Road, Chesterland, Ohio 44026. Our telephone number is (800) 255-7263. Our company website is www.fairmountsantrol.com. We make available free of charge our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports as soon as reasonably practicable after we file or furnish such reports to the Securities and Exchange Commission (the "SEC"). The information on our website is not incorporated by reference in or considered to be a part of this Annual Report on Form 10-K.

Proposed Merger with Unimin Corporation

On December 11, 2017, we entered into a merger agreement with Unimin and certain other parties with respect to the proposed combination of the businesses of Unimin and Fairmount Santrol. The merger agreement provides that, upon the satisfaction or waiver of the conditions contained in the agreement, a direct wholly owned subsidiary of Unimin will be merged with and into Fairmount Santrol, with Fairmount Santrol surviving such merger and becoming a direct wholly owned subsidiary of Unimin (the "Merger"). In accordance with the terms of the Merger agreement ("Merger Agreement"), Fairmount Santrol stockholders in the aggregate (including holders of certain Fairmount Santrol equity awards) will receive $170 million in cash and 35% of the common stock of Unimin, with SCR-Sibelco NV ("Sibelco"), the existing parent company of Unimin, owning the remaining 65%. The Merger is subject to, among other things, approval by Fairmount Santrol's stockholders, listing of Unimin's common stock on the NYSE, and certain regulatory approvals. Upon completion of the Merger, Fairmount Santrol would delist and no longer trade on the NYSE. The transaction is expected to close in mid-2018, subject to satisfaction of the closing conditions.

The Merger Agreement contains certain termination rights and we may be required to pay Unimin a termination fee of $52 million.

In 2017, we incurred $8.3 million in expenses associated with the Merger.

For further information on the Merger, refer to the Merger Agreement, a copy of which was filed as Exhibit 2.1 to our Current Report on Form 8-K filed with the SEC on December 12, 2017, and which is incorporated by reference herein.

INDUSTRY

Overview

The silica sand industry consists of businesses that are involved in the mining, processing, and sale of silica sand and silica sand-based products. Monocrystalline silica, also referred to as "silica," "industrial sand and gravel," "silica sand," and "quartz sand," is a term applied to sands and gravels containing a high percentage of silica (also known as silicon dioxide or SiO_2) in the form of quartz.

The low relative cost and special properties of monocrystalline silica — chemistry, purity, grain size, color, inertness, hardness, and resistance to high temperatures — make it critical to a variety of industries and end-use markets, including the production of molds and cores for metal castings, glass production, and the manufacturing of building products. In particular, monocrystalline silica is a key input in the hydraulic fracturing techniques used in the development of oil and gas resource basins.

Frac Sand Extraction, Processing, and Distribution

Raw frac sand is a naturally occurring mineral that is mined and processed. While the specific extraction method utilized depends primarily on the geologic conditions, most raw frac sand is mined using conventional open-pit extraction methods. The composition, depth, and chemical purity of the sand also dictate the processing method and equipment utilized. After extraction, raw frac sand is washed with water to remove fine impurities such as clay and organic particles, with additional procedures used when contaminants are not easily removable. The final steps in the production process involve the drying and screening of the raw frac sand according to mesh size.

Most frac sand is shipped in bulk from the processing facility to customers by truck, rail or barge. Because transportation costs may represent a significant portion of the overall delivered product cost, shipping in large quantities, particularly when shipping over long distances, provides a significant cost advantage to the suppliers, which highlights the importance of rail or barge access for low cost delivery. As a result, facility location and logistics capabilities are an important consideration for suppliers and customers. In addition, we believe that, over time, the largest proppant customers would prefer to consolidate their purchases across a smaller group of suppliers with robust logistics capabilities and a broad offering of high performance proppants.

Oil and Gas Proppant Market

Advances in oil and gas extraction techniques, such as horizontal drilling and hydraulic fracturing, have allowed for significantly greater extraction of oil and gas trapped within shale formations. The hydraulic fracturing process consists of pumping fluids down a well at pressures sufficient to create fractures in the targeted hydrocarbon-bearing rock formation in order to increase the flow rate of hydrocarbons from the well. A granular material, called proppant, is suspended and transported in the fluid and fills the fracture, "propping" it open once high-pressure pumping stops. The proppant-filled fracture creates a conductive channel through which the hydrocarbons can flow more freely from the formation into the wellbore and then to the surface. Proppants therefore perform the vital function of promoting the flow, or conductivity, of hydrocarbons over a well's productive life. In fracturing a well, operators select a proppant that is transportable into the fracture, is compatible with frac and wellbore fluids, permits acceptable cleanup of frac fluids and can resist proppant flowback. In addition, the proppant must be resistant to crushing under the earth's closure stress and reservoir temperature.

There are three primary types of proppant that are utilized in the hydraulic fracturing process: raw frac sand, coated sand and manufactured ceramic beads. Customers choose among these proppant types based on the geology of the reservoir, expected well pressures, proppant flowback concerns, and product cost. Given the price differences between the various proppant products and well-specific considerations, E&P companies are continually evaluating the optimal mix of lower-cost, lower-conductivity frac sand and higher-cost, higher-conductivity coated sand and ceramics in order to best address the geology of the well and to maximize well productivity and economic returns.

Proppant Industry Demand Trends

Over the past decade, E&P companies increasingly focused on exploiting the vast hydrocarbon reserves contained in North America’s oil and gas reservoirs. Using advanced techniques, such as horizontal drilling and hydraulic fracturing, North American production of oil and gas has grown rapidly as the development of horizontal drilling technologies has evolved. More recently, E&P and oil field service companies have refined their well designs and hydraulic fracturing techniques to achieve more efficient production. These changes in techniques have increased the demand for proppants, by increasing the amount of proppant used per frac stage (“proppant intensity”) associated with finer grades of proppant.

This focus on efficiency and profitability led to new development techniques, such as increased use of pad drilling which resulted in a greater number of wells drilled per rig, and incorporated longer lateral lengths and shorter intervals between frac stages, which resulted in more fracturing stages per well. In addition, the amount of proppant used per stage increased dramatically, compounding the increase in total demand for proppant.

As a result of these trends, North American demand for all proppants increased rapidly over the past ten years. This growth was fueled by the continued increase in both wells drilled and proppant used per well. Individual wells were being completed with as much as 25,000 tons of proppant. This represented a significant increase in the usage of proppant per well over just a few years ago and was driven by improved recovery rates for E&P companies at higher levels of proppant intensity with greater demand for finer grades of sand.

In response to improving hydrocarbon prices, oil and gas operators steadily began increasing rig counts in the third quarter of 2016 and this trend continued through the end of 2017. According to Baker Hughes rig count data, United States horizontal land rig counts have grown to an average of 740 rigs during 2017 from an average of 400 rigs in 2016. During 2017, horizontal land rigs in the United States ranged from a low point of 534 rigs in the first quarter to over 800 in the fourth quarter 2017. This significant rise in horizontal rig counts has resulted in increased drilling activity and demand for proppants throughout the year. The well design trend of using more proppant per lateral foot and longer horizontal laterals continued in 2017 and further contributed to demand for proppants.

Proppant Industry Supply Trends

To keep pace with rapidly growing demand, the available supply of proppant increased in 2017 through the reactivation of idled facilities, the building of new facilities, and capacity expansions at existing facilities. During 2017, a number of new facilities were announced in West Texas in response to increasing demand for proppant in the Permian basins. These facilities are expected to result in lower delivered cost within the Permian basin due to the facilities’ closer geographical proximity to well sites relative to other sources of supply. The majority of these West Texas facilities are expected to be commissioned in 2018.

Our Proppant Products

We a broad suite of proppant products designed to address nearly all well environments and related down-hole challenges faced by our customers. Our proppant products include Northern White sand, meeting the most common API-specified proppant categories, as well as regional and local sands in Voca, Texas; Kermit, Texas; and Wexford, Michigan. Revenue in our Proppant solutions business spans these categories of raw sand and includes our value-added products of resin-coated proppants and Propel SSP®. All revenues in our Proppant Solutions segment are derived from these products in each of 2017, 2016, and 2015.

Northern White Frac Sand. Our Northern White frac sand is mined from deposits located in our Illinois, Wisconsin, Missouri, and Minnesota facilities. These reserves are generally characterized by high purity, significant roundness and sphericity, and low turbidity. All of our Northern White raw sand proppant products meet the standards set by the API.

API-Spec Brown Frac Sand. Our API-spec brown sand reserves are located in Texas and marketed under the name Texas Gold® frac sand. Our Texas Gold® frac sand has lower crush resistance than our Northern White frac sand, but it is an effective solution for low pressure wells. These reserves are in close proximity to major oil and gas producing basins in Texas, including the Eagle Ford Shale and the Permian Basin, which provides them with a significant transportation cost advantage relative to API-spec frac sand sourced from more distant locations.

Value-Added Proppants. We coat a portion of our API-spec produced sand with resin to enhance its performance as a proppant using proprietary resin formulations and coating technologies. Our value-added proppants are generally used in higher temperature and higher pressure well environments and are marketed to end users who require increased conductivity in higher pressure wells, high crush resistance, and/or enhanced flow back control in order to enhance the productivity of their wells.

Our coated sand products are sold as both tempered (or pre-cured) and curable (or bonding) products. Curable coated sand bonds down hole as the formation heat causes neighboring coated sand grains to polymerize with one another locking proppant into place. This prevents proppant from flowing back out of the fracture when the oil or natural gas well commences production. For certain resin products, the resin’s chemical properties are triggered by the introduction of an activator into the frac fluid. We formulate, manufacture, and sell activators, which work with the specific chemistry of our resins. Tempered products do not require activation because they are not intended to bond, rather bring additional strength to the proppant.

We manufacture proprietary coatings designed to address the evolving needs of our customers, and have continued to invest in our research and development and technical marketing capabilities to maximize the sales of our coated products. We also coat ceramic product purchased from third-party suppliers. This product is marketed as HyperProp® proppants and has the strength characteristics of ceramic and the flowback performance characteristics of coated sand.

Proprietary Performance Products

Propel SSP®. Our patented Propel SSP® product utilizes a polymer coating applied to a proppant substrate. Upon contact with water, the coating hydrates and swells rapidly to create a hydrogel around the proppant substrate. The hydrogel layer, which is primarily water, is attached to the proppant particle and provides a nearly threefold increase in the hydrostatic radius of the proppant. Test results indicate that the lower specific gravity allows greater volumes of proppant and/or coarser mesh sizes coated with the Propel SSP® product to be carried deep into the fracture, which in turn allow more hydrocarbons to escape into the wellbore. As a result, field trials have shown a variety of benefits, including increased production, decreased use of fluids, and reduced pumping time.

In 2017, we introduced Propel SSP® 350, which expands the ability to place proppant with Propel SSP® technology by significantly extending the range of water compatibility from freshwater to ultra-high salinity produced water. This extension allows oil and gas operators to reuse their produced water, thus reducing water management logistics and associated costs.

Our Product Delivery

We have established an oil and gas logistics network that we believe is highly responsive to our customers’ needs. One of the most important purchasing criteria of our proppant customers is our ability to deliver the products our customers demand at their desired time and location. We believe we have one of the industry’s largest distribution footprints with 44 active oil and gas distribution terminals. We also have a railcar fleet of approximately 10,569 railcars as of December 31, 2017, providing us the flexibility for delivering product to our locations in-basin when customers require it. We believe we are one of the few proppant producers capable of Class I railroad deliveries to each of North America’s major oil and gas-producing basins. In 2017, we shipped approximately 74% of our North American proppant volume through our terminal network.

The ability to ship proppant through unit trains (a train in which all cars carry the same commodity and are not split up or stored en route) is becoming increasingly important in order to cost-effectively provide the large quantities of product required by evolving well completion methods. We have unit train capabilities at four of our production facilities and twelve of our destination terminals and shipped over 545 unit trains of product in 2017. The production unit train capability allows our customers that prefer to purchase the product FOB plant to efficiently ship the proppant to their own facilities.

I&R Industry Trends

Demand in the I&R end markets is relatively stable and is primarily influenced by key macroeconomic drivers such as housing starts, light vehicle sales, repair and remodel activity, and industrial production. The recent economic recovery has increased demand in the foundry, building products, and glassmaking end markets. The primary end markets served by our I&R segment are foundry, building products, sports and recreation, glassmaking, and filtration. All revenues in our I&R segment are derived from the following products in each of 2017, 2016, and 2015. In 2017, we focused our sales efforts in higher margin, value-added product which contributed to higher sales and profitability growth on an annual basis over prior year levels.

Our I&R Products

Foundry. We currently supply the foundry industry with multiple grades of high purity, round, angular, and sub-angular sands for molding and core-making applications, with products sold primarily in the U.S., Canada, Mexico, Japan, and China. Foundry sands are characterized by high purity, round and sub-angular sands precisely screened to perform under a variety of metal casting conditions. These factors dictate the refractory level and physical characteristics of the mold and core, which have a significant effect on the quality of the castings produced in the foundry. Our resin binders provide the necessary bonding of molds and cores in casting applications and are designed to improve overall productivity and environment conditions in the workplace.

Our extensive production experience and technical knowledge of the foundry industry have driven several industry advances. For example, we have developed our Signature Series™ of low smoke, low odor coated sands that provide lower overall emissions while providing a safer and more favorable work environment. Our expertise with coated sands enables us to provide coated sand for molds and cores where exceptional dimensional accuracy and surface finish are required. An example is TruCoat™, which has been engineered to dramatically lower in-plant smoke, odor, and emissions as well as deliver superior performance making TruCoat™ one of the most environmentally sound products on the market.

We believe we were the first sand operator to blend sands, which has proven extremely successful for specialty iron and aluminum applications. As foundries continue to utilize higher cost binders to improve the quality of their castings, minimize the use of binders which also reduces overall environmental impact, the industry continues to demand higher quality sands to realize the value of these binders. Our chemists and technicians support these applications with customized products that minimize binder usage, resulting in lower costs to foundries and higher prices for our products.

Glass. We provide a wide variety of high purity, low iron silica sands to the glass market. The glass industry uses industrial sand consumption for the production of windows, electronic display screens, photovoltaic panels, glass bottles, and other glass products.

Building Products. Various grades and types of our sands are used for roofing shingles, asphalt, industrial flooring ballast sand, bridge decking, pipe lining, and tank underlayment. We also work with our customers to blend minerals and chemicals to create colored flooring aggregates, concrete countertops, grout and plaster, including the newly-introduced Accel™ dust-preventing polymeric paver sand.

Sports and Recreation. We are a leading supplier of various turf and landscape infill products to contractors, municipalities, nurseries, and mass merchandisers. Our turf-related products are used in multiple major sporting facilities, including First Energy Stadium and Progressive Field in Cleveland, Ohio, PNC Park in Pittsburgh, Pennsylvania, Notre Dame Stadium in Notre Dame, Indiana, and ADPRO Sports Training Center Fieldhouse in Orchard Park, New York. In addition, we are a significant supplier of bunker sand, top dressing sands, and all-purpose sands to golf courses and landscape contractors throughout North America. Our sands are also supplied to horse tracks and training facilities. We also provide colored sand to a variety of major retailers for use as play sand and arts and crafts.

Filtration. We provide high-quality industrial sands and gravels in a wide variety of water and wastewater filtration applications. Over the past several years, we increased our focus on the filtration market. Our full range of products are monitored with an active statistical process control program to ensure compliance with all government and customer specifications, including the American Water Works and National Sanitation Foundation standards. Due to our efforts, we have emerged as a leader in sand and gravel products for private, public, and institutional water filtration systems.

Raw Materials

Our products are dependent on the availability of certain raw materials, including natural gas or propane, resins and additives, bagging supplies, and other raw materials. These are readily available from a variety of sources and we are not dependent on any one supplier of raw materials.

Our Customers

Since our inception, we have remained focused on developing and sustaining a loyal, diversified customer base. Currently, we maintain long-term contracts with many of the largest North American oilfield service companies. We believe the strength of our customer base is driven by our collaborative approach to product innovation and development, reputation for high-quality products, and extensive logistics network. Certain of our top customer relationships date back over 30 years. We have over 75 customers for our oil and gas proppants and over 830 customers across all our end markets. In the year ended December 31, 2017, three customers exceeded 10% of revenues. These customers collectively accounted for 45% of revenues in 2017. In the year ended December 31, 2016, two customers exceeded 10% of revenues. These customers collectively accounted for 42% of revenues in 2016.

We primarily sell products under supply agreements with terms that vary by contract. Certain of the agreements require the customer to purchase a specified percentage of its proppant requirements from us. Other agreements require the customer to purchase a minimum volume of proppant from us. These minimum volume contracts typically include a “take-or-pay” or “take-or-penalty” provision which triggers certain penalties if the purchased volume does not meet the required minimums. Specific custom orders are generally filled upon request, and backlog is not a material factor.

Research and Development and Technical Innovation

We have a history of partnering with our customers to develop innovative solutions to enhance the effectiveness of well completions, from conventional shallow wells to the most complex, multi-stage, horizontal wells. The nature of our vertically integrated model allows us to participate in each phase of proppant manufacturing and delivery and provides us a unique perspective into the current and future needs of our customers. Our technical sales team works closely with market participants to demonstrate the value proposition our proppants offer and stimulate market demand using data indicating enhanced hydrocarbon recoveries.

The table below summarizes some of our most significant product innovations:

Innovation	Year	Result
Propel SSP® 350 Products	2017	Accomplishes the same results as the original SSP technology when faced with brackish, sea, or produced water
CoolSet® Proppants	2014	Eliminates need for an activator for well temperatures as low as 100°F
TrueSet™ Proppants	2016	Provides effective flowback control and enhanced production, ideal for downhole temperatures between 150-300°F, does not require an activator, compatible with standard frac fluids and break technologies
PowerProp® Proppants	2010	Technology that delivers strength and performance characteristics similar to a light-weight ceramic (patent-pending)
Bio-based Binder System	2010	Technology for use in metal casting industry (patent-pending)
Bio-Balls® Ball Sealers	2006	Water soluble ball sealers that are environmentally safe and do not require retrieval after treatment
Encapsulated Curable Proppant	1997	High performance value-added products used in flow-back control
Dual Coat Technology	1995	Dual coat curable coated sand for enhanced conductivity and flowback control

During 2017, 2016, and 2015, we spent $5.3 million, $3.7 million, and $5.0 million, respectively, on research and development.

Along with continued commercial growth of Propel SSP® products, additional trial programs were initiated by oil and gas operators in 2017. Propel SSP® products are being evaluated to improve operational efficiency and well productivity. With Propel SSP®, the performance properties of the underlying proppant are maintained while optimal proppant volume and/or coarser mesh sizes are carried deep into the fractures, in turn allowing more hydrocarbons to flow into the wellbore. Extensive field tests have shown the benefits of Propel SSP® products, including increased production, reduced fluid and chemical usage, and reduced pumping time. Propel SSP® 350 products accomplish the same results, while allowing customers to use brackish water or reuse produced water. Water reuse reduces the full-cycle water management cost and impact on local communities.

Competition

There are numerous large and small producers in all sand producing regions of the United States with whom we compete. Our main competitors in the raw frac sand market include Badger Mining Corporation, CARBO Ceramics, Inc., Emerge Energy Services LP, Hi-Crush Partners LP, Preferred Sands LLC, Smart Sand Inc., Unimin Corporation, and U.S. Silica Holdings, Inc. Many new entrants to the raw frac sand market compete on an FOB-plant basis and lack comparable transportation infrastructure to meet customer demands in-basin. Our main competitors in the value-added proppant market include Atlas Resin Proppants LLC, Momentive Performance Materials Inc., Unimin Corporation, Preferred Sands LLC, and U.S. Silica Holdings, Inc. The most important factors on which we compete in both markets are product quality, performance, sand and proppant characteristics, transportation capabilities, proximity of supply to well site, reliability of supply, and price. Our largest competitors across both markets are U.S. Silica Holdings, Inc., Unimin Corporation, and Badger Mining Corporation (which owns Atlas Resin Proppants LLC). We believe we are uniquely positioned to utilize our scale of raw sand production to supply high-quality substrate for coated products and leverage our transportation infrastructure for reliable delivery in-basin.

Due to increased demand for sand based proppants, there has been an increase in the number of frac sand producers. Moreover, as a result of this increased demand, existing frac sand producers have added to or expanded their frac sand production capacity, thereby increasing competition. Demand for sand-based proppants is closely linked to proppant consumption patterns for the completion of oil and natural gas wells in North America. These consumption patterns in a particular basin are influenced by numerous factors, including the price of hydrocarbons, the drilling rig count, and hydraulic fracturing activity levels, including the number of stages completed and the amount of proppant used per stage. Further, these consumption patterns are also influenced by the location, quality, selling price and availability of sand-based proppants and other types of proppants such as ceramic proppant. Selling prices for sand-based proppants vary by basin and are determined based on supply and demand dynamics within each basin.

As a result of increasing global supply of oil, the demand for proppant decreased from the end of 2014 and through the latter half of 2016, resulting in proppant oversupply and downward pressure on proppant selling prices. This caused some proppant producers to exit the market and others, including us, to adjust operations and minimize costs. From the end of 2016 through 2017, the price of oil has increased and the United States horizontal land rig counts have increased leading to significant improvement in proppant demand and pricing.

Competitors in the I&R markets include some of our larger proppant competitors such as Unimin Corporation and U.S. Silica Holdings, Inc. but also typically include smaller, local or regional producers of sand and gravel.

Employees

As of December 31, 2017, we employed a workforce of 989 employees. We believe our culture of “People, Planet and Prosperity” has enabled us to achieve a long-tenured workforce and good relations with our workforce.

We maintain an active dialogue with employees and provide salaried and hourly employees a comprehensive benefits package including medical, life, and accident insurance, incentive bonus programs, a 401(k) plan with an employer match and discretionary employer contribution, as well as educational assistance. Certain employees are also eligible for stock-based compensation programs that are designed to encourage long-term performance aligned with Company objectives.

As of December 31, 2017, approximately 155 of our domestic employees are parties to collective bargaining contracts. We believe we have strong relationships with and maintain an active dialogue with union representatives. We have historically been able to successfully extend and renegotiate collective bargaining agreements as they expire.

Seasonality

Our business is affected to some extent by seasonal fluctuations in weather that impact our production levels and our customers’ business needs. For example, our proppant sales levels are lower in the first and fourth quarters due to lower market demand as adverse weather tends to slow oil and gas operations to varying degrees depending on the severity of the weather. Our inability to mine and process frac sand year round at our surface mines in northern states results in a seasonal build-up of inventory as we excavate excess sand to build a stockpile that will feed our drying facilities during the winter months. Additionally, in the second and third quarters, we sell more sand to our customers in the I&R end markets due to the seasonal rise in demand driven by more favorable weather conditions.

Intellectual Property

Our intellectual property consists primarily of patents, trade secrets, know-how, trademarks, including our name Fairmount Santrol™ and products, including, but not limited to PowerProp®, Propel SSP®, HyperProp®, and CoolSet®. We hold numerous U.S. and foreign-granted patents that are still in force as well as many U.S. and foreign patent applications that are still pending. We own patents in most of our major, differentiated proppant product lines. We have not granted any third-party rights with respect to our patents. The majority of our patents have an expiration date after 2025. In early 2016, we received a patent on certain of the Propel SSP® proppant technology and have additional patents pending. With respect to trade secrets and know-how, our extensive experience with a variety of different products enables us to offer our customers a wide range of proppants for their particular application.

ITEM 1A. RISK FACTORS

An investment in our securities involves significant risks. You should carefully consider the risks described below, together with the financial and other information contained in this Report, as well as the information discussed under the section entitled, “Management's Discussion and Analysis of Financial Conditions and Results of Operations” in evaluating us, our business and your investment in us. If any of the following risks actually occurs, our business, financial condition, results of operations, cash flows, and prospects could be materially and adversely affected. As a result, the trading price of our common stock could decline and you could lose all or part of your investment in our common stock.

Risks Related to Our Business

Our business and financial performance depend on the level of activity in the oil and gas industries.

Approximately 87% of our revenues for the year ended December 31, 2017 were derived from sales to companies in the oil and gas industry. As a result, our operations are materially dependent on the levels of activity in oil and gas exploration, development, and production. More specifically, the demand for the proppants we produce is closely related to the number of oil and gas wells completed in geological formations where sand-based proppants are used in fracturing activities. These activity levels are affected by both short- and long-term trends in oil and gas prices, among other factors.

In recent years, oil and gas prices and, therefore, the level of exploration, development, and production activity, have experienced significant fluctuations. Worldwide economic, political, and military events, including war, terrorist activity, events in the Middle East, growth in U.S. non-conventional oil production, and initiatives by the Organization of the Petroleum Exporting Countries (“OPEC”) and other large non-OPEC producers have contributed, and are likely to continue to contribute, to price and volume volatility. In 2016, OPEC producers reached an initial agreement to limit production, and in November 2017, the agreement was extended through December 2018. These agreements contributed to an increase in global oil and gas prices. However, this limit is voluntary and political and other issues may create varying degrees of adherence to this limitation, which could cause volatility and price fluctuations in the demand for oil and gas.

Prices remain subject to volatility. A return to a reduction in oil and gas prices would generally depress the level of oil and gas exploration, development, production, and well completion activity and may result in a corresponding decline in the demand for the proppants we produce. Such a decline would have a material adverse effect on our business, results of operations, and financial condition, and we may not be able to meet our debt obligations. The commercial development of economically-viable alternative energy sources could have a similar effect. Any future decreases in the rate at which oil and gas reserves are discovered or developed, whether due to the passage of legislation, increased governmental regulation leading to limitations, or prohibitions on exploration and drilling activity, including hydraulic fracturing, or other factors, could have a material adverse effect on our business and financial condition, even in a stronger oil and natural gas price environment.

Our substantial indebtedness could adversely affect our financial flexibility and our competitive position.

Although our indebtedness was significantly reduced in 2016 and 2017 and its maturity extended, it continues to be substantial and increases the risk that we may be unable to generate cash sufficient to pay amounts due in respect of our indebtedness, or refinance that indebtedness on favorable terms. As of December 31, 2017, we had approximately $745.0 million of outstanding long-term debt that matures in May and November 2022. Our indebtedness could have other important consequences and significant effects on our business. For example, it could:

- increase our vulnerability to adverse changes in general economic, industry and competitive conditions;
- require us to dedicate a substantial portion of our cash flow from operations to make payments on our indebtedness, thereby reducing the availability of our cash flow to fund working capital, capital expenditures and other general corporate purposes;
- limit our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate;

- restrict us from exploiting business opportunities;
- make it more difficult to satisfy our financial obligations, including payments on our indebtedness;
- place us at a disadvantage compared to our competitors that have less debt; and
- limit our ability to borrow additional funds for working capital, capital expenditures, railcar or other future purchase commitments, acquisitions, debt service requirements, execution of our business strategy, or other general corporate purposes.

Increasing logistics costs, a lack of dependability or availability of transportation services or infrastructure, and geographic shifts in demand could have a material adverse effect on our business.

Transportation and handling costs are a significant component of the total delivered cost of our products. In many instances, transportation costs can represent 70% to 80% of the delivered cost of frac sand. The high relative cost of transportation could favor suppliers located in close proximity to the customer. In addition, as we continue to expand our sand-based proppant production, we will need increased investment in transportation infrastructure, including terminals and railcars. We contract with truck, rail, ship, and barge services to move sand-based proppants from our production facilities to distribution terminals. Labor disputes, derailments, adverse weather conditions or other environmental events, increased railcar congestion, and other changes to rail freight systems could interrupt or limit available transportation services or result in a significant increase in transportation service rates. Increased costs resulting from these types of events that we are not able to pass on to our customers could impair our ability to deliver our products economically to our customers or to expand our markets. Accordingly, because we are so dependent on rail infrastructure, if there are disruptions of the rail transportation services utilized by us or our customers, and we or our customers are unable to find alternative transportation providers to transport our products, our business and results of operations could be adversely affected. Further, declining volumes could result in railcar over-capacity, which would lead to railcar storage fees while, at the same time, we would continue to incur lease costs for those railcars in storage.

A portion of our distribution infrastructure is located in or near oil and gas producing areas. A shift in demand away from areas where we have significant distribution infrastructure or relocation of our customers' businesses to areas farther from our plants or distribution infrastructure could have a material adverse effect on our business, financial condition, and results of operations.

Our operations are dependent on timely securing and maintaining various permits and approvals from governmental authorities and other third parties.

We hold numerous governmental, environmental, mining and other permits, water rights and approvals authorizing operations at each of our facilities. A decision by a governmental agency or other third party to deny or delay issuing a new or renewed permit or approval, or to revoke or substantially modify an existing permit or approval, could have a material adverse effect on our ability to continue operations at the affected facility. Furthermore, state and local governments could impose a moratorium on mining operations in certain areas. Expansion of our existing operations is also predicated on securing the necessary environmental or other permits, including air permits for our coated manufacturing, and water rights or approvals, which we may not receive in a timely manner or at all. In addition, our facilities are located near existing and proposed third-party industrial operations that could affect our ability to fully extract, or the manner in which we extract, the mineral reserves to which we have mining rights.

We may be adversely affected by decreased or shifted demand for sand-based proppants or the development of either effective alternative proppants or new processes to replace hydraulic fracturing.

Frac sand and coated sand are proppants used in the completion and re-completion of oil and gas wells through the process of hydraulic fracturing. A significant shift in demand from sand-based proppants to other proppants, or a shift in demand from higher-margin sand-based proppants to lower-margin sand-based proppants, could have a material adverse effect on our business, financial condition, and results of operations. The development and use of new technology for effective alternative proppants, or the development of new processes to replace hydraulic fracturing altogether, could also cause a decline in demand for the sand-based proppants we produce and could have a material adverse effect on our business, financial condition, and results of operations.

Our proppant sales are subject to fluctuations in market pricing.

Substantially all of our supply agreements involving the sale of sand-based proppants have market-based pricing mechanisms. Accordingly, in periods with decreasing prices, our results of operations may be lower than if our agreements had fixed prices. In periods with increasing prices, our agreements permit us to increase prices; however, our customers may elect to cease purchasing our sand-based proppants if they do not agree with our price increases or are able to find alternative, cheaper sources of supply. Furthermore, certain volume-based supply agreements may influence the ability to fully capture current market pricings. These pricing provisions may result in significant variability in our results of operations and cash flows from period to period.

Changes in supply and demand dynamics could also impact market pricing for proppants. A number of existing frac sand providers and new market entrants have recently announced reserve acquisitions, processing capacity expansions and greenfield projects. In periods where sources of supply of raw frac sand exceed market demand, market prices for frac sand may decline and our results of operations and cash flows may continue to decline, be volatile, or otherwise be adversely affected.

We may not be able to complete greenfield development or expansion projects or, if we do, we may not realize the expected benefits.

Any greenfield development or expansion project requires us to spend substantial capital and obtain numerous state and local permits. A decision by any governmental agency not to issue a required permit or substantial delays in the permitting process could prevent us from pursuing the development or expansion project. In West Texas, our current or future expansion plans could be slowed or halted by the U.S. Fish and Wildlife Service or other agencies due to conservation efforts targeted at the habitat of the dunes sagebrush lizard. In addition, if the demand for our products declines during the period we experience delays in raising capital or completing the permitting process, we may not realize the expected benefits from our greenfield facility or expansion project. Furthermore, our new or modified facilities may not operate at designed capacity or may cost more to operate than we expect. The inability to complete greenfield development or expansion projects or to complete them on a timely basis and in turn grow our business could adversely affect our business and results of operations.

We rely upon trade secrets, contractual restrictions and patents to protect our proprietary rights. Failure to protect our intellectual property rights may undermine our competitive position, and protecting our rights or defending against third-party allegations of infringement may be costly.

Our commercial success depends on our proprietary information and technologies, know-how and other intellectual property. Because of the technical nature of our business, we rely on patents, trade secrets, trademarks, and contractual restrictions to protect our intellectual property rights, particularly with respect to our coated products. The measures we take to protect our trade secrets and other intellectual property rights may be insufficient. Failure to protect, monitor, and control the use of our existing intellectual property rights could cause us to lose our competitive advantage and incur significant expenses. It is possible that our competitors or others could independently develop the same or similar technologies or otherwise obtain access to our unpatented technologies. In such case, our trade secrets would not prevent third parties from competing with us. As a result, our results of operations may be adversely affected. Furthermore, third parties or our employees may infringe or misappropriate our proprietary technologies or other intellectual property rights, which could also harm our business and results of operations. Policing unauthorized use of intellectual property rights can be difficult and expensive, and adequate remedies may not be available.

In addition, third parties may claim that our products infringe or otherwise violate their patents or other proprietary rights and seek corresponding damages or injunctive relief. Defending ourselves against such claims, with or without merit, could be time-consuming and result in costly litigation. An adverse outcome in any such litigation could subject us to significant liability to third parties (potentially including treble damages) or temporary or permanent injunctions prohibiting the manufacture or sale of our products, the use of our technologies or the conduct of our business. Any adverse outcome could also require us to seek licenses from third parties (which may not be available on acceptable terms, or at all) or to make substantial one-time or ongoing royalty payments. Protracted litigation could also result in our customers or potential customers deferring or limiting their purchase or use of our products until resolution of such litigation. In addition, we may not have insurance coverage in connection with such litigation and may have to bear all costs arising from any such litigation to the extent we are unable to recover them from other parties. Any of these outcomes could have a material adverse effect on our business, financial condition and results of operations.

The development and marketing of Propel SSP® products may prove to be unsuccessful.

The technology supporting Propel SSP® products is unproven through field trials. Although the results of field trials have been encouraging, and some customers are using Propel SSP® products on a commercial basis in all of thier wells, additional testing ultimately may demonstrate that the product is ineffective or not commercially viable. A return to or a prolonged decline in the oil and gas market may make the adoption of higher-value products, such as Propel SSP® products, more difficult. Additionally, competitive products could be developed and marketed. A failure to capitalize on Propel SSP® products in commercial application would result in a significant unrecouped investment and the failure to realize certain anticipated benefits, each of which could have a material adverse effect on our business, financial condition, and results of operations, as well as remedial actions with regard to the contractual agreement with Soane Energy LLC. For more information on Propel SSP® products, please read "Management's Discussion and Analysis of Financial Condition and Results of Operations – Acquisitions."

Our future performance will depend on our ability to succeed in competitive markets, and on our ability to appropriately react to potential fluctuations in demand for and supply of sand-based proppants.

We operate in a highly competitive market that is characterized by several large, national producers and a larger number of small, regional or local producers. Competition in the industry is based on price, consistency and quality of product, site location, distribution capability, customer service, reliability of supply, breadth of product offering, and technical support. In the proppant business, we compete with producers such as Badger Mining Corporation, CARBO Ceramics Inc., Emerge Energy Services LP, Hi-Crush Partners, LP, Momentive Performance Materials Inc., Preferred Sands LLC, Smart Sand Inc., Unimin Corporation, and U.S. Silica Holdings, Inc. Certain of our large competitors may have greater financial and other resources than we do, may develop technology superior to ours or may have production facilities that are located closer to key customers than ours.

We also compete with smaller, regional or local producers. In recent years there has been an increase in the number of small producers servicing the sand-based proppants market which could result in increased competition and pricing pressure in certain market conditions. In addition, oil and gas exploration and production companies and other providers of hydraulic fracturing services could acquire their own sand reserves, expand their existing sand-based proppant production capacity or otherwise fulfill their own proppant requirements and existing or new sand-based proppant producers could add to or expand their sand-based proppants production capacity, which could increase competition in the proppant industry. We may not be able to compete successfully against either our larger or smaller competitors in the future, and competition could have a material adverse effect on our business, financial condition and results of operations.

A large portion of our sales is generated by a limited number of customers, and the loss of, or a significant reduction in purchases by, our largest customers could adversely affect our operations.

In the year ended December 31, 2017, three customers exceeded 10% of revenues. These customers collectively accounted for 45% of revenues in 2017. In the year ended December 31, 2016, two customers exceeded 10% of revenues. These customers collectively accounted for 42% of revenues in 2016. These customers may not continue to purchase the same levels of our sand-based proppants in the future due to a variety of reasons. Over the course of our relationships, we have sold proppant to these customers on a purchase order basis and pursuant to supply agreements. We currently have supply agreements with these customers that contain customary termination provisions for bankruptcy related events and uncured breaches of the applicable agreement. If any of our major customers substantially reduces or altogether ceases purchasing our sand-based proppants and we are not able to generate replacement sales of sand-based proppants into the market, our business, financial condition, and results of operations could be adversely affected for a short-term period until such time as we generate replacement sales in the market.

We are exposed to the credit risk of our customers, and any material nonpayment or nonperformance by our customers could adversely affect our financial results.

We are subject to the risk of loss resulting from nonpayment or nonperformance by our customers, many of whose operations are concentrated solely in the global oilfield services industry which, as described above, is subject to volatility and therefore credit risk. Our credit procedures and policies may not be adequate to fully reduce customer credit risk. If we fail to adequately assess the creditworthiness of existing or future customers or unanticipated deterioration in their creditworthiness, any resulting increase in nonpayment or nonperformance by them and our inability to re-market or otherwise use the production could have a material adverse effect on our business, financial condition, and results of operations.

The demand for industrial and recreational sand fluctuates, which could adversely affect our results of operations.

A portion of our sales are to customers in industries that have historically been cyclical, such as glassmaking, building products and foundry. During periods of economic slowdown, our customers often reduce their production rates and also reduce capital expenditures and defer or cancel pending projects. Such developments occur even among customers that are not experiencing financial difficulties.

Demand in many of the end markets for industrial and recreational sand is driven by the construction and automotive industries. For example, the flat glass market depends on the automotive and commercial and residential construction and remodeling markets. The market for industrial sand used to manufacture building products is driven primarily by demand in the construction markets. The demand for foundry silica substantially depends on the rate of automobile, light truck and heavy equipment production. Other factors influencing the demand for industrial and recreational sand include (i) the substitution of plastic or other materials for glass, (ii) competition from offshore producers of glass products, (iii) changes in demand for our products due to technological innovations, and (iv) prices, availability, and other factors relating to our products.

We cannot predict or control the factors that affect demand for our products. Negative developments in the above factors, among others, could cause the demand for industrial and recreational sand to decline, which could adversely affect our business, financial condition, results of operations, cash flows, and prospects.

Our operations are subject to operating risks that are often beyond our control and could adversely affect production levels and costs, and such risks may not be covered by insurance.

Our mining, processing and production facilities are subject to risks normally encountered in the proppant and industrial and recreational sand industries. These risks include:

- changes in the price and availability of transportation;
- changes in the price and availability of natural gas or electricity;
- unusual or unexpected geological formations or pressures;
- cave-ins, pit wall failures, or rock falls, particularly in underground mines;
- unanticipated ground, grade, or water conditions;
- extreme seasonal weather conditions;
- hazardous or catastrophic weather conditions or events, including flooding, tornadoes, and hurricanes, and the physical impacts of climate change;
- environmental hazards;
- industrial accidents;
- changes in laws and regulations (or the interpretation thereof) or increased public scrutiny related to the mining and the drilling and well completion industries, silica dust exposure or the environment;

- inability to acquire or maintain necessary permits or mining or water rights;

- restrictions on blasting and mining operations, including potential moratoriums on mining as result of local activism or complaints;
- inability to obtain necessary production equipment or replacement parts;
- reduction in the amount of water available for processing;
- labor disputes;
- cybersecurity breaches;
- late delivery of supplies;
- fires, explosions, or other accidents; and
- facility shutdowns in response to environmental regulatory actions

Any of these risks could result in damage to, or destruction of, our mining properties or production facilities, personal injury, environmental damage, delays in mining or processing, losses, or possible legal liability. Any prolonged downtime or shutdowns at our mining properties or production facilities could have a material adverse effect on us.

Not all of these risks are reasonably insurable, and our insurance coverage contains limits, deductibles, exclusions, and endorsements. Our insurance coverage may not be sufficient to meet our needs in the event of loss and any such loss may have a material adverse effect on us.

A significant portion of our sales is generated at our Wedron Silica facility. Any adverse developments at this plant could have a material adverse effect on our business, financial condition, and results of operations.

For the year ended December 31, 2017, approximately 67% of our total volumes were produced at our Wedron Silica Facility. As of December 31, 2017, this facility accounts for approximately 43% of our annual sand processing capacity and approximately 25% of our annual coating capacity. A casualty event or other adverse event affecting the production at this plant, including adverse developments due to catastrophic events or weather (including floods, windstorms, ice storms, freezing temperatures, or tornadoes), adverse government regulatory impacts, private actions by residents of Wedron or surrounding communities, decreased demand for the products this plant produces, adverse developments affecting this plant's customers, or transportation-related constraints, could have a material adverse effect on our business, financial condition, and results of operations.

The manufacture of value-added proppants is an important process for us and is dependent on the availability of raw materials.

If we are unable to secure adequate, cost effective supply commitments for the raw materials associated with value-added proppants our ability to sell this product to the marketplace at profitable margins may be adversely impacted. Decreased sales of value-added proppants or the inability to control the costs associated with manufacturing and distribution of these products could have a material adverse effect on our business, financial condition, and results from operations.

Diminished access to water may adversely affect our operations or the operations of our customers.

The mining and processing activities in which we engage at a number of our facilities require significant amounts of water, and some of our facilities are located in areas that are water-constrained. Additionally, the development of oil and gas properties through fracture stimulation likewise requires significant water use. We have obtained water rights that we currently use to service the activities on our various properties, and we plan to obtain all required water rights to service other properties we may develop or acquire in the future. However, the amount of water that we and our customers are entitled to use pursuant to our water rights must be determined by the appropriate regulatory authorities in the jurisdictions in which we and our customers operate. Such regulatory authorities may amend the regulations regarding such water rights, increase the cost of maintaining such water rights or eliminate our current water rights, and we and our customers may be unable to retain all or a portion of such water rights.

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These new regulations, which could also affect local municipalities and other industrial operations, could have a material adverse effect on our operating costs and effectiveness if implemented. Such changes in laws, regulations or government policy and related interpretations pertaining to water rights may alter the environment in which we and our customers do business, which may negatively affect our financial condition and results of operations.

Title to our mineral properties and water rights, and royalties related to our production of sand may be disputed.

Title to, and the area of, mineral properties and water rights, and royalties related to our production of sand, may be disputed. Even though we obtain title guarantees on properties that we purchase, a successful claim that we lack appropriate mineral and water rights on one or more of our properties could cause us to lose any rights to explore, develop and operate mines on that property. Any decrease or disruption in our mineral rights may adversely affect our operations. In some instances, we have received access rights or easements from third parties, which allow for a more efficient operation than would exist without the access or easement. A third party could take action to suspend the access or easement, and any such action could be materially adverse to our results of operations or financial condition.

If we cannot successfully complete acquisitions or integrate acquired businesses, our growth may be limited and our financial condition may be adversely affected.

Our business strategy includes supplementing internal growth by pursuing acquisitions. Any acquisition may involve potential risks, including, among other things:

- the validity of our assumptions about mineral reserves and future production, sales, capital expenditures, operating expenses and costs, including synergies;
- an inability to successfully integrate the businesses we acquire;
- the use of a significant portion of our available cash or borrowing capacity to finance acquisitions and the subsequent decrease in our liquidity;
- a significant increase in our interest expense or financial leverage if we incur additional debt to finance acquisitions;
- the assumption of unknown liabilities, losses or costs for which we are not indemnified or for which our indemnity is inadequate;
- the diversion of management’s attention from other business concerns;
- an inability to hire, train or retain qualified personnel both to manage and to operate our growing business and assets;
- the incurrence of other significant charges, such as impairment of goodwill or other intangible assets, asset devaluation, or restructuring charges;
- unforeseen difficulties encountered in operating in new geographic areas;
- customer or key employee losses at the acquired businesses; and
- the accuracy of data obtained from production reports and engineering studies, geophysical and geological analyses, and other information used when deciding to acquire a property, the results of which are often inconclusive and subject to various interpretations.

If we cannot successfully complete acquisitions or integrate acquired businesses, our growth may be limited and our financial condition may be adversely affected.

We will be required to make substantial capital expenditures to maintain, develop and increase our asset base. The inability to obtain needed capital or financing on satisfactory terms, or at all, could have a material adverse effect on our growth and profitability.

Although we currently use a significant amount of our cash reserves and cash generated from our operations to fund the maintenance and development of our existing mineral reserves and production capacity and our acquisitions of new mineral reserves and production capacity, we may depend on the availability of credit to fund future capital expenditures and capital leases. Our ability to obtain financing or to access the capital markets for future equity or debt offerings may be limited by our financial condition at the time of any such financing or offering, the covenants contained in our existing credit facility, term loans or future debt agreements, adverse market conditions or other contingencies and uncertainties that are beyond our control. Our failure to obtain the funds necessary to maintain, develop, and increase our asset base, including our substantial railcar fleet, could adversely impact our growth and profitability.

Even if we are able to obtain financing or access the capital markets, incurring additional debt may significantly increase our interest expense and financial leverage, and our level of indebtedness could restrict our ability to fund future development and acquisition activities.

Our asset-based revolving credit facility and term loans contain affirmative and negative covenants and substantial restrictions that may restrict our business and financing activities.

Our revolving credit facility and term loans contain, and any future financing agreements that we may enter into will likely contain operating and financial restrictions and covenants that may restrict our ability to finance future operations or capital needs or to engage in, expand, or pursue our business activities.

Our revolving credit agreement has availability based on a defined borrowing base, which is a percentage of accounts receivable and inventory. A decline in or restrictions of our borrowing base could result in our ability to draw additional amounts on the revolving credit facility, as well as trigger repayments of existing revolver borrowings.

If we violate any of the restrictions or covenants in our debt agreements, a significant portion of our indebtedness may become immediately due and payable and our lenders' commitment to make further loans to us may terminate. We might not have, or be able to obtain, sufficient funds to make these accelerated payments. In addition, our obligations under our debt agreements are secured by substantially all of our assets, and if we are unable to repay our indebtedness under these agreements, the lenders could seek to foreclose on our assets.

We may have the need to incur substantial debt in the future to enable us to maintain or increase our production levels and to otherwise pursue our business plan. We may not be able to borrow funds successfully or, if we do, this debt may impair our ability to operate our business.

A significant amount of capital expenditures would be required to grow our production capacity. If prices for the products we produce were to decline for an extended period of time, if the costs of our acquisition and development opportunities were to increase substantially or if other events were to occur which reduced our sales or increased our costs, we may be required to borrow in the future to enable us to finance the expenditures necessary to replace the reserves we extract. The cost of the borrowings and our obligations to repay the borrowings could have important consequences to us, because:

- our ability to obtain additional financing, if necessary, for working capital, capital expenditures, acquisitions, or other purposes may be impaired or such financing may not be available on favorable terms, or at all;
-

covenants contained in future credit and debt arrangements may require us to meet financial tests that may affect our flexibility in planning for, and reacting to, changes in our business, including possible acquisition opportunities;

- we will need a substantial portion of our cash flow to make principal and interest payments on our indebtedness, reducing the funds that would otherwise be available for operations and future business opportunities; and
- our debt level will make us more vulnerable than our less leveraged competitors to competitive pressures or a downturn in our business or the economy generally.

Our ability to service our indebtedness will depend on, among other things, our future financial and operating performance, which will be affected by prevailing economic conditions and financial, business, regulatory and other factors, some of which are beyond our control. If our operating results are not sufficient generate cash flows in order to service our current or future indebtedness, we will be forced to take actions such as reducing or delaying business activities, acquisitions, investments and/or capital expenditures; selling assets; restructuring or refinancing our indebtedness; or seeking additional equity capital or bankruptcy protection. We may not be able to effect any of these remedies on satisfactory terms or at all.

Inaccuracies in our estimates of mineral reserves could result in lower than expected sales and higher than expected costs.

We base our mineral reserve estimates on engineering, economic and geological data assembled and analyzed by our engineers and geologists, which are reviewed by outside firms. However, sand reserve estimates are necessarily imprecise and depend to some extent on statistical inferences drawn from available drilling data, which may prove unreliable. There are numerous uncertainties inherent in estimating quantities and qualities of mineral reserves and costs to mine recoverable reserves, including many factors beyond our control. Estimates of economically recoverable mineral reserves necessarily depend on a number of factors and assumptions, all of which may vary considerably from actual results, such as:

- geological and mining conditions and/or effects from prior mining that may not be fully identified by available data or that may differ from experience;
- assumptions concerning future prices of sand-based products, operating costs, mining technology improvements, development costs, and reclamation costs;
- assumptions concerning future effects of regulation, including the issuance of required permits and taxes by governmental agencies; and
- demand for product by grade.

Any inaccuracy in our estimates related to our mineral reserves could result in lower than expected sales and higher than expected costs.

Mine closures entail substantial costs, and if we close one or more of our mines sooner than anticipated, our results of operations may be adversely affected.

We base our assumptions regarding the life of our mines on detailed studies that we perform from time to time, but our studies and assumptions do not always prove to be accurate. If we close any of our mines sooner than expected, sales will decline unless we are able to increase production at any of our other mines, which may not be possible. The closure of an open pit mine also involves significant closure costs, including accelerated employment legacy costs, severance-related obligations, reclamation and other environmental costs, and the costs of terminating long-term obligations, including energy contracts and equipment leases. We accrue for the costs of reclaiming open pits, stockpiles, tailings ponds, roads, and other mining support areas over the estimated mining life of our property. If we were to reduce the estimated life of any of our mines, the fixed mine closure costs would be applied to a shorter period of production, which would increase production costs per ton produced and could materially and adversely affect our results of operations and financial condition.

Applicable statutes and regulations require that mining property be reclaimed following a mine closure in accordance with specified standards and an approved reclamation plan. The plan addresses matters such as removal of facilities and equipment, regrading, prevention of erosion and other forms of water pollution, re-vegetation, and post-mining land use. In some cases, we are required to post a surety bond or other form of financial assurance equal to the cost of reclamation as set forth in the approved reclamation plan. The establishment of the final mine closure reclamation liability is based on permit requirements and requires various estimates and assumptions, principally associated with reclamation costs and production levels. If our accruals for expected reclamation and other costs associated with mine closures for which we will be responsible were later determined to be insufficient, our business, results of operations, and financial condition would be adversely affected.

A shortage of skilled labor together with rising labor costs in the mining industry may further increase operating costs, which could adversely affect our results of operations.

Efficient mining using modern techniques and equipment requires skilled laborers, preferably with several years of experience and proficiency in multiple mining tasks, including processing of mined minerals. If the shortage of experienced labor continues or worsens or if we are unable to train the necessary number of skilled laborers, there could be an adverse impact on our labor productivity and costs and our ability to expand production.

Our production process consumes large amounts of natural gas and electricity. An increase in the price or a significant interruption in the supply of these or any other significant raw material costs could have a material adverse effect on our business, financial condition, or results of operations.

Natural gas is the primary fuel source used for drying sand in the production process and, as such, our profitability is impacted by the price and availability of natural gas we purchase from third parties. The price and supply of natural gas are unpredictable and can fluctuate significantly based on international, political and economic circumstances, as well as other events outside our control, such as changes in supply and demand due to weather conditions, other oil and gas producers, regional production patterns, and environmental concerns. Furthermore, utility companies could enforce natural gas curtailments which affect our operations. In addition, potential climate change regulations or carbon or emissions taxes could result in higher production costs for energy, which may be passed on to us in whole or in part. In the past, the price of natural gas has been extremely volatile, and we expect this volatility to continue. For example, during the year ended December 31, 2017, the monthly closing price of natural gas on the New York Mercantile Exchange ranged from a high of $3.93 per million British Thermal Units ("BTUs") to a low of $2.63 per million BTUs.

Phenol is the primary component of the resins we buy, and our resin supply agreements contain market-based pricing provisions based on the cost of phenol. As a result, we are exposed to fluctuations in the prices for phenol.

A significant increase in the price of phenol or of energy that is not recovered through an increase in the price of our products or an extended interruption in the supply of natural gas or electricity to our production facilities could have a material adverse effect on our business, financial condition, and results of operations.

Our business may suffer if we lose, or are unable to attract and retain, key personnel.

We depend to a large extent on the services of our senior management team and other key personnel. Members of our senior management and other key employees have extensive experience and expertise in evaluating and analyzing industrial mineral properties, maximizing production from such properties, marketing industrial mineral production, and developing and executing financing and hedging strategies. Competition for management and key personnel is intense, and the pool of qualified candidates is limited. Further, we have not entered into employment agreements with any of our named executive officers. The loss of any of these individuals or the failure to attract additional personnel, as needed, especially with the announced Merger with Unimin, could have a material adverse effect on our operations and could lead to higher labor costs or the use of less-qualified personnel. In addition, due to the broad base of shares and options owned by our current employee base, a significant amount of readily-accessible wealth and liquidity may be generated in favorable market conditions. If any of our executives or other key employees were to retire as a result of this potential wealth creation, join a competitor, or form a competing company, we could lose customers, suppliers, know-how, and key personnel. We do not maintain key-man life insurance with respect to any of our employees. Our success is dependent on our ability to continue to attract, employ, and retain highly-skilled personnel.

Our profitability could be negatively affected if we fail to maintain satisfactory labor relations.

As of December 31, 2017, various labor unions represented 16% of our domestic employees. The current collective bargaining agreements expire in 2019. If we are unable to renegotiate acceptable collective bargaining agreements with these labor unions in the future, we could experience, among other things, strikes, work stoppages, or other slowdowns by our workers and increased operating costs as a result of higher wages, health care costs, or benefits paid to our employees. An inability to maintain good relations with our workforce could cause a material adverse effect on our business, financial condition, and results of operations.

Silica-related health issues and litigation could have a material adverse effect on our business, reputation, or results of operations.

The inhalation of respirable crystalline silica can lead to the lung disease silicosis. There is disputed evidence of an association between respirable silica exposure and lung cancer as well as a possible association with other diseases, including immune system disorders such as scleroderma. These health risks have been, and may continue to be, a significant issue confronting the silica industry. Concerns over silicosis and other potential adverse health effects, as well as concerns regarding potential liability from the use of silica, may have the effect of discouraging our customers' use of our silica products. The actual or perceived health risks of mining, processing, and handling silica could materially and adversely affect silica producers, including us, through reduced use of silica products, the threat of product liability or employee lawsuits, increased scrutiny by federal, state and local regulatory authorities of us and our customers, or reduced financing sources available to the silica industry. Further, any additional regulations that reduce the allowable silica exposure levels could materially and adversely affect the silica industry.

We and/or our predecessors have been named as a defendant, usually among many defendants, in numerous products liability lawsuits brought by or on behalf of current or former employees of our customers alleging damages caused by silica exposure. As of December 31, 2017, we were subject to approximately six active silica exposure claims. Almost all of the claims pending against us arise out of the alleged use of our silica products in foundries or as an abrasive blast media and have been filed in the states of Texas, Mississippi, and Illinois, although cases have been brought in many other jurisdictions over the years. In accordance with our insurance obligations, these claims are being defended by our subsidiaries' insurance carriers, subject to our payment of approximately 7% of the costs associated with these claims, which is not material. If the litigants prevail and our insurance coverage or indemnities prove to be insufficient or unavailable, it could have a material adverse effect on our business, financial condition, and results of operation.

Our competitors may develop products or services that impede our ability to compete.

Our ability to compete with competitors on a cost-effective or service basis may be limited if competitors develop products or services for customers that provide additional advantages over our own products or services. This includes, but is not limited to, a logistical "last mile" solution for delivering proppant to the well site.

Failure to maintain effective quality control systems at our mining, processing and production facilities could have a material adverse effect on our business, financial condition, and operations.

The performance, quality and safety of our products are critical to the success of our business. These factors depend significantly on the effectiveness of our quality control systems, which, in turn, depends on a number of factors, including the design of our quality control systems, our quality-training program, and our ability to ensure that our employees adhere to the quality control policies and guidelines. Any significant failure or deterioration of our quality control systems could have a material adverse effect on our business, financial condition, results of operations, and reputation.

Seasonal factors may impact our ability to process sand and our customers' demand for our products.

Because raw sand cannot be wet-processed during extremely cold temperatures, frac sand is typically washed only eight months out of the year at our surface mines in Wisconsin and our Minnesota and Ohio operations. Our inability to mine and process frac sand year round in these surface mines results in a seasonal build-up of inventory as we excavate excess sand to build a stockpile that will feed our drying facilities during the winter months.

Unexpected winter weather conditions may result in our having an insufficient sand stockpile to supply feedstock for our drying plants for the winter months and result in our being unable to satisfy customer requirements during these periods. As a result of these seasonal supply impacts, the cash flows of our North American operations can fluctuate if plant operations must remain shut down due to harsh winter weather conditions.

In addition to supply considerations, severe weather conditions may curtail our customers' drilling activities and impair rail shipment and transportation services and, as a result, our sales volumes to customers may similarly be adversely affected. Unexpected winter weather conditions may compound these seasonal impacts, and could result in a material adverse effect on our business, financial condition, and results of operation.

We may be subject to interruptions or failures in our information technology systems.

We rely on sophisticated information technology systems and infrastructure to support our business, including process control technology. Any of these systems may be susceptible to outages due to fire, floods, power loss, telecommunications failures, usage errors by employees, computer viruses, cyber-attacks or other security breaches, or similar events. The failure of any of our information technology systems may cause disruptions in our operations, which could adversely affect our sales and profitability.

Our international operations expose us to risks inherent in doing business abroad.

We conduct business in many parts of the world, including Argentina, Mexico, China, and northern Europe. Our ability to comply with the Foreign Corrupt Practices Act ("FCPA") is dependent on the success of our ongoing compliance program, including our ability to continue to manage our agents and business partners, and supervise, train, and retain competent employees. We could be subject to sanctions and civil and criminal prosecution as well as fines and penalties in the event of a finding of a violation of the FCPA by us or any of our employees.

In addition, our international operations are subject to the various laws and regulations of those respective countries as well as various risks peculiar to each country, which may include, but are not limited to:

- global economic conditions;
- political actions and requirements of national governments including trade restrictions, embargoes, seizure, detention, nationalization, and expropriations of assets;
- interpretation of tax statutes and requirements of taxing authorities worldwide, routine examination by taxing authorities, and assessment of additional taxes, penalties, and/or interest;
- civil unrest;
- acts of terrorism;
- devaluations and other fluctuations in currency exchange rates;
- the impact of inflation; and
- difficulty in repatriating foreign currency received in excess of the local currency requirements.

Significant impairment losses related to goodwill, intangibles, and other assets could have a material adverse effect on our business, financial condition, and results of operation.

We assess the impairment of goodwill, intangibles, and other assets at least annually and also whenever events or changes in circumstances indicate that these assets may be impaired. In 2015, we recorded an impairment of goodwill in our Proppant Solutions segment of $69.2 million. We assess impairment of our intangible assets when circumstances indicate the recoverability of the asset group or individual assets within the asset group may be impaired. In 2016, we recorded impairment of assets in our Proppant Solutions segment of $59.8 million as well as impairment of corporate assets of $33.3 million. We did not record any impairment of assets in 2017. Any significant impairment of goodwill, intangibles, or other assets could have a material adverse effect on our business, financial condition, and results of operations.

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A terrorist attack or armed conflict could harm our business.

Terrorist activities, anti-terrorist efforts and other armed conflicts involving the United States or other countries in which we operate could adversely affect the U.S. and global economies and could prevent us from meeting financial and other obligations. We could experience loss of business, delays or defaults in payments from payors or disruptions of fuel supplies and markets if pipelines, production facilities, processing plants or refineries are direct targets or indirect casualties of an act of terror or war. Such activities could reduce the overall demand for oil and gas, which, in turn, could also reduce the demand for our products and services. Terrorist activities and the threat of potential terrorist activities and any resulting economic downturn could adversely affect our results of operations, impair our ability to raise capital or otherwise adversely impact our ability to realize certain business strategies.

Risks Related to Environmental, Mining, and Other Regulation

Federal, state and local legislative and regulatory initiatives relating to hydraulic fracturing and the potential for related litigation could result in increased costs and additional operating restrictions or delays for our customers, which could cause a decline in the demand for our sand-based proppants and negatively impact our business, financial condition, and results of operations.

We supply proppants to oilfield service companies. Hydraulic fracturing is a widely used industry production technique that is used to recover natural gas and/or oil from dense subsurface rock formations. The process involves the injection of water, sand and chemicals, under pressure, into the formation to fracture the surrounding rock and stimulate production. The hydraulic fracturing process is typically regulated by state or local governmental authorities. However, the practice of hydraulic fracturing has become controversial in some areas and is undergoing increased scrutiny. Several federal agencies, regulatory authorities, and legislative entities are investigating the potential environmental impacts of hydraulic fracturing and whether additional regulation may be necessary. The U.S. Environmental Protection Agency (“EPA”) has asserted limited federal regulatory authority over hydraulic fracturing and has indicated it may seek to further expand its regulation of hydraulic fracturing. The Bureau of Land Management has proposed regulations applicable to hydraulic fracturing conducted on federal and Indian oil and gas leases. Congress has from time to time considered the adoption of legislation to provide for federal regulation of hydraulic fracturing. In addition, various state, local and foreign governments have implemented, or are considering, increased regulatory oversight of hydraulic fracturing through additional permitting requirements, operational restrictions, disclosure requirements and temporary or permanent bans on hydraulic fracturing in certain areas such as environmentally sensitive watersheds. For example, many states – including the major oil and gas producing states of North Dakota, Ohio, Oklahoma, Pennsylvania, Texas, and West Virginia – have imposed disclosure requirements on hydraulic fracturing well owners and operators. Some local governments have adopted and others may seek to adopt ordinances prohibiting or regulating the time, place and manner of drilling activities in general or hydraulic fracturing activities within their jurisdictions.

Although we do not conduct hydraulic fracturing, the adoption of new laws or regulations at the federal, state, local or foreign levels imposing reporting obligations on, or otherwise limiting or delaying, the hydraulic fracturing process could make it more difficult to complete oil and gas wells, increase our customers’ costs of compliance and doing business, and otherwise adversely affect the hydraulic fracturing services they perform, which could negatively impact demand for our sand-based proppants. In addition, heightened political, regulatory and public scrutiny of hydraulic fracturing practices, including nuisance lawsuits, could expose us or our customers to increased legal and regulatory proceedings, which could be time-consuming, costly or result in substantial legal liability or significant reputational harm. We could be directly affected by adverse litigation involving us, or indirectly affected if the cost of compliance limits the ability of our customers to operate. Such costs and scrutiny could directly or indirectly, through reduced demand for our sand-based proppants, have a material adverse effect on our business, financial condition, and results of operations.

We and our customers are subject to extensive environmental and health and safety regulations that impose, and will continue to impose, significant costs and liabilities. In addition, future regulations, or more stringent enforcement of existing regulations, could increase those costs and liabilities, which could adversely affect our results of operations.

We are subject to a variety of federal, state and local regulatory environmental requirements affecting the mining and mineral processing industry, including among others, those relating to employee health and safety, environmental permitting and licensing, air and water emissions, greenhouse gas emissions, water pollution, waste management, remediation of soil and groundwater contamination, land use, reclamation and restoration of properties, hazardous materials, and natural resources. Some environmental laws impose substantial penalties for noncompliance, and others, such as the federal Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), impose strict, retroactive and joint and several liability for the remediation of releases of hazardous substances. Liability under CERCLA, or similar state and local laws, may be imposed as a result of conduct that was lawful at the time it occurred or for the conduct of, or conditions caused by, prior operators or other third parties. Failure to properly handle, transport, store or dispose of hazardous materials or otherwise conduct our operations in compliance with environmental laws could expose us to liability for governmental penalties, cleanup costs and civil or criminal liability associated with releases of such materials into the environment, damages to property or natural resources and other damages, as well as potentially impair our ability to conduct our operations. In addition, future environmental laws and regulations could restrict our ability to expand our facilities or extract our mineral reserves or could require us to acquire costly equipment or to incur other significant expenses in connection with our business. Future events, including changes in any environmental requirements (or their interpretation or enforcement) and the costs associated with complying with such requirements, could have a material adverse effect on us.

Any failure by us to comply with applicable environmental laws and regulations may cause governmental authorities to take actions that could adversely impact our operations and financial condition, including:

- issuance of administrative, civil, and criminal penalties;
- denial, modification, or revocation of permits or other authorizations;
- imposition of injunctive obligations or other limitations on our operations, including cessation of operations; and
- requirements to perform site investigatory, remedial, or other corrective actions.

Moreover, environmental requirements, and the interpretation and enforcement thereof, change frequently and have tended to become more stringent over time. For example, greenhouse gas emission regulation is becoming more rigorous. We expect to be required to report annual greenhouse gas emissions from our operations to the EPA, and additional greenhouse gas emission related requirements at the supranational, federal, state, regional and local levels are in various stages of development. The U.S. Congress has considered, and may adopt in the future, various legislative proposals to address climate change, including a nationwide limit on greenhouse gas emissions. In addition, the EPA has issued regulations, including the "Tailoring Rule," that subject greenhouse gas emissions from certain stationary sources to the Prevention of Significant Deterioration and Title V provisions of the federal Clean Air Act. Any such regulations could require us to modify existing permits or obtain new permits, implement additional pollution control technology, curtail operations or increase significantly our operating costs. Any regulation of greenhouse gas emissions, including, for example, through a cap-and trade system, technology mandate, emissions tax, reporting requirement or other program, could adversely affect our business, financial condition, reputation, operating performance, and product demand.

In addition to environmental regulation, we are subject to laws and regulations relating to human exposure to crystalline silica. Several federal and state regulatory authorities, including the U.S. Mining Safety and Health Administration and the U.S. Occupational Safety and Health Administration ("OSHA"), may continue to propose changes in their regulations regarding workplace exposure to crystalline silica, such as permissible exposure limits and required controls and personal protective equipment. For instance, in August 2013, OSHA proposed regulations that would reduce permissible exposure limits to 50 micrograms of respirable crystalline silica per cubic meter of air, averaged over an eight-hour day. Both the North American Industrial Mining Association and the National Industrial Sand Association, both of which we are a member, track silicosis related issues and aim to work with government policymakers in crafting such regulations.

We may not be able to comply with any new laws and regulations that are adopted, and any new laws and regulations could have a material adverse effect on our operating results by requiring us to modify our operations or equipment or shut down some or all of our plants. Additionally, our customers may not be able to comply with any new laws and regulations, and any new laws and regulations could have a material adverse effect on our customers by requiring them to shut down old plants or to relocate plants to locations with less stringent regulations farther away from our facilities. We cannot at this time reasonably estimate our costs of compliance or the timing of any costs associated with any new laws and regulations, or any material adverse effect that any new standards will have on our customers and, consequently, on our operations.

We are subject to the Federal Mine Safety and Health Act of 1977, which imposes stringent health and safety standards on numerous aspects of our operations.

Our operations are subject to the Federal Mine Safety and Health Act of 1977, as amended by the Mine Improvement and New Emergency Response Act of 2006, which imposes stringent health and safety standards on numerous aspects of mineral extraction and processing operations, including the training of personnel, operating procedures, operating equipment, and other matters. Our failure to comply with such standards, or changes in such standards or the interpretation or enforcement thereof, could have a material adverse effect on our business, financial condition, and results of operation or otherwise impose significant restrictions on our ability to conduct mineral extraction and processing operations.

We and our customers are subject to other extensive regulations, including licensing, plant and wildlife protection, and reclamation regulation, that impose, and will continue to impose, significant costs and liabilities. In addition, future regulations, or more stringent enforcement of existing regulations, could increase those costs and liabilities, which could adversely affect our results of operations.

In addition to the regulatory matters described above, we and our customers are subject to extensive governmental regulation on matters such as permitting and licensing requirements, plant and wildlife protection, wetlands protection, reclamation and restoration of mining properties after mining is completed. Our future success depends, among other things, on the quantity of our mineral reserves and our ability to extract these reserves profitably, and our customers being able to operate their businesses as they currently do.

In order to obtain permits and renewals of permits in the future, we may be required to prepare and present data to governmental authorities pertaining to the impact that any proposed exploration or production activities, individually or in the aggregate, may have on the environment. Certain approval procedures may require preparation of archaeological surveys, endangered species studies and other studies to assess the environmental impact of new sites or the expansion of existing sites. Compliance with these regulatory requirements is expensive and significantly lengthens the time needed to develop a site. Finally, obtaining or renewing required permits is sometimes delayed or prevented due to community opposition, including nuisance lawsuits, and other factors beyond our control. The denial of a permit essential to our operations or the imposition of conditions with which it is not practicable or feasible to comply could impair or prevent our ability to develop or expand a site. New legal requirements, including those related to the protection of the environment, or the identification of certain species as “threatened” or “endangered” could be adopted that could materially adversely affect our mining operations (including our ability to extract mineral reserves), our cost structure or our customers’ ability to use our sand-based proppants. Such current or future regulations could have a material adverse effect on our business and we may not be able to obtain or renew permits in the future.

Our inability to acquire, maintain or renew financial assurances related to the reclamation and restoration of mining property could have a material adverse effect on our business, financial condition, and results of operations.

We are generally obligated to restore property in accordance with regulatory standards and our approved reclamation plan after it has been mined. We are required under federal, state and local laws to maintain financial assurances, such as surety bonds, to secure such obligations. The inability to acquire, maintain or renew such assurances, as required by federal, state and local laws, could subject us to fines and penalties as well as the revocation of our operating permits. Such inability could result from a variety of factors, including:

- the lack of availability, higher expense, or unreasonable terms of such financial assurances;
- the ability of current and future financial assurance counterparties to increase required collateral; and
- the exercise by financial assurance counterparties of any rights to refuse to renew the financial assurance instruments.

Our inability to acquire, maintain or renew necessary financial assurances related to the reclamation and restoration of mining property could have a material adverse effect on our business, financial condition, and results of operations.

Risks Related to Ownership of Our Common Stock

The concentration of our capital stock ownership among our largest stockholders and their affiliates could limit your ability to influence corporate matters.

As of December 31, 2015, the AS Group ("American Securities") indirectly owned approximately 44.1% of our outstanding common stock. In December 2016, American Securities sold 23 million shares, or 22.6% of our common stock, in a secondary public offering. As a result of the transaction, American Securities indirectly owns approximately 21.5% of our outstanding common stock as of December 31, 2017. Our management, directors, and other employees own a significant portion of our stock. As a result, the portion of our stock held by the balance of the investing public taken as a whole is approximately 47.6% as of March 9, 2018. Consequently, our management and employees will continue to have significant influence over all matters that require approval by our stockholders, including the election of directors and approval of significant corporate transactions. This concentration of ownership may limit your ability to influence corporate matters, and as a result, actions may be taken that you may not view as beneficial.

Furthermore, conflicts of interest could arise in the future between us, on the one hand, and American Securities and its affiliates, including its portfolio companies, on the other hand, concerning among other things, potential competitive business activities or business opportunities. American Securities is a private equity firm in the business of making investments in entities in a variety of industries. As a result, American Securities' existing and future portfolio companies which it controls may compete with us for investment or business opportunities. These conflicts of interest may not be resolved in our favor.

Our stock price could be volatile, and you may not be able to resell shares of your common stock at or above the price you paid.

Broad market fluctuations may adversely affect the trading price of our common stock. Volatility in the market price of our common stock may prevent you from being able to sell your common stock at or above the price at which you purchased the stock. As a result, you may suffer a loss on your investment. Securities class action litigation has often been instituted against companies following periods of volatility in the overall market and in the market price of a company's securities. Such litigation, if instituted against us, could result in very substantial costs, divert our management's attention and resources and harm our business, operating results and financial condition.

In addition to the risks described in this section, the market price of our common stock may fluctuate significantly in response to a number of factors, most of which we cannot control, including:

- our operating and financial performance;
- quarterly variations in the rate of growth of our financial indicators, such as revenues, EBITDA, net income, and net income per share;
- actions taken by our competitors;
- the public reaction to our press releases, our other public announcements, and our filings with the SEC;
- strategic actions by our competitors;
- our failure to meet revenue or earnings estimates by research analysts or other investors;
- changes in revenue or earnings estimates, or changes in recommendations or withdrawal of research coverage, by equity research analysts;
- speculation in the press or investment community;
- the failure of research analysts to cover our common stock;
- sales of our common stock by us, the selling stockholders, or other stockholders, or the perception that such sales may occur;
- changes in accounting principles, policies, guidance, interpretations, or standards;
- additions or departures of key management personnel;
- actions by our stockholders;
- general market conditions, including fluctuations in commodity prices, sand-based proppants, or industrial and recreational sand-based products;
- domestic and international economic, legal and regulatory factors unrelated to our performance;
- failure to successfully complete the merger with Unimin; and
- the realization of any risks described under this “Risk Factors” section.

Our amended and restated certificate of incorporation contains a provision renouncing our interest and expectancy in certain corporate opportunities.

Our amended and restated certificate of incorporation provides for the allocation of certain corporate opportunities between us and American Securities. Under these provisions, neither American Securities, its affiliates and subsidiaries, nor any of their officers, directors, agents, stockholders, members, or partners will have any duty to refrain from engaging, directly or indirectly, in the same business activities or similar business activities or lines of business in which we operate, other than opportunities related to hydraulic fracturing proppants. For instance, a director of our company who also serves as a director, officer or employee of American Securities or any of its subsidiaries or affiliates may pursue certain acquisitions or other opportunities that may be complementary to our business and, as a result, such acquisition or other opportunities may not be available to us. These potential conflicts of interest could have a material adverse effect on our business, financial condition and results of operations if attractive corporate opportunities are allocated by American Securities to itself or its subsidiaries or affiliates instead of to us.

Our amended and restated certificate of incorporation and amended and restated bylaws, as well as Delaware law, contain provisions that could discourage acquisition bids or merger proposals, which may adversely affect the market price of our common stock.

Our amended and restated certificate of incorporation authorizes our Board of Directors (“Board”) to issue preferred stock without stockholder approval. If our Board elects to issue preferred stock, it could be more difficult for a third party to acquire us. In addition, some provisions of our amended and restated certificate of incorporation and amended and restated bylaws could make it more difficult for a third party to acquire control of us, even if the change of control would be beneficial to our stockholders, including:

- a classified board of directors;
- limitations on the removal of directors;
- limitations on the ability of our stockholders to call special meetings;
- advance notice provisions for stockholder proposals and nominations for elections to the Board to be acted upon at meetings of stockholders;
- providing that the Board is expressly authorized to adopt, or to alter or repeal our bylaws;
- establishing advance notice and certain information requirements for nominations for election to our Board or for proposing matters that can be acted upon by stockholders at stockholder meetings;
- giving the Board the power to authorize the issuance of one or more classes or series of preferred stock having such designations, preferences, limitations and relative rights, including preferences over our common stock respecting dividends and distributions; and
- providing that the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for certain stockholder actions involving the Company.

We currently do not intend to pay dividends on our common stock, and our debt agreements place certain restrictions on our ability to do so. Consequently, your only opportunity to achieve a return on your investment is if the price of our common stock appreciates.

We do not plan to declare dividends on shares of our common stock in the foreseeable future. Additionally, our existing revolving credit facility and our term loan both place certain restrictions on our ability to pay cash dividends. Consequently, unless we revise our dividend policy, your only opportunity to achieve a return on your investment in us will be if you sell your common stock at a price greater than you paid for it.

Future sales of our common stock by significant shareholders, or the perception in the public markets that these sales may occur, may depress our stock price.

Sales of substantial amounts of our common stock in the public market or the perception that these sales could occur, could adversely affect the price of our common stock and could impair our ability to raise capital through the sale of additional shares. As of March 9, 2018, we had 224,630,307 shares of common stock outstanding. A substantial number of these shares of common stock are freely tradable without restriction under the Securities Act. However, any shares of our common stock that may be held or acquired by our directors, executive officers and other affiliates, as that term is defined in the Securities Act, will be considered restricted or control shares under the Securities Act. Restricted or control shares may not be sold in the public market unless the sale is registered under the Securities Act or an exemption from registration is available. If a large number of these shares are sold on the open market, the price of our common stock could decline.

In the future, we may also issue securities if we need to raise capital in connection with a capital raise, acquisition, or to meet our debt obligations. The amount of shares of our common stock issued in connection with a capital raise or acquisition could constitute a material portion of our then outstanding shares of common stock.

If securities or industry analysts do not publish research or reports about our business, if they adversely change their recommendations regarding our common stock or if our operating results do not meet their expectations, our stock price could decline.

The trading market for our common stock is influenced by the research and reports that industry or securities analysts publish about us or our business. If one or more of these analysts cease coverage of our company or fail to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline. Moreover, if one or more of the analysts who cover our company downgrades our common stock or if our operating results do not meet their expectations, our stock price could decline.

Risks related to the Merger with Unimin

The announcement of the Merger with Unimin could adversely affect our business, financial results, and/or operations.

The announcement of the Merger could cause disruptions and create uncertainty surrounding our business. These uncertainties may impair our ability to attract, retain, and motivate key personnel if this transaction is consummated, and could cause suppliers, customers, and other counterparties to change existing business relationships. Changes to existing business relationships, including termination or modification of contractual or other agreements, could negatively affect our revenues, earnings, and cash flow, as well as the market price of our common stock.

We are also subject to restrictions on the conduct of our business prior to the consummation of the transaction as provided in the Merger Agreement. The Merger Agreement restricts us from making certain acquisitions and divestitures, entering into certain contracts, incurring certain indebtedness or expenditures, paying certain dividends, repurchasing or issuing securities and taking other specified actions without the consent of the other party until the earlier of the closing of the Merger or the termination of the Merger Agreement. These restrictions could prevent or delay the pursuit of strategic corporate or business opportunities, could result in our ability to respond effectively and/or timely to competitive pressures, industry developments, developments relating to our customers and suppliers, and future opportunities, and may as a result or otherwise have a significant negative impact on our business, prospects, results of operations and financial condition.

In addition, management and financial resources have been diverted and will continue to be diverted towards the completion of the Merger. We have incurred, and expect to incur, significant costs, expense, and fees for professional services and other transaction costs in connection with the Merger. These costs could adversely affect our financial condition and results of operation prior to the consummation of the Merger.

We may not complete the Merger within the timeframe we anticipate or at all, which could have an adverse effect on our business, financial results, and/or operations.

There can be no assurance that the Merger will occur. Completion of the Merger is subject to a number of closing conditions, including receipt of required regulatory approvals, and an affirmative stockholder vote. We can provide no assurance that all required approvals will be obtained or that all closing conditions will be satisfied and, if all required approvals are obtained and the closing conditions are satisfied, we can provide no assurance as to the terms, conditions, and timing of such approvals or the timing of the completion of the Merger.

If the Merger is not completed for any reason, including as a result of our stockholders failing to approve the Merger, our ongoing business may be adversely affected. Our business may be adversely impacted by the failure to pursue other beneficial opportunities during the pendency of the Merger, by the failure to obtain the anticipated benefits of completing the Merger, by payment of certain costs relating to the Merger (whether or not the Merger is completed), by the focus of our management on the Merger for an extended period of time rather than on normal business operations or opportunities or by the loss of certain senior managers and other key personnel by us as a consequence of the Merger not completing. We could experience negative reactions from our customers, regulators, and employees. In addition, we may experience negative reactions from the financial markets, and the market price of our common stock might decline as a result of any such failures to the extent that the current market price reflects a market assumption that the Merger will be completed. Any of these factors, among others, could have a material impact on our business, prospects, financial condition, and results of operations.

If the Merger Agreement is terminated and if our Board seeks another merger, business combination, or other transaction, our stockholders cannot be certain that we will be able to find a party willing to offer equivalent or more attractive consideration than the consideration our stockholders would receive in the Merger. If the Merger Agreement is terminated under certain circumstances specified in the Merger Agreement, we may be required to pay Unimin, or Unimin may be required to pay us, a termination fee of $52 million, depending on the circumstances surrounding the termination. We also may be negatively impacted if we become subject to litigation related to entering into or failing to consummate the Merger.

Even if the Merger is consummated, the anticipated benefits to stockholders may not be realized.

The success of the Merger will depend on, among other things, the combined company's ability to combine our business with that of Unimin in a manner that realizes anticipated synergies and meets or exceeds the projected standalone cost savings and revenue growth trends anticipated by each company. On a combined basis, the combined company expects to benefit from significant synergies, including integrating and optimizing our supply chain with that of Unimin in order to reduce logistics costs, decease cycles times of the companies' combined rail fleet and optimize the combined company's footprint. In the longer term, the combined company will evaluate applying our coating technologies to other minerals and applications in markets Unimin serves, advancing both companies' collective dust control technologies, growing our blending businesses across Unimin's assets and geographies and leveraging the best operational and commercial excellence programs of each company across the combined business. If the combined company is not able to successfully achieve these objectives, or the cost to achieve these synergies is greater than expected, then the anticipated benefits of the Merger may not be realized fully or at all, or may take longer to realize than expected.

We will incur substantial transaction fees and costs in connection with the Merger and the integration of our business with Unimin's business.

We have incurred and expect to incur additional material non-recurring expenses in connection with the Merger and completion of the transactions contemplated by the Merger Agreement. Additional unanticipated costs may be incurred in the course of coordinating our business and that of Unimin after completion of the Merger. The parties cannot be certain that the elimination of duplicative costs or the realization of other efficiencies related to the coordination of the two businesses after the completion of the Merger will offset the transaction and coordination costs in the near term or at all.

There are a large number of processes, policies, procedures, operations, technologies, and systems that must be integrated in connection with the Merger. While we have assumed that a certain level of expenses would be incurred in connection with the Merger and the other transactions contemplated by the Merger Agreement, there are many factors beyond our control that could affect the total amount of, or the timing of, anticipated expenses with respect to integration and implementation of the combined businesses.

There also may be additional unanticipated significant costs in connection with the Merger that the combined company may not recoup. These costs and expenses could reduce the benefits and additional income we expect to achieve from the Merger. Although we expect that the benefits of the Merger will offset the transaction expenses and integration costs over time, no assurance can be given that any benefits will be achieved in the near term, if at all.

Further, even if the Merger is not completed, we will need to pay certain pre-tax costs relating to the Merger incurred prior to the date the Merger was abandoned, such as legal, accounting, financial advisory, filing and printing fees, reorganization and restructuring costs, employee-benefit related expenses, and other related charges. Additionally, if the Merger is not completed within the expected timeframe, such delay may materially adversely affect the benefits we may achieve as a result of the Merger and could result in additional pre-tax transaction costs, loss of revenue or other effects associated with uncertainty about the Merger. Satisfying the conditions to, and completion of, the Merger may take longer than, and could cost more than, we expect.

Combining our business with that of Unimin may be more difficult, costly, or time-consuming than expected, which may adversely affect the combined company's results of operations and negatively affect the value of the combined company common stock following the Merger.

We have entered into the Merger Agreement with Unimin because we believe that the Merger will be beneficial to our respective companies and stockholders and that combining our business with that of Unimin will produce cost synergies and other benefits. However, Unimin and we have historically operated as independent companies and will continue to do so until the closing of the Merger. Following the closing of the Merger, the combined company's management will need to integrate Unimin's and our respective businesses. The combination of two independent businesses of our size of and scale is a complex, costly, and time-consuming process and the management of the combined company may face significant challenges in implementing such integration, some of which may be beyond their control including, without limitation:

- difficulties in achieving, in a timely manner, anticipated cost savings, synergies, business opportunities, and growth prospects;
- difficulties in managing a larger combined company, addressing differences in historical business culture, and retaining key personnel;
- difficulties in integrating Unimin's business practices as a private company into that of a public company and building a public company infrastructure of the combined company;
- the diversion of our respective management teams' attention from ongoing business operations as a result of the Merger;
- the possibility of incorrect assumptions underlying expectations regarding the integration process;
- unanticipated difficulties in integrating information technology, communications programs, financial procedures and operations, and other systems (including those provided by third-party service providers), procedures and policies;
- difficulty addressing possible differences in corporate cultures and management philosophies;
- unforeseen and unexpected liabilities related to the Merger or our business;
- any potential deterioration of credit ratings resulting from the Merger;
- unanticipated changes in applicable laws and regulations;
- managing tax costs or inefficiencies associated with integrating the operations of the combined company;
- combining separate organizations located in different regions of the country; and
- any other unforeseen expenses or delays associated with the Merger.

Some of these factors will be outside of our control, and any one of them could result in increased costs or decreased revenue, which could materially impact the combined company's business, financial conditions, and results of operations, as well as increase the risk of operational errors due to management teams being diverted from ongoing business concerns, which could have negative reputational or regulatory impacts. The integration process and other disruptions resulting from the Merger may also adversely affect the combined company's relationships with employees, suppliers, customers, distributors, licensors, and other with whom we have business or other dealings, and difficulties in integrating our business with that of Unimin could harm the reputation of the combined company.

If the combined company is not able to combine our business with that of Unimin successfully in an efficient, cost-effective, and timely manner, the anticipated benefits and cost synergies of the Merger may not be realized fully, or at all, or may take longer to realize than expected, and the value of the combined company common stock or the revenue, levels of expenses, and results of operations of the combined company may be affected adversely. If the combined company is not able to adequately address integration challenges, the combined company may be unable to successfully realize the anticipated benefits of the Merger.

Further, while either party can, in general, refuse to complete the Merger if there is a material adverse effect (as defined in the Merger Agreement) affecting the other party prior to the completion of the Merger, certain types of changes do not permit either party to refuse to complete the Merger, even if such changes would have a material adverse effect on us. If adverse changes occur but we must still complete the Merger, the market price of the combined company common stock may suffer.

We may be materially adversely affected by negative publicity related to the Merger and in connection with other matters.

From time to time, political and public sentiment in connection with the Merger and in connection with other matters could result in a significant amount of adverse press coverage and other adverse public statements affecting Unimin and us. Adverse press coverage and other adverse statements, whether or not driven by political or public sentiment, also may result in investigations by regulators, legislators, and law enforcement officials or in legal claims. Responding to these investigations and lawsuits, regardless of the ultimate outcome of the proceeding, can divert the time and effort of senior management from the management of Unimin's and our respective businesses. Addressing any adverse publicity, governmental scrutiny or enforcement, or other legal proceedings is time-consuming and expensive and, regardless of the factual basis for the assertions being made, can have a negative impact on our reputation, on the morale and performance of our employees, and on our relationships with our regulators. It also may have a negative impact on our ability to take timely advantage of various business and market opportunities. The direct and indirect effects of negative publicity, and the demands of responding to and addressing it, may have a material adverse effect on our business, financial condition, and results of operations and cash flows.

The Merger Agreement contains provisions that could discourage a potential alternative acquirer that might be willing to pay more to acquire us.

The Merger Agreement contains provisions that may discourage a third party from submitting a business combination proposal to us during the pendency of the Merger. In particular, the Merger Agreement includes a general prohibition on soliciting or, subject to certain exceptions, entering into discussions with any third party regarding any acquisition or combination proposal or offers for competing transactions, subject to limited exceptions. While our Board may withdraw or change its recommendation regarding the Merger Agreement in response to an unsolicited third-party proposal to acquire us that our Board determines to be superior to the Merger with Unimin, there are restrictions on our Board's ability to do so. Further, even if our Board withdraws its approval or recommendation of the Merger, we will still be required to submit the Merger proposal to a vote of our stockholders at a special meeting unless the Merger Agreement is earlier terminated in accordance with its terms. In addition, we may be required to pay Unimin a termination fee of $52 million in certain circumstances involving acquisition proposals for competing transactions. These provisions could discourage a potential third-party acquirer from considering or proposing an alternative acquisition, even if it were prepared to pay consideration with a higher value than the proposed to be paid in the Merger. If the Merger Agreement is terminated and we determine to seek another strategic transaction, we may not be able to negotiate a transaction on terms comparable to, or better than, the terms of the Merger.

Following the closing of the Merger, any inability to access the debt capital markets could impair the combined company's liquidity, business, or financial condition.

Any limitation on the ability of the combined company to raise money in the debt markets could have a substantial negative effect on the combined company's liquidity. The combined company's access to the debt markets in amounts adequate to finance its activities could be impaired as a result of various factors, some of which are not specific to the combined company, such as a severe disruption of the financial markets and interest rate fluctuations.

The costs and availability of financing from the debt capital markets also will be dependent on the creditworthiness of the combined company. The level and quality of the combined company's earnings, operations, business, and management, among other things, will impact its creditworthiness and potentially any credit ratings assigned by rating agencies to the combined company. A decrease in credit ratings assigned to the combined company by the ratings agencies may, to the extent that the combined company wishes to secure further borrowing, negatively impact the combined company's access to the debt capital markets and increase the combined company's cost of borrowing. It may also impact investor confidence in the combined company and consequently cause a decline in the price of the combined company common stock. There can be no assurance that the combined company will have a credit rating assigned to it by rating agency or maintain any specific credit rating on a stand-alone basis. Any actual or anticipated changes or downgrades in such credit ratings may have a negative impact on the combined company.

Our current stockholders will have a reduced ownership and voting interest in, and will exercise less influence over management of, the combined company after the Merger than they did with respect to Fairmount Santrol prior to the Merger.

Our stockholders currently have the right to vote in the election of our Board and on other matters affecting us that are subject to a vote of stockholders. Upon the closing of the Merger, each Fairmount Santrol stockholder who receives combined company common stock in the Merger will become a combined company stockholder with a percentage ownership of, and voting interest in, the combined company that is smaller than such stockholder's percentage ownership of, and voting interest in, us immediately prior to the Merger. Immediately following the closing of the Merger, our stockholders, as a group, will own 35% of the combined company. In addition, our former directors will constitute less than half of the combined company's board of directors. Accordingly, our stockholders will have less influence on the management and policies of the combined company than they now have on our management and policies.

Sibelco will exercise significant influence over the combined company, and its interests in the combined company may be different than yours.

Upon the completion of the proposed Merger, Sibelco will beneficially own approximately 65% of the outstanding shares of combined company common stock. In addition, pursuant to a Stockholders Agreement, Sibelco will have certain preemptive rights pursuant to which it will be able to purchase its pro rata portion of any new securities that the combined company may from time to time propose to issue or sell to any person, with certain exceptions. Accordingly, subject to applicable law and the limitations set forth in the Stockholders Agreement, Sibelco will be able to exercise significant influence over the combined company's business policies and affairs, including any action requiring the approval of the combined company's stockholders, including the adoption of amendments to the certificate of incorporation and bylaws and the approval of a merger or sale of all or substantially all of the combined company's assets.

In addition, pursuant to the Stockholders Agreement, Sibelco will have the right to nominate the majority of the initial directors of the combined company. Subject to the limitations included in the Stockholders Agreement, the directors designated by Sibelco will have significant authority to effect decisions affecting the capital structure of the combined company, including the issuance of additional capital stock, the incurrence of additional indebtedness, the implementation of stock repurchase programs and the decision of whether or not to declare dividends.

The interests of Sibelco may conflict with the interests of other combined company stockholders. For example, Sibelco may support certain long-term strategies or objectives for the combined company that may not be accretive to combined company stockholders in the short term. The concentration of ownership may also delay, defer or even prevent a change in control of the combined company, even if such a change in control would benefit the other combined company stockholders and may make some transactions more difficult or impossible without the support of

Sibelco. This significant concentration of share ownership may adversely affect the trading price for the combined company common stock because investors may perceive disadvantages in owning stock in companies with stockholders who own significant percentages of a company's outstanding stock.

The combined company will be a "controlled company" within the meaning of the rules of the New York Stock Exchange ("NYSE") and, as a result, will qualify for, and intends to rely on, exemptions from certain corporate governance requirements.

In addition to the consequences of the concentration of share ownership and possible conflicts between the interests of Sibelco and your interests discussed above, the combined company will initially be a "controlled company" within the meaning of the rules of the NYSE. Under these rules, a company in which over 50% of the voting power is held by an individual, a group or another company is a "controlled company" and is not required to have:

- a majority of its board of directors be independent directors;
- a nominating and corporate governance committee or a compensation committee, or to have such committees be composed entirely of independent directors; and
- the compensation of the chief executive officer be determined, or recommended to the board of directors for determination, either by a compensation committee comprised of independent directors or by a majority of the independent directors on the board of directors.

Following the proposed Merger, the combined company intends to rely on certain of these exemptions. In particular, a majority of the combined company's directors will not be independent directors. Accordingly, you will not have the same protections afforded to stockholders of companies that are subject to all of the corporate governance requirements of the NYSE without regard to the exemptions available for "controlled companies," and the combined company's initial status as a "controlled company" may adversely affect the trading price for the combined company common stock.

Upon the completion of the Merger, the combined company will become a public reporting company subject to financial reporting and other requirements.

Upon the completion of the proposed Merger, as a public company, the combined company will become subject to reporting, disclosure control and other obligations under the Exchange Act, the Sarbanes-Oxley Act of 2002 ("SOX"), the Dodd-Frank Wall Street Reform and Consumer Protection Act, as well as rules adopted, and to be adopted, by the SEC and the NYSE. The combined company's management and other personnel will need to devote a substantial amount of time to these compliance initiatives. As a result, the combined company may incur higher legal, accounting and other expenses than before, and these expenses may increase even more in the future. For example, subject to certain exceptions, Section 404 of SOX requires an annual management assessment of the effectiveness of internal controls over financial reporting and a report by the combined company's independent registered public accounting firm addressing these assessments. If the combined company is unable to implement its compliance initiatives in a timely and effective fashion, its ability to comply with the financial reporting requirements and other rules that apply to reporting companies could be impaired.

In addition, the combined company cannot assure you that there will not be material weaknesses or significant deficiencies in its internal control over financial reporting in the future. Any failure to maintain internal control over financial reporting could severely inhibit the combined company's ability to accurately report its cash flows, results of operations or financial condition. If the combined company is unable to conclude that its internal control over financial reporting is effective, or if its independent registered public accounting firm determines that the combined company has a material weakness or significant deficiency in its internal control over financial reporting, the combined company could lose investor confidence in the accuracy and completeness of its financial reports, the market price of its common stock could decline, and the combined company could be subject to sanctions or investigations by the NYSE, the SEC or other regulatory authorities. Failure to remedy any material weakness in the combined company's internal control over financial reporting, or to implement or maintain other effective control systems required of public companies, could also restrict its future access to the capital markets and reduce or eliminate the trading market for the combined company common stock.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Our Reserves

We control one of the largest bases of silica sand reserves in the United States. From our reserves, we are able to produce a large selection of high-purity silica sand, lake sand, coated sand, silica gravel, and other specialty sands. According to the SEC Industry Guide 7, reserves are defined as that part of a mineral deposit which could be economically and legally extracted or produced at the time of the reserve determination. Reserves are categorized into proven (measured) reserves and probable (indicated) reserves. In accordance with SEC Industry Guide 7, our reserves are categorized as proven or probable.

We estimate that the company has approximately 893.4 million tons of proven recoverable mineral reserves as of December 31, 2017. Additional probable but not proven reserves are considered immaterial. Mineral reserve estimated quantities and characteristics at our properties are overseen by our internal geologists and engineers and validated by third party consulting company, GZA GeoEnvironmental, Inc.

Summary of Reserves

The following table provides information on each of our sand mining facilities. Included is the location and area of the facility; the type, amount, and ownership status of its reserves and whether or not they meet API standards; and the primary end markets that it serves:

Active Mines	Acres Owned/Leased		API	Proven Reserves In-Situ (Thousand Tons)	Estimated Recovery Percentages	Primary End Markets
API White						
Wedron, IL	2,230 0	O L	API White	223,296	80%	proppant, glass, foundry, specialty products
Maiden Rock, WI	987 576 377	O OM L	API White	24,061	70%	proppant, glass, foundry
Menomonie, WI	2 366	O L	API White	23,102	75%	proppant, glass, foundry, specialty products
Shakopee, MN	93 115	O L	API White	14,133	80%	proppant, glass, foundry, specialty products
Brewer, MO	353 0	O L	API White	31,460	80%	proppant, glass, foundry
API Brown						
Voca, TX	1,962 0	O L	API Brown	187,013	50%	proppant, glass, foundry
Non-API						
Chardon, OH	591 0	O L	Non-API	17,337	80%	glass, turf, landscaping, construction, filler/extender, foundry, industrial, proppant, filtration

Beaver, OH	91 216	O L	Non-API	12,473	75%	turf, landscaping, industrial
Development Stage						
Katemcy, TX	848 0	O L	API Brown	113,278	50%	potential to serve proppant, glass, foundry
Diamond Bluff, WI	10 2,674	O L	API White	44,539	70%	potential to serve proppant, glass, foundry
Kermit, TX	0 3,250	O L	API Brown	165,772	90%	potential to serve proppant, glass, foundry
Inactive						
Bay City, WI	40 322 1,131	O OM L	API White	19,251	70%	proppant, glass, foundry
Harrietta, MI	255 86	O L	Non-API	11,087	75%	foundry, construction
Grand Haven, MI	143 0	O L	Non-API	6,555	85%	N/A
Total				893,357		

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Descriptions of Sand Facilities

As of December 31, 2017, we had seven active sand mining and processing operations facilities located in Illinois, Wisconsin, Minnesota, Missouri, Texas, and Ohio. We also have a processing facility located in Ontario, Canada that does not have any sand reserves but has an annual processing capacity of approximately 336,000 tons per year. We have inactive mines in Michigan, Minnesota, and Wisconsin and undeveloped mines in Texas and Wisconsin.

The mineral rights and access to mineral reserves for the majority of our facilities are secured through land that is owned. There are no underlying agreements and/or royalties associated with these properties. Where there are agreements and/or royalties associated related to our properties, we have provided more information in the facility descriptions below. We are required to pay production royalties on a per ton basis pursuant to our mineral reserve leases.

API White

Wedron, Illinois. Our Wedron, Illinois facility is located in Wedron, LaSalle County, Illinois and consists of owned real property. The facility, which is approximately 6 miles northeast of Ottawa, Illinois, is accessible via County Highway 21 off of State Highway 71 and State Highway 23. The site utilizes natural gas and electricity to process sand. Mining methods include mechanical removal of glacial overburden followed by drilling, blasting, and hydraulic mining. Hydraulically mined sand is pumped to the wash plant to be hydraulically sized and sent to the dry plant where it is dried and screened.

Our Wedron facility and its predecessors have operated since 1890. The washing and drying operations at our Wedron facility were upgraded in 2012, 2013, 2014, 2015 and 2016 in conjunction with significant capacity and reserve base increases. Significant railyard expansions in 2014 and 2015 facilitated greater flexibility and provided for unit train capabilities. Processed sand is shipped from the facility via truck or rail on the Burlington Northern Santa Fe ("BNSF") and CSX Railroads via the Illinois Railnet. Our Wedron facility utilizes approximately 50,000 linear feet of rail. A portion of the sand is transferred by conveyor or trucked from our Wedron facility and is coated at our Technisand Wedron and/or Troy Grove, Illinois resin-coating facilities. The total net book value of the Wedron facility's real property and fixed assets as of December 31, 2017 was $250.5 million.

The sand reserve mined from the open-pit mine at the Wedron facility is the St. Peter Sandstone formation. The Wedron facility produces high purity, round grain silica sand that meets the API requirements for proppant application. The Wedron facility production capacity, including the expansion project completed in April 2016, is approximately 9.0 million tons per year. The surface deposit at the Wedron facility is a high purity, round grain sand with a minimum silica content of 99%, which meets API requirements for proppant application. The controlling attributes are iron and grain size. Iron is concentrated near the surface, where orange iron staining is evident and also increases where the bottom contact becomes concentrated in iron pyrite. Maximum average full face iron content is 0.020%. The deposit tends to exhibit a coarser grain size distribution in the top half of the deposit.

Maiden Rock, Wisconsin. Our Maiden Rock, Wisconsin facility is located in Maiden Rock, Pierce County, Wisconsin and consists of owned and leased real property. The mineral reserves at the Maiden Rock facility are secured under mineral leases that, with the exercise of renewal options, expire between 2021 and 2046. The facility is within the Village and Town of Maiden Rock along State Highway 35. The Maiden Rock facility utilizes natural gas and electricity to process sand. This is an underground mine and mining methods include drilling and blasting. The reserves are located at a depth of 230 feet. The sand is removed from the face of the tunnels with a front end loader and deposited into a container where it is combined with water to form a slurry. The slurry is pumped to the surface wash plant to be hydraulically sized and sent to the dry plant where it is dried and screened.

The Maiden Rock facility and its predecessors have operated since the 1920s. We acquired a 50% equity interest in the facility from Wisconsin Industrial Sand in 1997, and acquired the remaining equity interest in 1999. The washing and drying operations at the Maiden Rock facility were upgraded in 2012 in conjunction with a significant capacity increase. Processed sand is shipped from the Maiden Rock facility via truck or rail on the BNSF Railroad.

The Maiden Rock facility utilizes a new rail loadout facility and approximately 5,000 linear feet of rail constructed in 2012. This plant is unit train capable, utilizing the new unit train railyard at the Bay City facility. The total net book value of the Maiden Rock facility's real property and fixed assets as of December 31, 2017 was $45.1 million.

The sand reserve mined from the underground mine at the Maiden Rock facility is the Jordan Sandstone formation. The Maiden Rock facility produces high purity, round grain silica that meets API requirements for proppant application. The mining capacity is approximately 1.3 million tons per year.

The underground deposit at this facility is a high purity, round grain sand with a minimum silica content of 99%, which meets API requirements for proppant application. The controlling attributes are turbidity, acid solubility, and grain size. The deposit tends to exhibit a coarser grain size distribution near the top of the deposit. Grain size distribution is maintained through control of mine horizon. Turbidity and acid solubility are controlled though the use of hydrosizers during wet processing.

Menomonie, Wisconsin. Our Menomonie, Wisconsin facility is located in Menomonie, Dunn County, Wisconsin and consists of owned and leased real property. The mineral reserves at our Menomonie facility are secured under mineral subleases that expire in 2044. We constructed the Menomonie facility in 2007 approximately two miles east of Menomonie and it is accessible via US Highway 12 / State Highway 16. The Menomonie facility utilizes natural gas and electricity to process sand. Mining methods include the mechanical removal of glacial overburden followed by drilling, blasting and mechanical mining. Mined sand is processed and shipped by truck or rail. A remote transload facility adjacent to the Union Pacific (UP) Railroad is located approximately one mile north of the site. The total net book value of the Menomonie facility's real property and fixed assets as of December 31, 2017 was $8.8 million.

The sand reserve mined from the open-pit at the Menomonie facility is the Wonewoc Sandstone formation. The Menomonie facility produces high purity, round grain silica sand that meets the API requirements for proppant application. The mining capacity is approximately 750,000 tons per year. The surface deposit at the Menomonie facility is a high purity, round grain sand with a minimum silica content of 99% which meets API requirements for proppant application. The controlling attributes are turbidity, iron, and grain size. Maximum average full face iron content is 0.080%. The deposit tends to exhibit a coarser grain size distribution in top half of deposit. Turbidity is controlled though the use of attrition scrubbers during wet processing. Iron is controlled during processing through the use of magnetic separators.

Bay City, Wisconsin. Our Bay City, Wisconsin facility is located in Isabelle and Hartland Township, Pierce County, Wisconsin and consists of owned and leased real property. The mineral reserves at the Bay City facility are secured under mineral leases that, with the exercise of renewal terms, expire between 2045 and 2106. The Bay City facility was opened in 1919 and operated continuously until 1989. We acquired the mine through the acquisition of Wisconsin Specialty Sand and constructed the associated Hager City processing (drying) plant in 2007. This underground mine is approximately 1.5 miles northeast of Bay City on State Highway 35. The reserves are located at a depth of 230 feet. The mine utilizes electricity to process sand. Mining methods include drilling and blasting. As a result of the challenging conditions in the global oil and gas markets, these operations were idled in 2015. Although the processing facility was idled, the railyard remains active and provides unit train capabilities for the Maiden Rock facility.

Mined sand is shipped approximately five miles to the Hager City plant for further processing and eventual shipment via truck or rail on the BNSF Railroad. The Hager City plant, constructed by Wisconsin Industrial Sand Company, LLC in 2007, was expanded in 2013 and 2014 with the addition of a new rail yard containing approximately 19,000 linear feet of rail for assembling unit trains. The total net book value of the Bay City facility's real property and fixed assets as of December 31, 2017 was $41.4 million.

The sand reserve mined from the underground mine at the Bay City facility is the Jordan Sandstone formation. The Bay City facility produces high purity, round grain silica that meets API requirements for proppant application. The mining capacity is approximately 780,000 tons per year. The underground deposit at the Bay City facility is a high purity, round grain sand with a minimum silica content of 99% which meets API requirements for proppant application. The controlling attributes are turbidity, acid solubility, and grain size. The deposit tends to exhibit a coarser grain size distribution near the top of the deposit. Grain size distributions are maintained through control of mine horizon. Turbidity and acid solubility are controlled though the use of hydrosizers during wet processing.

Shakopee, Minnesota. Our Shakopee, Minnesota facility is located in Shakopee, Scott County, Minnesota and consists of owned and leased real property. The mineral reserves at our mine are secured by fee ownership and a lease agreement that, with the exercise of renewal options, expires in 2030. The facility is approximately four miles south of Shakopee, Minnesota and is accessible via US Highway 169. The Shakopee facility utilizes natural gas and electricity to process sand. Mining methods include the mechanical removal of glacial overburden followed by drilling, blasting and mechanical mining. As a result of the challenging conditions in the global oil and gas markets, these operations were idled in 2015 and re-opened in 2017.

Mining occurred at the Shakopee facility for a short time in the 1980s by others until the property was reclaimed. The mine was permitted by Great Plains Sand in 2012 and acquired by us in 2013, at which time we changed the name to Shakopee Sand LLC. We upgraded the washing and drying operations at the facility following the acquisition. Processed sand is shipped from the Shakopee facility via truck or by rail on the UP. The total net book value of the Shakopee facility's real property and fixed assets as of December 31, 2017 was $12.0 million.

The sand reserve mined from the open-pit mine at the Shakopee facility is the Jordan Sandstone formation. The deposit produces high purity, round grain silica sand which meets API requirements for proppant application. The mining capacity is approximately 718,000 tons per year. This surface deposit at the Shakopee facility is a high purity, round grain sand with a minimum silica content of 99% which meets API requirements for proppant application. The controlling attributes are turbidity and grain size. The deposit tends to exhibit a coarser grain size distribution in the top half of deposit. Turbidity is controlled through the use of hydrosizers and attrition scrubbers during wet processing. Fine and coarse areas are blended to meet the grain size average.

Brewer, Missouri. Our Brewer, Missouri mine is located in Brewer, Perry County, Missouri and consists of owned real property. The facility, approximately one-half mile northwest of Brewer, Missouri, is accessible via State Highway M. We acquired the inactive mine in 2013. The operation was reactivated and began production in December 2014 but was idled in 2015 due to the challenging conditions in the global oil and gas markets. In January 2017, the decision was made to return Brewer to full production due to an increase in demand for proppants. The mine resumed production in the first quarter of 2017. Mining methods include the mechanical removal of overburden followed by drilling, blasting and mechanical mining. The total net book value of the facility's real property and fixed assets as of December 31, 2017 was $22.2 million.

The sand reserve mined from the open-pit mine at the Brewer facility is the St. Peter Sandstone formation. The deposit produces high purity, round grain silica that meets API requirements for proppant application. The mining capacity is approximately 1.3 million tons per year. The surface deposit at the Brewer facility is a high purity, round grain sand with a minimum silica content of 99% which meets API requirements for proppant application. The controlling attributes are turbidity and grain size. The deposit tends to exhibit a coarser grain size distribution in top half of deposit. Turbidity is controlled through the use of hydrosizers and attrition scrubbers during wet processing.

API Brown

Voca, Texas. Our Voca, Texas facility is located in Voca, Mason and McCulloch Counties, Texas and consists of owned real property. The facility, which is approximately 1.5 miles southeast of Voca, is accessible via County Highway 1851, south of State Highway 71. Sand mining and processing operations were developed at the facility during 2008, with the construction of existing plants completed in 2012. We acquired the operations in 2013. The Voca facility utilizes propane and electricity to process sand. Mining methods include the mechanical removal of thin overburden followed by drilling, blasting, and mechanical mining. The total net book value of the Voca facility's real property and fixed assets as of December 31, 2017 was $92.4 million.

The sand reserve mined at our Voca property is the Hickory Sandstone Member of the Riley formation. The Voca facility produces high purity, round grain silica which meets API requirements for proppant application. The mining capacity is approximately 1.2 million tons per year. The surface deposit at the Voca facility is a high purity, round grain sand with a minimum silica content of 98% which meets API requirements for proppant application. The controlling attributes are turbidity and grain size. Turbidity is controlled through the use of hydrosizers and attrition scrubbers during wet processing. Grain size is controlled through the use of hydrosizers and wet screening.

Non-API

Chardon, Ohio. Our Chardon, Ohio facility is located in Geauga County, Ohio and consists of owned real property. The facility, which is approximately two miles south of Chardon, is accessible via State Route 44. The site utilizes natural gas and electricity to process sand. Mining methods include the mechanical removal of glacial overburden followed by drilling, blasting and mechanical mining.

The mine was opened in 1938 and acquired by Best Sand in 1978. We acquired the mine as a result of the merger of Wedron Silica and Best Sand in 1986. Upgrades were made to the wash plant in 2009, the fluid bed dryer in 2012 and the rotary dryer circuit in 2012. The reserve base was increased by 950,000 tons in 2014 and 1.2 million tons in 2015. The total net book value of the Chardon facility's real property and fixed assets as of December 31, 2017 was $10.5 million.

The sand reserve mined from the open-pit mine at the Chardon facility is the Sharon Conglomerate formation. This plant produces high purity, sub-angular grain silica sand and gravel used for industrial and recreational markets. The mining capacity is approximately 1.1 million tons per year. The surface deposit at the Chardon facility is a high purity, sub-round grain silica sand/gravel. The deposit has a minimum silica content of 99% ideal for glass and foundry applications. The contributing attributes are iron and grain size distribution. The mine's iron averages 0.084%.

Beaver, Ohio. Our Beaver, Ohio facility, acquired in 1994 from Schrader Sand and Gravel, is located in Jackson Township, Pike County, Ohio and consists of owned and leased real property. The mineral reserves at this facility are secured under mineral leases that, with the exercise of renewal options, expire in 2024. The facility, which is approximately six miles northeast of Beaver, Ohio, is accessible via County Road 521. The facility utilizes electricity to process sand. Mining methods include the mechanical removal of glacial overburden followed by drilling, blasting and mechanical mining. The total net book value of the Beaver facility's real property and fixed assets as of December 31, 2017 was $1.3 million.

The sand reserve mined from the open-pit mine at the Beaver facility is the Sharon Conglomerate formation. The Beaver facility produces high purity, sub-angular grain silica sand and gravel. The mining capacity is approximately 426,000 tons per year. The surface deposit at the Beaver facility is a high purity, sub-angular grain silica sand/gravel. The deposit has a minimum silica content of 99% and is ideal for turf/landscaping and industrial applications. The controlling attribute is cleanliness. Cleanliness is controlled through wet processing.

Harrietta, Michigan. Our Harrietta, Michigan facility is located in Slagle Township, Wexford County, Michigan and consists of owned and leased real property. The facility, which is approximately three miles northeast of Harrietta, Michigan, is accessible via West 28th Road and State Highway 37. The facility utilizes recycled oil and electricity to process sand. Mining methods include mechanical removal of overburden and excavation of sand.

We acquired Wexford Sand from Sargent Sand in 1998. A new screen plant was installed in 2008. The processed sand is shipped from the Harrietta facility by bulk via truck or rail on the Great Lakes Central Railroad. The total net book value of the Harrietta facility's real property and fixed assets as of December 31, 2017 was $1.2 million.

The sand reserve mined from the open-pit mine at the Harrietta facility is a glacial outwash sand deposit for proppant applications. Glacial outwash is glacial sediments deposited by melting glacial ice at the terminus of a glacier. The mining capacity is approximately 625,000 tons per year. This surface deposit at the Harrietta is sub-round grain sand with minimum silica content of 96% ideal for foundry applications. The controlling attributes are Acid Demand Value (ADV) and grain size distribution.

As a result of challenging conditions in end markets, this facility was closed in 2015. However, it is in the process of being re-opened and producing sand, and is scheduled for the second quarter of 2018.

Grand Haven, Michigan. Our Grand Haven, Michigan facility is located in Grand Haven, Ottawa County, Michigan. The mine and facility consists of owned real property that is subject to a reverter to the prior property owner in 2021. The mine and facility have been closed since 2014. The facility, which is approximately two miles south of Grand Haven, Michigan, is accessible via Lakeshore drive and US Highway 31.

The sand reserve historically mined from the open-pit mine at the facility is a dune sand deposit. This surface dune deposit is a high purity, sub-round grain sand with minimum silica (SiO2) content of 96% ideal for foundry metal casting applications. The controlling attributes are grain size and chemistry, (ADV). The mine's ADV ranges from 30-50. ADV is controlled through floatation during wet processing. The grain size distribution averages greater than 50% plus 50 mesh. There is no net book value assigned to the Grand Haven mine or facility.

Development

Katemcy, Texas. Our Katemcy, Texas reserves are located in Katemcy, Mason County, Texas and consist of owned real property. The mine property was purchased in September 2013 and is accessed via County Road 1222 and State Highway 87. The mine has not yet been developed and the property is currently used as agricultural land. This deposit is capable of producing high purity, round grain silica sand that meets API requirements for proppant application. Plans to develop the mine property are under review. The sand reserve at this proposed open-pit mine is the Hickory Sandstone Member of the Riley formation. The total net book value of Katemcy as of December 31, 2017 is included in the net book value of the Voca facility.

The surface reserve is a high purity, round grain sand with a minimum silica content of 98% which meets API requirements for proppant application. The controlling attributes will be turbidity and grain size.

Diamond Bluff, Wisconsin. Our Diamond Bluff, Wisconsin reserves are located in Diamond Bluff and Oak Grove Townships, Pierce County, Wisconsin and consist of owned and leased real property. The mineral reserves are secured under mineral leases that expire between 2063 and 2064. The mine access property was purchased in 2014 and is undeveloped. The mine was permitted by the Diamond Bluff Township in 2012 and by the Oak Grove Township in 2014. The facility, which is located approximately one mile northwest of the unincorporated community of Diamond Bluff, is accessible off of 1005th Street via State Highway 35. The proposed underground mine site will be at a depth of 230 feet and will utilize electricity to process sand through drilling, blasting, mechanical, and hydraulic mining methods. Mined sand will be shipped approximately eight miles to the Hager City plant for further processing and eventual shipment via truck or rail on the BNSF Railroad. The total net book value of the facility's real property and fixed assets as of December 31, 2017 is included in the net book value of the Bay City facility.

The sand reserve at this proposed underground mine is the Jordan Sandstone formation. This deposit is capable of producing high purity, round grain silica sand which meets API requirements for proppant application. This underground reserve is a high purity, round grain sand with a minimum silica content of 99% which meets API requirements for proppant application. The controlling attributes are turbidity, acid solubility, and grain size. The deposit tends to exhibit a coarser grain size distribution near the top of the deposit.

Kermit, Texas. Our Kermit, Texas reserves are located eight miles east of Kermit, Winkler County, Texas and consists of approximately 3,250 acres of leased property. The location is accessible via Highway 115 with access to the Delaware and Midland basins. The facility (currently under construction) will mine sand through the excavation method and will use natural gas and electricity to process sand. The sand will be transported by slurry to the processing plant where it will be washed, screened, and dried. The finished product will be shipped via truck. At December 31, 2017, this property is a greenfield site with construction expected to be completed and the facility expected to be in operation in the second quarter of 2018. The net book value of the location's real property and fixed assets is $79.2 million as of December 31, 2017. The mining capacity will be approximately 3.0 million tons.

The sand reserves are an active dune deposit that is capable of producing high purity and round grain silica sand that meets API requirements for proppant application.

Coating, Resin Manufacturing, Specialty Blending, and Research and Development Facilities

We have six strategically located coating facilities in North America near our mining operations. These facilities are on a combination of leased as well as owned land and buildings. As of March 2018, two of the domestic facilities were inactive or closed. We also have three international coating facilities located in Mexico, Denmark, and China.

We have four specialty blending facilities, located in Ohio, Illinois, and Texas. These operations make custom blends of aggregates for use in industrial and commercial flooring, polymer cements, grouts and performance mortars. An additional specialty facility, Mineral Visions, located in Illinois, produces specialty colored quartz. We have a manufacturing facility in Michigan, Alpha Resins, which produces resins primarily for our own use. These properties are all on owned land and buildings. We have research and development facilities also located in Texas and Illinois. These facilities are leased.

The following map reflects the location of our mining and processing, resin manufacturing, coating, specialty blending and R&D facilities and our administrative offices:

The following table reflects the segment(s) served by significant locations:

Location	Segment Proppant Solutions	I&R	Corporate
Chesterland, OH	—	—	X
Ottawa, IL	—	—	X
Sugar Land, TX	—	—	X
Benton Harbor, MI	—	—	X
Wedron, IL	X	X	—
Menomonie, WI	X	X	—
Voca, TX	X	—	—
Brewer, MO	X	—	—
Shakopee, MN	X	—	—
Maiden Rock, WI	X	—	—
Hager City, WI	X	—	—
Harrietta, MI	X	X	—
Chardon, OH	—	X	—
Beaver, OH	—	X	—
Troy Grove, IL	X	X	—
Roff, OK	X	—	—
Cutler, IL	X	—	—
Fresno, TX	—	X	—
Detroit, MI	X	X	—
Ontario, Canada	X	X	—
Mexico	X	—	—
Denmark	X	—	—
China	X	—	—

Product Delivery

We have established an oil and gas logistics network that we believe is highly responsive to our customers' needs. Our terminal network includes 44 active oil and gas terminals and 12 industrial and recreational terminals. These terminals are a combination of facilities that we own or lease, as well as properties that are owned and operated by third parties. They generally consist of rail and transload operations, plus in some cases additional storage and handling facilities.

ITEM 3. LEGAL PROCEEDINGS

We are subject to various legal proceedings, claims and governmental inspections, audits, or investigations arising out of our business which cover matters such as general commercial, governmental regulations, FCPA requirements, antitrust and trade regulations, product liability, environmental, intellectual property, employment, and other actions. Although the outcomes of these potential claims cannot be predicted with certainty, in the opinion of management, the ultimate resolution of these matters will not have a material adverse effect on our financial position or results of operations.

Regulation and Legislation

Mining and Workplace Safety

Federal Regulation

The U.S. Mine Safety and Health Administration ("MSHA") is the primary regulatory organization governing the commercial silica industry. Accordingly, MSHA regulates quarries, surface mines, underground mines, and the industrial mineral processing facilities associated with quarries and mines. The mission of MSHA is to administer the provisions of the Federal Mine Safety and Health Act of 1977 and to enforce compliance with mandatory safety and health standards. MSHA works closely with the Industrial Minerals Association, a trade association, in pursuing this mission. As part of MSHA's oversight, representatives perform at least two unannounced inspections annually for each above-ground facility. To date these inspections have not resulted in any citations for material violations of MSHA standards.

We also are subject to the requirements of the U.S. Occupational Safety and Health Act ("OSHA") and comparable state statutes that regulate the protection of the health and safety of workers. In addition, the OSHA Hazard Communication Standard requires that information be maintained about hazardous materials used or produced in operations and that this information be provided to employees, state and local government authorities and the public. OSHA regulates users of commercial silica and provides detailed regulations requiring employers to protect employees from overexposure to silica through the enforcement of permissible exposure limits.

Internal Controls

We adhere to a strict occupational health program aimed at controlling exposure to silica dust, which includes dust sampling, a respiratory protection program, medical surveillance, training, and other components. Our safety program is designed to ensure compliance with the standards of our Occupational Health and Safety Manual and MSHA regulations. For both health and safety issues, extensive training is provided to employees. We have safety committees at our plants made up of salaried and hourly employees. We perform annual internal health and safety audits and conduct semi-annual crisis management drills to test our plants' abilities to respond to various situations. Health and safety programs are administered by our corporate health and safety department with the assistance of plant Environmental, Health and Safety Coordinators.

Environmental Matters

We and the proppant industry are subject to extensive governmental regulation on, among other things, matters such as permitting and licensing requirements, plant and wildlife protection, hazardous materials, air and water emissions, and environmental contamination and reclamation. A variety of federal, state, and local agencies implement and enforce these regulations.

Federal Regulation

At the federal level, we may be required to obtain permits under Section 404 of the Clean Water Act from the U.S. Army Corps of Engineers for the discharge of dredged or fill material into waters of the United States, including wetlands and streams, in connection with our operations. We also may be required to obtain permits under Section 402 of the Clean Water Act from the EPA (or the relevant state environmental agency in states where the permit program has been delegated to the state) for discharges of pollutants into waters of the United States, including discharges of wastewater or storm water runoff associated with construction activities. Failure to obtain these required permits or to comply with their terms could subject us to administrative, civil and criminal penalties as well as injunctive relief.

The U.S. Clean Air Act and comparable state laws regulate emissions of various air pollutants through air emissions permitting programs and the imposition of other requirements, such as monitoring and reporting requirements. These regulatory programs may require us to install expensive emissions abatement equipment, modify our operational practices and obtain permits for our existing operations, and before commencing construction on a new or modified source of air emissions, such laws may require us to obtain pre-approval for the construction or modification of certain projects or facilities extended to produce or significantly increase air emissions. In addition, air permits are required for our processing and terminal operations, and our frac sand mining operations that result in the emission of regulated air contaminants. Obtaining air emissions permits has the potential to delay the development or continued performance of our operations. As a result, we may be required to incur increased capital and operating costs because of these regulations. We could be subject to administrative, civil, and criminal penalties as well as injunctive relief for noncompliance with air permits or other requirements of the U.S. Clean Air Act and comparable state laws and regulations.

Methane, a primary component of natural gas, and carbon dioxide, a byproduct of the burning of natural gas, are examples of greenhouse gases (“GHGs”). In recent years, the U.S. Congress has considered legislation to reduce emissions of GHGs. It presently appears unlikely that comprehensive climate legislation will be passed by either house of Congress in the near future, although energy legislation and other regulatory initiatives may be proposed that may be relevant to GHG emissions issues.

Independent of Congress, the EPA has adopted regulations controlling GHG emissions under its existing authority under the CAA. In 2009, the EPA officially published its findings that emissions of carbon dioxide, methane and other GHGs present an endangerment to human health and the environment because emissions of such gases are, according to the EPA, contributing to warming of the earth’s atmosphere and other climatic changes. These findings by the EPA allow the agency to proceed with the adoption and implementation of regulations that would restrict emissions of GHGs under existing provisions of the CAA. In 2010, the EPA published a final rule expanding its existing GHG emissions reporting rule for certain petroleum and natural gas facilities that emit 25,000 metric tons or more of carbon dioxide equivalent per year. We are subject to annual GHG reporting obligations for our operations in Wedron, Illinois.

Although it is not currently possible to predict how any proposed or future GHG legislation or regulation by Congress, the EPA, the states, or multi-state regions will impact our business, any legislation or regulation of GHG emissions that may be imposed in areas in which we conduct business could result in increased compliance costs or additional operating restrictions or reduced demand for our services, and could have a material adverse effect on our business, financial condition, and results of operations.

As part of our operations, we utilize or store petroleum products and other substances such as diesel fuel, lubricating oils, and hydraulic fluid. We are subject to regulatory programs pertaining to the storage, use, transportation, and disposal of these substances, including Spill Prevention, Control and Countermeasure planning requirements. Spills or releases may occur in the course of our operations, and we could incur substantial costs and liabilities as a result of such spills or releases, including those relating to claims for damage or injury to property and persons. Additionally, some of our operations are located on properties that historically have been used in ways that resulted in the release of contaminants, including hazardous substances, into the environment, and we could be held liable for the remediation of such historical contamination. The Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA," also known as the Superfund law) and comparable state laws impose joint and several liability, without regard to fault or legality of conduct, on classes of persons who are considered to be responsible for the release of hazardous substances into the environment. These persons include the owner or operator of the site where the release occurred and anyone who disposed or arranged for the disposal of a hazardous substance released at the site. Under CERCLA, such persons may be subject to liability for the costs of cleaning up the hazardous substances, for damages to natural resources, and for the costs of certain health studies. In addition, it is not uncommon for neighboring landowners and other third parties to file claims for personal injury and property damage allegedly caused by the hazardous substances released into the environment.

In the course of our operations, we generate industrial solid wastes that may be regulated as hazardous wastes. The Resource Conservation and Recovery Act ("RCRA") and comparable state statutes regulate the generation, transportation, treatment, storage, disposal, and cleanup of hazardous and non-hazardous wastes. The EPA and the individual states, to which the EPA has delegated portions of the RCRA program for local implementation, administer the RCRA program.

In September 2013, the EPA issued RCRA consent orders to several companies, including us, in connection with historic contamination of residential drinking water wells near our Wedron, Illinois facility. The EPA identified benzene and other volatile organic compounds in some drinking water wells, some (including benzene) in excess of established standards. The consent orders required the companies to analyze conditions at their sites to determine whether operations at their sites are potential sources of groundwater contamination. We completed the study for our site, and our consultant submitted a site conditions report to the EPA in August 2014, which report concluded that our operations at the site are not a source of groundwater impacts in the Wedron community. The report recommended that no further work should be required under the consent order. In March 2015, the EPA issued a letter to us stating that we have completed all work required under the consent order to the EPA's satisfaction, and our obligations under the consent order have now been satisfied. We have also performed environmental investigation and remediation activities under oversight of the Illinois Environmental Protection Agency (IEPA) at a removed underground storage tank (UST) system at the Wedron facility south of residential areas of the community. The investigation report approved by the IEPA concluded that the petroleum constituents reported in the groundwater in the Wedron community are not related to the former UST system. We have performed limited soil removal at the location of the former UST system pursuant to a Corrective Action Plan approved by the IEPA. The IEPA has approved the closure of this site, which is documented through a No Further Remediation Letter issued by the Agency. The No Further Remediation Letter has been recorded with the local County Recorder of Deeds and includes deed restrictions which will limit this portion of the Wedron property to industrial use in perpetuity.

Although we do not directly engage in hydraulic fracturing activities, we supply sand-based proppants to hydraulic fracturing operators in the oil and natural gas industry. Hydraulic fracturing involves the injection of water, sand, and chemicals, under pressure, into the formation to fracture the surrounding rock and stimulate production. The hydraulic fracturing process is typically regulated by state or local governmental authorities. However, the practice of hydraulic fracturing has become controversial in some areas and is undergoing increased scrutiny. Several federal agencies and regulatory authorities are investigating the potential environmental impacts of hydraulic fracturing and whether additional regulation may be necessary. The EPA has asserted limited federal regulatory authority over hydraulic fracturing and has indicated it may seek to further expand its regulation of hydraulic fracturing. The Bureau of Land Management has proposed regulations applicable to hydraulic fracturing conducted on federal and Indian oil and gas leases. Congress has from time to time considered the adoption of legislation to provide for federal regulation of hydraulic fracturing. In addition, various state, local, and foreign governments have implemented, or are considering, increased regulatory oversight of hydraulic fracturing through additional permitting requirements, operational restrictions, disclosure requirements, and temporary or permanent bans on hydraulic fracturing in certain areas such as environmentally sensitive watersheds. Numerous states have imposed disclosure requirements on hydraulic fracturing well owners and operators. Some local governments have adopted and others may seek to adopt ordinances prohibiting or regulating the time, place, and manner of drilling activities in general or hydraulic fracturing activities within their jurisdictions.

The adoption of new laws, regulations, or enforcement policies at the federal, state, local, or foreign levels imposing reporting obligations on, or otherwise limiting or delaying, the hydraulic fracturing process could make it more difficult to complete oil and natural gas wells, increase our customers’ costs of compliance and doing business, and otherwise adversely affect the hydraulic fracturing services they perform, which could negatively impact demand for our sand-based proppants.

Our operations may also be subject to broad environmental review under the National Environmental Policy Act (“NEPA”). NEPA requires federal agencies to evaluate the environmental impact of all “major federal actions” significantly affecting the quality of the human environment. The granting of a federal permit for a major development project, such as a mining operation, may be considered a “major federal action” that requires review under NEPA. Therefore, our projects may require review and evaluation under NEPA. As part of this evaluation, the federal agency considers a broad array of environmental impacts, including, among other things, impacts on air quality, water quality, wildlife (including threatened and endangered species), historical and archeological resources, geology, socioeconomics and aesthetics. NEPA also requires the consideration of alternatives to the project. The NEPA review process, especially the preparation of a full environmental impact statement, can be time consuming and expensive. The purpose of the NEPA review process is to inform federal agencies’ decision-making on whether federal approval should be granted for a project and to provide the public with an opportunity to comment on the environmental impacts of a proposed project. Though NEPA requires only that an environmental evaluation be conducted and does not mandate a result, a federal agency could decide to deny a permit, or impose certain conditions on its approval, based on its environmental review under NEPA, or a third party may challenge the adequacy of a NEPA review and thereby delay the issuance of a federal permit or approval.

Federal agencies granting permits for our operations also must consider impacts to endangered and threatened species and their habitat under the Endangered Species Act. We also must comply with and are subject to liability under the Endangered Species Act, which prohibits and imposes stringent penalties for the harming of endangered or threatened species and their habitat. Some of our operations are conducted in areas where protected species or their habitats are known to exist. In these areas, we may be obligated to develop and implement plans to avoid potential adverse effects to protected species and their habitats, and we may be prohibited from conducting operations in certain locations or during certain times, such as breeding and nesting seasons, when our operations could have an adverse effect on the species. Federal agencies also must consider a project’s impacts on historic or archeological resources under the National Historic Preservation Act, and we may be required to conduct archeological surveys of project sites and to avoid or preserve historical areas or artifacts.

State and Local Regulation

Because our operations are located in numerous states, we are also subject to a variety of different state and local environmental review and permitting requirements. Some states in which our projects are located or are being developed have state laws similar to NEPA; thus our development of new sites or the expansion of existing sites may be subject to comprehensive state environmental reviews even if it is not subject to NEPA. In some cases, the state environmental review may be more stringent than the federal review. Our operations may require state law-based permits in addition to federal or local permits, requiring state agencies to consider a range of issues, many the same as federal agencies, including, among other things, a project’s impact on wildlife and their habitats, historic and archaeological sites, aesthetics, agricultural operations, and scenic areas. Some states also have specific permitting and review processes for commercial silica mining operations, and states may impose different or additional monitoring or mitigation requirements than federal agencies. The development of new sites and our existing operations also are subject to a variety of local environmental and regulatory requirements, including land use, zoning, building, and transportation requirements.

Some local communities have expressed concern regarding silica sand mining operations. These concerns have generally included exposure to ambient silica sand dust, truck traffic, water usage, and blasting. In response, certain state and local communities have developed or are in the process of developing regulations or zoning restrictions intended to minimize dust from getting airborne, control the flow of truck traffic, significantly curtail the amount of practicable area for mining activities, require compensation to local residents for potential impacts of mining activities and, in some cases, ban issuance of new permits for mining activities. To date, we have not experienced any material impact to our existing mining operations or planned capacity expansions as a result of these types of concerns. We are not aware of any proposals for significant increased scrutiny on the part of state or local regulators in the jurisdictions in which we operate or community concerns with respect to our operations that would reasonably be expected to have a material adverse effect on our business, financial condition, or results of operations going forward.

Planned expansion of our mining and production capacity or construction and operation of related facilities in new communities could be more significantly impacted by increased regulatory activity. Difficulty or delays in obtaining or inability to obtain new mining permits or increased costs of compliance with future state and local regulatory requirements could have a material negative impact on our ability to grow our business. In an effort to minimize these risks, we continue to be engaged with local communities in order to grow and maintain strong relationships with residents and regulators.

Costs of Compliance

We may incur significant costs and liabilities as a result of environmental, health, and safety requirements applicable to our activities. Failure to comply with environmental laws and regulations may result in the assessment of administrative, civil and criminal penalties, imposition of investigatory, cleanup and site restoration costs and liens, the denial or revocation of permits or other authorizations, and the issuance of injunctions to limit or cease operations. Compliance with these laws and regulations may also increase the cost of the development, construction and operation of our projects and may prevent or delay the commencement or continuance of a given project. In addition, claims for damages to persons or property may result from environmental and other impacts of our activities. In addition, the clear trend in environmental regulation is to place more restrictions on activities that may affect the environment, and thus, any changes in, or more stringent enforcement of, these laws and regulations that result in more stringent and costly pollution control equipment, waste handling, storage, transport, disposal, or remediation requirements could have a material adverse effect on our operations and financial position.

The process for performing environmental impact studies and reviews for federal, state, and local permits for our operations involves a significant investment of time and monetary resources. We cannot control the permit approval process. We cannot predict whether all permits required for a given project will be granted or whether such permits will be the subject of significant opposition. The denial of a permit essential to a project or the imposition of conditions with which it is not practicable or feasible to comply could impair or prevent our ability to develop a project. Significant opposition by neighboring property owners, members of the public or other third parties, as well as any delay in the environmental review and permitting process, could impair or delay our ability to develop or expand a project. Additionally, the passage of more stringent environmental laws could impair our ability to develop new operations and have an adverse effect on our financial condition and results of operations.

ITEM 4. MINE SAFETY DISCLOSURES

The Fairmount Santrol Safety & Health Management System ("SHMS") establishes the system for promoting a safety culture that encourages incident prevention and continually strives to improve its safety and health performance.

The SHMS includes as its domain all established safety and health specific programs and initiatives for the Company's compliance with all local, state and federal legislation, standards, and regulations and SHMS Policy as they apply to a safe and healthy employee, stakeholder and work environment.

The SHMS has the ultimate goal for the identification, elimination or control of all risks to personnel, stakeholders, and facilities, that can be controlled and directly managed, and those it does not control or directly manage, but can expect to have an influence upon.

The operation of our U.S. based mines is subject to regulation by MSHA under the Federal Mine Safety and Health Act of 1977 (the "Mine Act"). MSHA inspects our mines on a regular basis and issues various citations and orders when it believes a violation has occurred under the Mine Act. Following passage of The Mine Improvement and New Emergency Response Act of 2006, MSHA significantly increased the numbers of citations and orders charged against mining operations. The dollar penalties assessed for citations issued has also increased in recent years.

Fairmount Santrol is required to report certain mine safety violations or other regulatory matters required by Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act and Item 104 of Regulation S-K, and that required information is included in Exhibit 95.1 and is incorporated by reference into this Annual Report.

PART II

ITEM 5. MARKET FOR REGISTRANT’S COMMON EQUITY, RELATED STOCKHOLDER MATTERS, AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information

Shares of our common stock, traded under the symbol “FMSA,” have been publicly traded since October 3, 2014, when our common stock was listed and began trading on the NYSE. Prior to that date, there was no public market for our common stock.

The following table sets forth, for the reporting period indicated, the high and low market prices per share for our common stock, as reported on the NYSE composite tape:

	Sales Price	
	High	Low
Fiscal 2016		
January 1, 2016 – March 31, 2016	$3.35	$1.00
April 1, 2016 – June 30, 2016	8.17	2.39
July 1, 2016 – September 30, 2016	8.83	5.88
October 1, 2016 – December 31, 2016	12.06	7.37
Fiscal 2017		
January 1, 2017 – March 31, 2017	$13.12	$5.97
April 1, 2017 – June 30, 2017	7.71	3.38
July 1, 2017 – September 30, 2017	5.00	2.47
October 1, 2017 – December 31, 2017	5.62	3.41

Holders of Record

On March 9, 2018, there were 224,630,307 shares of our common stock outstanding, which were held by 39 stockholders of record. Because many of our shares of common stock are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of stockholders represented by these record holders.

Dividends

There have been no cash dividends declared for the most recent two fiscal periods. We currently have no plans to pay cash dividends in the foreseeable future.

Fairmount Santrol Holdings Inc. Comparative Stock Performance Graph

The information contained in this Fairmount Santrol Holdings Inc. Comparative Stock Performance Graph section shall not be deemed to be "soliciting material" or "filed" or incorporated by reference in future filings with the SEC, or subject to the liabilities of Section 18 of the Exchange Act, except to the extent that we specifically incorporate it by reference into a document filed under the Securities Act or the Exchange Act.

The graph below compares the cumulative total shareholder return on our common stock, the cumulative total return on the Russell 3000 Index, the Standard and Poor's Small Cap 600 GICS Oil & Gas Equipment & Services Sub-Industry index, and a composite average of publicly traded proppant peer companies (U.S. Silica Holdings, Inc., Hi-Crush Partners LP, CARBO Ceramics, Inc., and Emerge Energy Services LP) since October 3, 2014, the first day our stock traded on the NYSE.

The graph assumes $100 was invested on October 3, 2014, the first day our stock was traded on the NYSE, in our common stock, the Russell 3000, the Standard and Poor's Small Cap 600 GICS Oil & Gas Equipment & Services Sub-Industry Index, and a composite of publicly-traded proppant peer companies. The cumulative total return assumes the reinvestment of all dividends. We elected to include the stock performance of a composite of our publicly-traded peers as we believe it is an appropriate benchmark for our line of business/industry.

TOTAL RETURN

	Russell 3000	S&P Oil & Gas Equipment & Services	Proppant Peers	Fairmount Santrol Holdings Inc.
10/3/2014	100.00	100.00	100.00	100.00
12/31/2014	105.42	78.93	56.34	43.25
3/31/2015	107.32	72.34	61.63	45.25
6/30/2015	107.47	70.55	54.64	51.19
9/30/2015	99.68	43.49	18.80	16.88
12/31/2015	105.92	41.04	19.70	14.69
3/31/2016	106.94	39.77	20.92	15.69
6/30/2016	109.76	41.86	34.66	48.19
9/30/2016	114.58	48.72	43.34	53.00
12/31/2016	119.40	57.24	52.16	73.69
3/31/2017	126.25	51.28	46.16	45.81
6/30/2017	130.06	37.89	31.97	24.38
9/30/2017	136.00	41.82	28.59	29.88
12/31/2017	144.61	42.25	30.37	32.69

ITEM 6. SELECTED FINANCIAL DATA

The following table presents our consolidated statement of operations and certain operating data. The results of operations by segment are discussed in further detail following the consolidated overview.

	Year Ended December 31,				
	2017	2016	2015	2014	2013
	(in thousands)				
Statement of Income Data:					
Revenues	$959,795	$535,013	$828,709	$1,356,458	$988,386
Income (loss) from operations	108,725	(179,319)	(30,135)	311,664	227,956
Income (loss) before provision for income taxes	49,419	(239,566)	(93,869)	248,036	149,876
Net income (loss)	54,085	(140,125)	(91,930)	170,623	104,657
Net income (loss) attributable to Fairmount Santrol Holdings Inc.	53,788	(140,192)	(92,135)	170,450	103,961
Earnings (loss) per share					
Basic	$0.24	$(0.78)	$(0.57)	$1.08	$0.67
Diluted	$0.23	$(0.78)	$(0.57)	$1.03	$0.63
Statement of Cash Flows Data:					
Net cash provided by (used in):					
Operating activities	$144,788	$1,500	$236,820	$205,276	$174,635
Investing activities	(98,804)	(26,214)	(114,000)	(138,331)	(579,517)
Financing activities	(112,642)	46,797	(25,917)	(7,677)	410,515
Other Financial Data:					
Capital expenditures	$69,573	$30,597	$113,750	$143,491	$111,514
EBITDA	184,674	(101,990)	34,922	368,084	248,877
Adjusted EBITDA	206,344	(4,902)	138,100	397,291	292,584
Operating Data:					
Proppant Solutions					
Total tons sold	10,278	6,415	6,204	7,188	5,117
Revenues	$834,749	$416,144	$710,083	$1,232,232	$856,212
Segment gross profit	244,042	26,501	175,226	463,426	317,117
Industrial & Recreational Products					
Total tons sold	2,478	2,504	2,301	2,426	2,462
Revenues	$125,046	$118,869	$118,626	$124,226	$132,174
Segment gross profit	55,995	48,798	44,638	41,578	43,427
Balance Sheet Data (at period end):					
Cash and cash equivalents	$127,967	$194,069	$171,486	$76,923	$17,815
Total assets	1,265,319	1,202,910	1,354,249	1,514,016	1,283,431
Long-term debt (including current portion)	748,930	843,013	1,223,106	1,252,639	1,262,146
Total liabilities	945,025	951,790	1,414,617	1,480,542	1,448,789
Total equity (deficit)	320,294	251,120	(60,368)	33,474	(165,358)

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis summarizes the significant factors affecting the consolidated operating results, financial condition, liquidity and cash flows of our company as of and for the periods presented below. The following discussion and analysis should be read in conjunction with our description of the business in Item 1, "Business" in this report, and our consolidated financial statements in Item 8 of this Annual Report on Form 10-K. This discussion contains forward-looking statements that are based on the beliefs of our management, as well as assumptions made by, and information currently available to, our management. Actual results could differ materially from those discussed in or implied by forward-looking statements as a result of various factors, including those discussed herein, particularly in the section entitled "Risk Factors."

Overview

We are one of the world's largest providers of sand-based proppant solutions and for nearly 40 years have been a pioneer in the development of high performance proppants used by E&P companies to enhance the productivity of their oil and gas wells. We offer the broadest range of proppants available in the market today, including high quality sand and a variety of coated products. All of our frac sand exceeds API specifications. Additionally, for more than 120 years, we and our predecessor companies have provided high quality sand-based products, strong technical leadership and applications knowledge to end users in the I&R markets.

As one of the industry leaders, our asset base at December 31, 2017 included 893.4 million tons of proven and probable mineral reserves, which we believe is one of the largest reserve bases in the industry. As of March 2018, we have eleven sand processing facilities (ten of which are active) with 17.5 million tons of annual sand processing capacity. We recently restarted our Wexford, Michigan sand processing facility to accommodate increased customer demand. At this time, all of our remaining sand processing facilities are open with the exception of Hager Bay, Wisconsin. We also have nine coating facilities (six of which are active) with in excess of 2.0 million tons of annual coating capacity.

As disclosed in Note 5 of the consolidated financial statements in this Report, on July 18, 2017, we entered into a 40-year lease agreement for approximately 3,250 acres of sand reserves in Kermit, Texas. The reserves are estimated to contain approximately 165.0 million tons of fine grade 40/70 and 100 mesh regional proppant sand. We are obligated for a $40.0 million leasehold interest payment, as well as royalties based on volumes sold. The initial leasehold interest installment of $20.0 million was paid at lease commencement and is non-refundable. The remaining $20.0 million of the leasehold interest is payable in two installments of $10.0 million each upon the occurrence of certain probable events. In October 2017, we paid an installment of $10.0 million and the remaining $10.0 million is currently expected to be paid once we begin selling sand from this property in 2018. We have capitalized the entire $40.0 million of expected payments as property, plant, and equipment. We are in the process of building a mine and processing facility on the leased land with a capacity of approximately 3.0 million tons of proppant sand production annually. Capital expenditures for construction of the facilities over the next twelve months are estimated to be $50.0 million to $55.0 million. We expect to fund this investment with cash on hand. An average royalty of less than $3 per ton will be paid over the term of the lease on sand sold from this new facility, with no minimum annual royalty.

We are capable of Class I railroad deliveries to each of North America's major oil and gas producing basins and also have the flexibility to ship our product via barge, marine terminals and trucks to reach our customers as needed. We operate an integrated logistics platform consisting of 44 proppant distribution terminals and a fleet of approximately 10,569 railcars, which includes 1,723 customer railcars, considering car returns that took place throughout the year and subleases. Our unit train capabilities include four production facilities and twelve in-basin terminals, which reduce freight costs and improve cycle times for our railcar fleet. In order to better align our logistics network with customer demand and to reduce costs, we discontinued activity at four terminals in 2017.

Our operations are organized into two segments based on the primary end markets we serve: (i) Proppant Solutions and (ii) I&R. Our Proppant Solutions segment predominantly provides sand-based proppants for use in hydraulic fracturing operations throughout the U.S. and Canada, Argentina, Mexico, China, northern Europe and the United Arab Emirates. Our I&R segment provides raw, coated, and custom blended sands to the foundry, building products, glass, turf and landscape and filtration industries primarily in North America. We believe our two market segments are complementary. Our ability to sell to a wide range of customers across multiple end markets allows us to maximize the recovery of our reserve base within our mining operations and to reduce the cyclicality of our earnings.

Recent Trends and Outlook

Recent trends driving demand for our proppants and commercial silica include:

- Level of drilling activity and demand for proppants. Through 2014, the growth in the use of horizontal drilling utilizing hydraulic fracturing as a means to extract hydrocarbons from shale formations dramatically increased the number of oil and gas rigs operating in North America. This increased drilling activity contributed to substantial growth in demand for proppants from 2009 to 2014. In 2015 and most of 2016, due to the increasing global supply of oil and slowing growth of global oil demand, crude oil prices experienced downward pressure which caused various E&P companies to reduce drilling and capital programs resulting in significantly reduced rig counts. During 2017, United States horizontal land rig counts increased considerably from an average of 400 rigs in 2016 to an average of 740 rigs in 2017. This rise in rig counts resulted in increased drilling activity and proppant demand in 2017. Additionally, on average, E&P companies and oil field service companies have refined their well designs and hydraulic fracturing techniques to achieve more efficient production. These changes in techniques have increased the demand for proppants, by increasing the proppant intensity associated with finer grades of proppant.
- Shift in drilling activity and demand mix. The level of drilling activity for oil and gas has an impact on the demand for proppant and the mix of proppant we sell. In 2015 and 2016, lower crude oil prices caused E&P companies to seek ways to reduce short-term operating costs at the expense of maximizing well performance and, as a result, we experienced reduced demand for our coated proppants. As a result of increased drilling activity in 2017, including wells that are prone to flowback, demand for resin-coated proppants increased at a faster pace than raw sand proppants. Propel SSP® also experienced significant growth in 2017 from both commercial and trial well sales. Beginning in late 2016, demand for finer grades of sand increased relative to coarser grades and this trend has continued throughout 2017.
- Volatility in selling prices for proppants. The rapid decline in oil and gas prices that occurred into 2016 led to reduced drilling activity, reduced demand for proppants, and reduced proppant pricing. In 2017, demand for proppant increased significantly in response to higher drilling activity and proppant intensity. As a result, the supply and demand dynamics for the proppant market was more balanced relative to 2016, and led to higher prices for raw sand for all market participants.
- Demand for in-basin delivery of proppant. In recent years, many customers sought to outsource proppant logistics and to purchase proppant at the basin, allowing them to focus on their core competencies, minimize inventory costs, and maximize flexibility. In 2017, approximately 74% of our proppant sales volume was sold in-basin. Our terminal network continues to be a key differentiator for customers to provide proppants closer to completion activities. With our increasing capability to provide low-cost unit train shipments directly to large customers while also shipping unit trains to certain of our own in-basin terminals, we are well-equipped to take advantage of shifting demand. This demand for in-basin delivery of proppant has also contributed to the announcement of several sand plants in West Texas to serve demand for proppant in the Permian basin. We announced construction of our plant near Kermit, Texas to help meet this demand and broaden our ability to serve customers with a low-cost in-basin solution.

- Increased demand for unit train deliveries. With the shift of larger oilfield services customers toward shipments taken directly from our plants, there is also a greater demand for shipments via unit trains to enhance the economics of deliveries. During the fourth quarter of 2017, we shipped over 145 unit trains representing approximately 70% of Northern White sand volumes with over 545 unit trains of product shipped in 2017. We are well-positioned to help our customers lower their costs and improve delivery, as we now have twelve unit train-capable destinations.
- Continued stable demand in industrial end markets. Sales in our I&R segment are driven by macroeconomic factors such as housing starts, light vehicle sales, repair and remodel activity and industrial production. To the extent these demand drivers continue on their current trends, we expect that demand for our commercial silica products will remain relatively stable.

How We Generate Our Sales

We derive our sales by mining, processing and transporting sand-based proppants and silica sand products that our customers purchase for use in a wide variety of applications. In our Proppant Solutions business for the year ended December 31, 2017, we sold approximately 74% of our North American proppant volume through our network of terminals at selling prices that are set by local market dynamics. The remaining volume in the Proppant Solutions business is sold to customers directly from our mining and production facilities. The average selling prices for products sold through our terminals are higher than the average selling prices for comparable products sold from our production facilities due to costs incurred to handle and transport the products from the production facilities to the terminals. Generally, logistics costs can comprise 70-80% of the delivered cost of Northern White frac sand, depending on the basin into which the product is delivered. Due to the closer proximity of distribution terminals to our production facility, the amount of logistics costs included in the total delivered cost of our Texas Gold frac sand generally will be lower than that for our Northern White frac sand.

We primarily sell products under supply agreements with terms that vary by contract. Generally, the selling prices specified in our contracts are based on market prices. We believe that this approach to contract pricing allows us to reduce prices and retain or gain volume in market downcycles and capture higher prices in market upcycles. Our contracts have a variety of volume provisions. While certain of our contracts have no minimum volume requirements, certain of the agreements require the customer to purchase a specified percentage of its proppant requirements or a minimum volume of proppant. Certain of these minimum volume contracts include a provision which may trigger penalties if the purchased volume does not meet the required minimums.

Our Proppant Solutions segment represented 87% of our revenues for the year ended December 31, 2017. A large portion of our sales is generated by our top customers, and the loss of, or significant reduction in, purchases by our largest customers could adversely affect our operations. During the years ended December 31, 2017 and 2016, our top ten proppant customers collectively represented 75% and 70% of our revenues, respectively. In the year ended December 31, 2017, three customers exceeded 10% of revenues. These customers accounted for 20%, 14%, and 11% of our revenues, respectively, in the year ended December 31, 2017. In the year ended December 31, 2016, two customers exceeded 10% of revenues. These customers accounted for 30% and 12%, respectively, of our revenues in the year ended December 31, 2016.

Our I&R business segment has over 755 customers and represented 13% of our revenues for the year ended December 31, 2017. In our I&R business, we use our network of I&R distribution terminals to sell products from our production facilities to distributors which sell the product to the end user.

The Costs of Conducting Our Business

The principal costs involved in operating our business are logistics costs associated with transporting products from our production facilities to our terminals; payroll costs for personnel at our production, terminal and administrative facilities; resin and other raw materials and supplies used in the production of our products; and maintenance and repair costs at our production facilities. We own or lease our sand reserves, the combination of which, we believe, helps us maintain a very competitive cost position.

Logistics costs, including freight, railcar leases, demurrage and handling, represented approximately 42% and 48% of our revenues during the years ended December 31, 2017 and 2016, respectively. Freight costs primarily represent charges to transport our product by rail, but we also ship product by truck and barge. In order to move product by rail, we lease a substantial number of railcars under operating leases with durations ranging from three to seven years. We currently have approximately 8,846 railcars under lease and 1,723 railcars made available to us from our customers, giving us a total fleet of approximately 10,569 railcars (net of 142 cars currently subleased). Demurrage costs are charged by the railroads based on the time a railcar spends on the rail in excess of the allotted time. These costs can vary significantly from period to period driven by high levels of rail activity at a terminal and changes in the timing of fulfilling customer orders. Handling costs are incurred at our distribution and terminal facilities to move product from one mode of transportation to another (e.g., truck to railcar) and to move product into storage facilities. Storage costs are incurred when railcars are temporarily taken out of service and stored at a rail yard or storage facility.

Labor costs, including wages and benefits, represented approximately 15% and 16% of revenues during the years ended December 31, 2017 and 2016, respectively. Approximately 16% of our workforce was party to collective bargaining contracts as of December 31, 2017.

We use a significant amount of resins and additives in the production of our coated products in both our Proppant Solutions and I&R businesses. We purchase these resins under supply agreements that contain annual pricing adjustments based on the cost of phenol, the primary component of the resins we buy. We also supply a portion of our resin requirements from our resin manufacturing facility located in Michigan.

Our selling, general and administrative costs, which include the wages and benefits costs noted above, represented approximately 12% and 15% of revenues during the years ended December 31, 2017 and 2016, respectively. These costs are related to our corporate operations, including costs for the sales and marketing; research and development; finance; legal; and environmental, health and safety functions of our organization, as well as non-cash stock-based compensation expense.

We capitalize the costs of our mining and processing equipment and depreciate them over their expected useful life. We also capitalize the costs to remove overburden on our sand reserves for our surface mines and amortize them based on the actual tons mined. Depreciation, depletion, and amortization costs represented approximately 8% and 14% of revenues during the years ended December, 2017 and 2016, respectively. Repair and maintenance costs that do not involve the replacement of major components of our equipment and facilities are expensed as incurred. These repair and maintenance costs can be significant due to the abrasive nature of our products and represented approximately 3% and 4% of revenues during the years ended December 31, 2017 and 2016, respectively.

How We Evaluate Our Business

Our management uses a variety of financial and operational metrics to analyze our performance across our Proppant Solutions and I&R segments. This segmentation is based on the primary end markets we serve, our management structure and the financial information that is reviewed by the Chief Executive Officer in deciding how to allocate resources and assess performance. We evaluate the performance of these segments based on their volumes sold, average selling price and segment gross profit. Additionally, we consider a number of factors in evaluating the performance of the business as a whole, including total volumes sold and Adjusted EBITDA. We view these metrics as important factors in evaluating our profitability and review these measurements frequently to analyze trends and make decisions.

Segment Gross Profit

Segment gross profit is a key metric that management uses to evaluate our operating performance and to determine resource allocation between segments. Segment gross profit does not include any selling, general, and administrative costs or corporate costs and further excludes depreciation, depletion, and amortization charges.

EBITDA and Adjusted EBITDA

EBITDA and Adjusted EBITDA are supplemental non-GAAP financial measures that are used by management and certain external users of our financial statements in evaluating our operating performance.

We define EBITDA as net income before interest expense, income tax expense, depreciation, depletion and amortization. Adjusted EBITDA is defined as EBITDA before non-cash stock-based compensation, impairment of assets, and certain other income or expenses, as shown below.

Management believes EBITDA and Adjusted EBITDA are useful because they allow us to more effectively evaluate our operations from period to period without regard to our financing methods or capital structure. EBITDA and Adjusted EBITDA have limitations as analytical tools and should not be considered as alternatives to, or more meaningful than net income as determined in accordance with GAAP as indicators of our operating performance. Certain items excluded from EBITDA and Adjusted EBITDA are significant components in understanding and assessing a company's financial performance, such as a company's cost of capital and tax structure, as well as the historic costs of depreciable assets, none of which are components of EBITDA or Adjusted EBITDA. Although we attempt to determine EBITDA and Adjusted EBITDA in a manner that is consistent with other companies in our industry, our computations of EBITDA and Adjusted EBITDA may not be comparable to other similarly titled measures of other companies. We believe that EBITDA and Adjusted EBITDA are widely followed measures of operating performance.

Adjusted EBITDA is presented as a performance measure because certain charges or expenses may occur in a particular period and are not indicative of true operating performance. For this reason, management believes Adjusted EBITDA is useful to investors as well.

The following table sets forth a reconciliation of net income, the most directly comparable GAAP financial measure, to EBITDA and Adjusted EBITDA:

	Year Ended December 31,		
	2017	2016	2015
	(in thousands)		
Reconciliation of Adjusted EBITDA			
Net income (loss) attributable to Fairmount Santrol Holdings Inc.	$53,788	$(140,192)	$(92,135)
Interest expense	56,408	65,367	62,242
Benefit from income taxes	(4,666)	(99,441)	(1,939)
Depreciation, depletion, and amortization expense	79,144	72,276	66,754
EBITDA	184,674	(101,990)	34,922
Non-cash stock compensation expense(1)	10,071	8,870	4,525
Goodwill and other asset impairments(2)	-	93,148	80,188
Restructuring charges(3)	-	-	9,221
Loss on disposal of fixed assets(4)	-	-	7,915
Write-off of deferred financing costs(5)	389	2,618	864
Loss (gain) on debt extinguishment and repurchase(6)	2,898	(8,178)	-
Merger transaction expenses(7)	8,312	-	-
Debt transaction expenses(8)	-	450	-
Other charges(9)	-	180	465
Adjusted EBITDA	$206,344	$(4,902)	$138,100

(1) Represents the non-cash expense for stock-based awards issued to our employees and outside directors.
(2) Non-cash charges in 2016 are associated with the impairment of mineral reserves and other long-lived assets. Charges in 2015 included a $69.2 million impairment of goodwill in the Proppant Solutions segment.
(3) Expenses associated with restructuring activities and plant closures, including pension withdrawal, severance payments, and other liabilities.
(4) Includes losses related to the sale and disposal of certain assets in property, plant, and equipment.
(5) Represents the write-off of deferred financing fees in relation to a term loan prepayment in 2017, term loan repurchases in 2016, and the amendment of our Revolving Credit Facility in 2015.
(6) Loss related to the extinguishment of term loans in 2017 and gain related to the discount on term loan repurchases in 2016.
(7) Expenses related to the announced Merger with Unimin. Costs incurred in the second quarter of $144 and in the third quarter of $1,333 were not previously disclosed, as the Merger had not yet been publically announced.
(8) Expenses associated with term loan repurchases.
(9) Loss on the curtailment of a pension plan in 2016 and cash payment associated with an audit of our Employee Stock Bonus Plan in 2015.

Results of Operations

The following table presents our consolidated statement of operations and certain operating data. The results of operating by segment are discussed in further detail following the consolidated overview.

	Year Ended December 31,		
	2017	2016	2015
	(in thousands)		
Other Financial Data			
Net income (loss) attributable to Fairmount Santrol Holdings Inc.	$53,788	$(140,192)	$(92,135)
EBITDA	184,674	(101,990)	34,922
Adjusted EBITDA	$206,344	$(4,902)	$138,100
Operating Data			
Proppant Solutions			
Total tons sold	10,278	6,415	6,204
Revenues	$834,749	$416,144	$710,083
Segment gross profit	$244,042	$26,501	$175,226
Industrial & Recreational Products			
Total tons sold	2,478	2,504	2,301
Revenues	$125,046	$118,869	$118,626
Segment gross profit	$55,995	$48,798	$44,638

Year Ended December 31, 2017 Compared to Year Ended December 31, 2016

Revenues

Revenues increased $424.8 million, or 79%, to $959.8 million for the year ended December 31, 2017 compared to $535.0 million for the year ended December 31, 2016.

Average North American rig counts increased approximately 73% in 2017 compared to 2016. Additionally, average oil prices increased to approximately $51 per barrel of oil in 2017 compared to approximately $43 per barrel in the prior year. Demand for proppants continues to grow with accelerated trends in proppant intensity as a result of modified well designs.

Total volumes in the Proppant Solutions segment increased 60% to 10.3 million tons in the year ended December 31, 2017 compared to 6.4 million in the year ended December 31, 2016. Raw frac sand volumes increased 57% to 9.5 million tons in the year ended December 31, 2017 compared to 6.0 million tons in the year ended December 31, 2016. Value-added proppant volumes increased 111% to 0.8 million tons in the year ended December 31, 2017 compared to 0.4 million tons in the year ended December 31, 2016. Revenues in the Proppant Solutions segment increased $418.6 million, or 101%, to $834.7 million for the year ended December 31, 2017 compared to $416.1 million for the year ended December 31, 2016. The increase in Proppant Solutions segment revenue was due to higher overall volumes, which increased revenues by approximately $313.7 million. The remaining revenue increase of $104.9 million is due to higher pricing and slight changes in product mix and distribution channel sales.

Volumes in the I&R segment stayed flat at 2.5 million tons in the year ended December 31, 2017 compared to the year ended December 31, 2016. Revenues in the I&R segment increased $6.2 million to $125.0 million for the year ended December 31, 2017 compared to $118.9 million for the year ended December 31, 2016. The increase in I&R segment revenue was largely due to higher pricing over the prior year period and a shift in our sales towards value added resin coated products and specialty products.

Segment Gross Profit

Gross profit increased $224.7 million to $300.0 million for the year ended December 31, 2017 compared to $75.3 million for the year ended December 31, 2016.

Gross profit in the Proppant Solutions segment increased $217.5 million to $244.0 million for the year ended December 31, 2017 compared to $26.5 million for the year ended December 31, 2016. Gross profit for the year ended December 31, 2017 included $2.4 million of charges due to mine start-ups, and one-time expenses of $4.6 million to move approximately 2,400 railcars from storage to our active fleet. Gross profit for the year ended December 31, 2016 included non-cash inventory write-downs of $9.9 million and $0.2 million in restructuring charges. Excluding these charges in 2017 and 2016, respectively, gross profit would have increased approximately $214.5 million. The volume increases in the Proppant Solutions segment improved gross profit for the year ended December 31, 2017 by approximately $94.3 million compared to the year ended December 31, 2016. The remaining gross profit improvement is attributed to higher pricing noted above as well as lower cost per ton due to greater fixed cost leverage from higher volumes.

Gross profit in the I&R segment increased $7.2 million, or 15%, to $56.0 million for the year ended December 31, 2017 compared to $48.8 million for the year ended December 31, 2016. Gross profit for 2016 included non-cash inventory write-downs of $0.4 million. Excluding this charge in 2016, gross profit would have increased approximately $6.8 million. Increased prices and more favorable mix of product sales over the prior year period improved I&R segment gross profit by $6.6 million. The remaining change in I&R gross profit is attributable to the slight increase in volumes over the prior year period.

Selling, General and Administrative Expenses

Selling, general and administrative expenses (“SG&A”) increased $34.1 million, or 43%, to $113.2 million for the year ended December 31, 2017 compared to $79.1 million for the year ended December 31, 2016. SG&A includes non-cash stock compensation expense of $10.1 million and $8.9 million for the years ended December 31, 2017 and 2016, respectively. Stock compensation expense in the second quarter of 2016 included approximately $2.1 million due to a modification in the retirement provisions of the Company’s Long Term Incentive Plans that accelerates vesting and related expense for equity-based compensation awarded to retirement-eligible individuals (defined as age 55, plus 10 years of service). Excluding this amount, stock compensation expense was higher in 2017 due to increases in our stock price at the time of the awards to employees.

SG&A expenses for the year ended December 31, 2017 includes transaction expenses of $8.3 million associated with the announced Unimin merger and contributions of $1.0 million to the Fairmount Santrol Foundation.

Excluding stock compensation, transaction expenses and foundation contributions, SG&A increased by $23.6 million from 2016 to 2017. The increase in SG&A from 2016 is the result of higher base compensation and benefits in 2017 from the additional staffing of our re-opened facilities, as well as significantly higher estimated variable compensation and pension and profit-sharing contributions based on our 2017 performance, which was significantly improved compared to 2016.

Depreciation, Depletion and Amortization

Depreciation, depletion and amortization increased $6.9 million, or 10%, to $79.1 million for the year ended December 31, 2017 compared to $72.3 million for the year ended December 31, 2016. The increase in this expense was related to a higher asset base due to capital projects and improvements, higher stripping costs due to more plants in service and incremental amortization of the acquired technology from the SSP acquisition, which began in 2017 with the commercialization of Propel SSP®.

Income (Loss) from Operations

Income (loss) from operations increased $288.0 million to $108.7 million for the year ended December 31, 2017 compared to a loss of $179.3 million for the year ended December 31, 2016. Earnings in 2017 were largely impacted by increases in gross profits due to increased demand for proppant and price improvements.

Interest Expense

Interest expense decreased $9.0 million, or 14%, to $56.4 million for the year ended December 31, 2017 compared to $65.4 million for the year ended December 31, 2016. The change in interest expense is primarily due to the prepayments and repurchases of the term loans in 2016, and approximately $132.7 million in total debt prepayments on the term loans in the second and fourth quarter of 2017, which reduced the principal balance of the loans and overall interest expense, partially offset by $4.7 million from the debt refinancing fees which were recorded to interest expense in the fourth quarter of 2017 and generally higher interest rates on the variable rate term loans in 2017 compared to 2016.

Provision (Benefit) for Income Taxes

In December 2017, the U.S. government passed the Tax Cuts and Jobs Act (the “Tax Act”) effective January 1, 2018. The Tax Act establishes a corporate income tax rate of 21%, replacing the current 35% rate, and creates a territorial tax system rather than a worldwide system, which generally eliminates the U.S. federal income tax on dividends from foreign subsidiaries. The transition to a territorial system includes a one-time transition tax on certain unremitted foreign earnings. On the same day of the Tax Act, the SEC issued Staff Bulletin 118 ("SAB 118"). SAB 118 expresses views of the SEC regarding ASC Topic 740, Income Taxes ("ASC 740") in the reporting period that includes the enactment date of the Tax Act. The SEC staff issuing SAB 118 recognized that a company’s review of certain income tax effects of the Tax Act may be incomplete at the time the financial statements are issued for the reporting period that includes the enactment date, including interim periods therein. If a company does not have the necessary information available, prepared or analyzed for certain income tax effects of the Tax Act, SAB 118 allows a company to report provisional numbers and adjust those amounts during the measurement period not to extend beyond one year from the day of enactment.

For the year ended December 31, 2017, we recorded a net estimated benefit to tax expense of $11.0 million related to enactment of the Tax Act. This net benefit is comprised of expense of $2.3 million from revaluing our U.S. deferred taxes to reflect the new U.S. corporate rate; a benefit of $12.1 million relating to revaluing and adjusting valuation allowances maintained on certain federal and state deferred taxes due to the corporate rate reduction and repeal of the corporate Alternative Minimum Tax; a benefit of $4.2 million to reduce deferred tax liabilities maintained for taxation of unremitted foreign earnings; and expense of $3.0 million relating to the one-time transition tax on unremitted foreign earnings.

The benefit from income taxes decreased $94.8 million to $4.7 million for the year ended December 31, 2017 compared to $99.4 million for the year ended December 31, 2016. Income before income taxes increased $289.0 million to income of $49.4 million for the year ended December 31, 2017 compared to a loss of $239.6 million for the year ended December 31, 2016. The increase in expense recorded during the year ended December 31, 2017 was primarily related to the increase in income before income taxes and the benefit from a loss carryback recognized in 2016. The effective tax rate was negative 9.4% and 41.5% for the years ended December 31, 2017 and 2016, respectively. The decrease in the effective tax rate is primarily attributable to the impact of a tax benefit from a loss carryback recorded in 2016, an increase in depletion applied against forecasted results in 2017, as compared to 2016, the benefit from the impact of the Tax Act, offset by increases in valuation allowances maintained on certain domestic and foreign deferred tax assets. The effective rate differs from the U.S. federal statutory rate due primarily to depletion and valuation allowances maintained on certain domestic and foreign deferred tax assets.

Net Income (Loss) Attributable to Fairmount Santrol Holdings Inc.

Net income attributable to Fairmount Santrol Holdings Inc. increased $194.0 million to $53.8 million for the year ended December 31, 2017 compared to a loss of $140.2 million for the year ended December 31, 2016 due to the factors noted above.

Adjusted EBITDA

Adjusted EBITDA increased $211.2 million to $206.3 million for the year ended December 31, 2017 compared to a loss of $4.9 million for the year ended December 31, 2016. Adjusted EBITDA for 2017 excludes the impact of $10.1 million of non-cash stock compensation expense, $3.3 million of refinancing costs as a result of the $50.0 million debt payment in the second quarter of 2017 and term loan refinancing in the fourth quarter of 2017, and $8.3 million in transaction expenses associated with the announced Unimin merger. Adjusted EBITDA for the year ended December 31, 2017 includes $2.4 million of charges due to mine start-ups and one-time expenses of $4.6

million to move over 2,400 railcars from storage to our active fleet for the first six months of the year. Adjusted EBITDA for the year ended December 31, 2016 excludes the impact of $8.9 million of non-cash stock compensation expense, $93.1 million of impairment charges, and the $5.1 million gain related to the November 2016 debt repurchase, net of fees. Adjusted EBITDA for the year ended December 31, 2016 includes non-cash inventory write-downs of $10.3 million, $1.2 million of restructuring charges and $17.1 million in professional fees for railcar restructuring, refinancing and cost improvement initiatives. The increase in Adjusted EBITDA is largely due to increased gross profit which, as noted previously, is due to higher proppant volumes, improved pricing, and higher fixed cost leverage due to greater volumes.

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

Revenues

Revenues decreased $293.7 million, or 35%, to $535.0 million for the year ended December 31, 2016 compared to $828.7 million for the year ended December 31, 2015, primarily due to declines in volumes, particularly value-added products, including the impact of product mix and lower average selling prices in our Proppant Solutions segment.

North American rig counts increased approximately 31% from the third quarter of 2016 into the fourth quarter of 2016, but are still down approximately 45% from prior year levels. Oil prices have stabilized in 2016 at an average of approximately $43 per barrel of oil versus approximately $49 per barrel in the prior year. In response to the current market trends, E&P companies and oilfield service companies are continuing to refine their well designs and hydraulic fracturing techniques to achieve more efficient production. These changes in techniques have increased the demand for proppants by increasing the amount of proppant used per frac stage (“proppant intensity”) associated with finer graders of proppant.

Total volumes in the Proppant Solutions segment increased 3% to 6.4 million tons in the year ended December 31, 2016 compared to the year ended December 31, 2015. Raw frac sand volumes increased 11% to 6.0 million tons in the year ended December 31, 2016 compared to 5.4 million tons in the year ended December 31, 2015. Value-added product volumes decreased 52% to 0.4 million tons in the year ended December 31, 2016 compared to 0.8 million tons in the year ended December 31, 2015. Revenues in the Proppant Solutions segment decreased $293.9 million, or 41%, to $416.1 million for the year ended December 31, 2016 compared to $710.1 million for the year ended December 31, 2015. The decrease in Proppant Solutions revenue was primarily due to higher volumes offset by continued pricing declines throughout the year and shift in mix toward raw frac sales in 2016 versus 2015.

As a result of the current market trends, including the decline in oil and gas pricing, reduced drilling activity, and reduced demand for proppants; the average selling prices for all proppants declined from the prior year.

Volumes in the I&R segment increased to 2.5 million tons in the year ended December 31, 2016 compared to 2.3 million tons in the year ended December 31, 2015. Revenues increased $0.2 million to $118.9 million for the year ended December 31, 2016 compared to $118.6 million for the year ended December 31, 2015. I&R segment revenue was impacted by an expansion of our customer base and strong performance in several key markets, including glass, building products, and sports and recreation.

Revenues in our I&R segment are driven by macroeconomic factors, such as housing starts, light vehicle sales, repair and remodel activity, and industrial production. To the extent the trend of these demand drivers are consistent, we expect that demand for our commercial silica products will remain relatively stable.

Segment Gross Profit

Gross profit decreased $144.6 million to $75.3 million for the year ended December 31, 2016 compared to $219.9 million for the year ended December 31, 2015, primarily due to product mix and selling prices in our Proppant Solutions segment. Gross profit for the year ended December 31, 2016 also included inventory write-downs of $10.3 million.

Gross profit in the Proppant Solutions segment decreased $148.7 million to $26.5 million for the year ended December 31, 2016 compared to $175.2 million for the year ended December 31, 2015. Gross profit in the Proppant Solutions segment contains $0.1 million from a pension loss curtailment from the Technisand pension plan and $9.9 million from inventory write-downs for the year ended December 31, 2016. Excluding these charges, the volume increases in the Proppant Solution segment improved gross profit for the year ended December 31, 2016 by approximately $2 million compared to 2015. However, this improvement to gross profit from volume was more than offset by the declines in pricing throughout the year and changes in product mix between raw frac sand and value-added proppants.

Gross profit in the I&R segment increased $4.2 million, or 9%, to $48.8 million for the year ended December 31, 2016 compared to $44.6 million for the year ended December 31, 2015. The increase was primarily driven by increased volumes and improved costs per ton. Gross profit in the I&R segment for the year ended December 31, 2016 includes write-downs of $0.4 million.

Selling, General, and Administrative Expenses

SG&A decreased $6.1 million, or 7%, to $79.1 million for the year ended December 31, 2016 compared to $85.2 million for the year ended December 31, 2015. SG&A costs for 2016 included $7.3 million in professional fees for cost reduction initiatives, extension of our Term B-1 Loans, and stock offering fees throughout the year. SG&A also includes non-cash stock compensation expense of $8.9 million and $4.5 million for the years ended December 31, 2016 and 2015, respectively. Stock compensation expense was higher in 2016 due to plan amendments for retirement provisions while 2015 stock compensation expense had $2.6 million of forfeitures included for employee departures. The declines in SG&A over prior year levels are the result of workforce reductions in 2015 and early 2016 and continued focus around cost reductions.

Depreciation, Depletion, and Amortization

Depreciation, depletion and amortization increased $5.5 million, or 8%, to $72.3 million for the year ended December 31, 2016 compared to $66.8 million for the year ended December 31, 2015. The increase in depreciation is due to more assets placed in service primarily related to the Wedron plant expansion.

Income (Loss) from Operations

Income (loss) from operations decreased $149.2 million to a loss of $179.3 million for the year ended December 31, 2016 compared to loss of $30.1 million for the year ended December 31, 2015. Earnings in 2016 were largely impacted by declines in gross profits due to the changes in product mix and decreased selling prices. The loss from operations for the year ended December 31, 2016 included inventory write-downs of $10.3 million; $9.8 million in railcar renegotiation fees; professional fees from cost reduction initiatives, debt refinancing and stock equity offerings of $7.3 million, $1.2 million in severance costs, and non-cash impairments and restructuring costs of $93.3 million.

Interest Expense

Interest expense increased $3.1 million, or 5%, to $65.4 million for the year ended December 31, 2016 compared to $62.2 million for the year ended December 31, 2015. The change in interest expense is in part due to the prepayments and repurchases of the term loans, which reduced overall interest expense, and an increase in the notional amounts for interest rate swap agreements, entered into in 2013, that became effective October 2015.

Provision (Benefit) for Income Taxes

The provision (benefit) for income taxes decreased $97.5 million to arrive at a benefit of $99.4 million for the year ended December 31, 2016 compared to benefit of $1.9 million for the year ended December 31, 2015. Income before income taxes decreased $145.7 million to a loss of $239.6 million for the year ended December 31, 2016 compared to loss of $93.9 million for the year ended December 31, 2015. The tax provision is primarily impacted by the benefit from a loss carryback and depletion. These favorable items are partially offset by an increase in the valuation allowance primarily related to federal and state net operating loss carryforwards.

Net Income (Loss) Attributable to Fairmount Santrol Holdings Inc.

Net income attributable to Fairmount Santrol Holdings Inc. decreased $48.1 million to a loss of $140.2 million for the year ended December 31, 2016 compared to loss of $92.1 million for the year ended December 31, 2015 due to the factors noted above.

Adjusted EBITDA

Adjusted EBITDA decreased $143.0 million to a loss of $4.9 million for the year ended December 31, 2016 compared to income of $138.1 million for the year ended December 31, 2015. Adjusted EBITDA for 2016 excludes the impact of $8.9 million of non-cash stock compensation expense, the $5.1 million net gain from the repurchase of debt, and $93.3 million from asset impairments and restructuring charges. Fees of $9.8 million from the renegotiation of certain railcar leases, $7.3 million in professional fees from cost reduction initiatives, debt refinancing and stock equity offerings and inventory write-offs of $10.3 million have not been added back to Adjusted EBITDA. The decline in Adjusted EBITDA in 2016 over 2015 was largely due to declines in proppant pricing and product mix over the period.

Liquidity and Capital Resources

Overview

Our liquidity is principally used to service our debt and to meet our working capital and capital expenditure needs. Historically, we have met our liquidity needs in part with funds generated from operations as well as through periodic capital market transactions, such as the issuance of shares of our common stock.

On June 27, 2017, we prepaid $50.0 million of term loans. On November 1, 2017, we successfully refinanced all of our term loans into one new term loan (“Term Loan B”), extending maturities to November 2022, and replaced our existing Revolving Credit Facility with a new asset-based revolving credit facility (“ABL Revolver”). The ABL Revolver expires in November 2022, however, if the new Term Loan B is still outstanding, then any balance outstanding under the ABL Revolver is due in May 2022.

As of December 31, 2017, we had outstanding term loan borrowing of $689.0 million and cash on-hand of $128.0 million. In addition, our ABL Revolver can provide additional liquidity, if needed. As of December 31, 2017, we had $80.0 million of availability under our ABL Revolver with $15.6 million committed to letters of credit and $1.0 million withheld for collateral, leaving net availability at $63.4 million.

As of the date of this Report, we believe that our cash on-hand, cash generated from operations, and amounts available under the new ABL Revolver will be sufficient to meet cash obligations, such as working capital requirements, anticipated capital expenditures, and scheduled debt payments. We may continue to use cash at times to make debt prepayments and related fees or to negotiate market-priced repurchases of our term debt to the extent permitted under our credit agreement. See “Credit Facilities” below for more information.

A downturn in our business’s key markets could significantly impact our forecasts. While we believe that our operating forecasts are reasonable, the forecasts are based on assumptions and market conditions that continue to vacillate and impact the industry, primarily the proppant business. We continue to have contingency plans allowing us to address fluctuations in market conditions that could adversely affect liquidity, including, but not limited to, implementing reductions in operating costs, idling or closing mines and processing facilities, reducing selling, general, and administrative costs, reducing planned capital spending, and improving working capital.

Working Capital

Working capital is the amount by which current assets exceed current liabilities and represents a measure of liquidity. Our working capital was $193.7 million at December 31, 2017 and $279.6 million at December 31, 2016.

Accounts Receivable

Accounts receivable increased 99% to $156.9 million at December 31, 2017 compared to $78.9 million at December 31, 2016. The increase is primarily the result of increased sales in the year ended December 31, 2017 compared to the year ended December 31, 2016. At December 31, 2017 and 2016, we had two customers whose receivable balances exceeded 10% of total receivables. These customers comprised approximately 42% and 45% of our accounts receivable balance at December 31, 2017 and December 31, 2016, respectively. During the years ended December 31, 2017 and 2016, our top ten proppant customers collectively represented 75% and 70% of our revenues, respectively. In the year ended December 31, 2017, three customers exceeded 10% of revenues. These customers accounted for 20%, 14%, and 11% of our revenues, respectively, in the year ended December 31, 2017. In the year ended December 31, 2016, two customers exceeded 10% of revenues. These customers accounted for 30% and 12%, respectively, of our revenues in the year ended December 31, 2016.

Inventory

Inventory consists of raw materials, work-in-process and finished goods. The cost of finished goods includes processing costs and transportation costs to terminals. The increase in inventory to $70.5 million at December 31, 2017 compared to $52.7 million at December 31, 2016 relates to increased production to meet current and projected demand.

Prepaid Expenses and Other Assets

Prepaid expenses and other assets decreased $0.2 million to $6.8 million at December 31, 2017 from $7.1 million at December 31, 2016, primarily due to a slight decrease in prepaid insurance as a result of lower insurance premiums.

Refundable Income Taxes

Refundable income taxes decreased $20.2 million to $0.9 million at December 31, 2017 from $21.1 million at December 31, 2016. The decrease primarily represents the receipt in the quarter ended June 30, 2017 of the $16.0 million refund relating to a loss carryback to a prior year.

Accounts Payable

Accounts payable increased $33.4 million to $70.6 million at December 31, 2017 compared to $37.3 million at December 31, 2016. The increase in accounts payable is due to increased purchasing and freight activity driven by higher sales volumes compared to the prior year period.

Accrued Expenses

The increase in accrued expenses to $74.0 million at December 31, 2017 compared to $26.1 million at December 31, 2016 is primarily due an increase in the accruals related to 2017 performance-based compensation and pension plan contributions, and the accrual of $10.0 million in remaining leasehold interest payments related to the July 2017 Kermit, Texas transaction.

Deferred Revenue

The increase in deferred revenue to $5.7 million at December 31, 2017 compared to $0.1 million at December 31, 2016 is due to approximately $5.6 million of prepayments on customer contracts.

Cash Flow Analysis

Net Cash Provided by (Used in) Operating Activities

Operating activities consist primarily of net income adjusted for non-cash items, including depreciation, depletion, and amortization, asset impairments, and the effect of changes in working capital.

Net cash provided by operating activities was $144.8 million for the year ended December 31, 2017 compared with $1.5 million provided in the year ended December 31, 2016. This $143.3 million variance was primarily the result of a $194.2 million increase in net income offset by a $39.0 million decrease in operating assets and liabilities and $11.9 million decrease to adjustments to reconcile net income.

Net cash used in operating activities was $1.5 million for the year ended December 31, 2016 compared with $236.8 million provided in the year ended December 31, 2015. This $235.3 million decrease was primarily the result of a decline in operating income, partially offset by improvements in working capital.

Net Cash Used in Investing Activities

Investing activities consist primarily of capital expenditures for growth and maintenance. Capital expenditures generally are for expansions of production or terminal capacities, or for stripping costs. Maintenance capital expenditures generally are for asset replacement and health, safety, and quality improvements.

Net cash used in investing activities was $98.8 million for the year ended December 31, 2017 compared to $26.2 million used for the year ended December 31, 2016. The $72.6 million variance was primarily the result of an increase in capital expenditures, which included approximately $27.3 million related to the construction of the new Kermit, Texas sand processing facility, as well as $30.0 million in leasehold interest payments for the sand reserves at this site.

Capital expenditures of $69.6 million, including stripping costs, in the year ended December 31, 2017 were primarily focused on maintenance of existing facilities, the re-opening of idled mines and processing facilities in early 2017, continued development of our terminal and logistics network, and construction of the new Kermit, Texas sand processing facility. Capital expenditures were $30.6 million in the year ended December 31, 2016 and were primarily associated with the early 2016 completion of the Wedron facility expansion.

Net cash used in investing activities was $26.2 million for the year ended December 31, 2016 compared to $114.0 million used for the year ended December 31, 2015. The $87.8 million variance was primarily the result of a decrease in capital expenditures.

Capital expenditures of $30.6 million, including stripping costs, in the year ended December 31, 2016 were primarily focused on the completion of the expansion of our Wedron facility, certain projects improving plant efficiencies, adding terminals, and maintenance activities on other assets. Capital expenditures were $113.8 million in the year ended December 31, 2015 and also were primarily associated with the expansion of the Wedron facility.

For 2018, we expect full year capital expenditures to approximate $50.0 million to $55.0 million. This includes maintenance capital expenditures, terminal expansions, land acquisitions, and stripping, and excludes any Kermit, Texas-related capital expenditures. Kermit-related capital expenditures are expected to be approximately $50.0 to $55.0 million in 2018, as well as an additional $10.0 million for the final leasehold interest payment in the second quarter.

Net Cash Provided by (Used in) Financing Activities

Financing activities consist primarily of borrowings and repayments under our Term Loans and ABL Revolver. Net cash used in financing activities was $112.6 million in the year ended December 31, 2017 compared to $46.8 million provided in the year ended December 31, 2016. The $159.4 million variance is primarily due to the approximately $439.6 million in proceeds from the primary stock offerings in the year ended December 31, 2016, offset by approximately $233.1 million more of net proceeds, prepayments, and repurchases on our term loans in 2016 compared to 2017, $45.0 million of borrowings on our ABL Revolver in 2017, and $2.9 million in fees related to refinancing in 2017.

Net cash provided by financing activities was $46.8 million in the year ended December 31, 2016 compared to $25.9 million used in the year ended December 31, 2015 primarily as a result of the common stock offerings, debt prepayments, and debt repurchases.

Credit Facilities

On June 27, 2017, we prepaid $50.0 million of term loans. As previously noted, on November 1, 2017 (the “Closing Date”), we entered into an agreement for a new $700.0 million Term Loan B to refinance substantially all of our existing term debt. The Term Loan B matures in November 2022. Additionally, we replaced our existing revolving credit facility with a new ABL Revolver. The ABL Revolver expires in November 2022, however, if the new Term Loan B is still outstanding, then any balance outstanding under the ABL Revolver is due in May 2022. The ABL Revolver has a borrowing capacity of up to $125.0 million with an option to increase by $50.0 million to $175.0 million. On the Closing Date, we drew $50.0 million on the ABL Revolver to refinance a portion of the previous term debt, but paid $5.0 million of this balance down at December 31, 2017. We also expect to use the ABL Revolver to fund capital expenditures and provide ongoing working capital. Please see further detail in Note 8 of our consolidated financial statements in this Report.

As of December 31, 2017, we had outstanding term loan borrowings of $689.0 million.

As of December 31, 2017, we had $80.0 million of availability under our ABL Revolver with $15.6 million committed to letters of credit and $1.0 million withheld for collateral, leaving net availability at $63.4 million. As of December 31, 2017, we have $45.0 million drawn on our ABL Revolver.

As of December 31, 2017, the Term Loan B and the ABL Revolver had actual interest rates of 7.7% and 3.3%, respectively.

We have a $10.0 million Industrial Revenue Bond outstanding related to the construction of a mining facility in Wisconsin. The bond bears interest, which is payable monthly, at a variable rate. The rate was 1.46% at December 31, 2017. The bond matures on September 1, 2027 and is collateralized by a letter of credit of $10.0 million.

As of the date of this Report, we believe that the amount available under our new ABL Revolver, cash generated from operations, and our cash and cash equivalents on hand will provide adequate liquidity to allow us to meet our cash obligations over the next twelve months.

Off-Balance Sheet Arrangements

We have no undisclosed off-balance sheet arrangements that have or are likely to have a current or future material effect on our financial condition, changes in financial condition, revenues, expenses, results of operations, liquidity, capital expenditures or capital resources.

Contractual Obligations

As of December 31, 2017, we have contractual obligations for long-term debt, capital leases, operating leases, purchase obligations, terminal operating costs, leasehold interest payments, earnout payments, and other long-term liabilities. Substantially all of the operating lease obligations are for railcars.

We became contractually obligated for $40.0 million in leasehold interest payments for the July 2017 Kermit, Texas transaction. We paid $30.0 million in 2017 and expect to pay the remaining $10.0 million when the new facility begins to sell sand in the second quarter of 2018. See Note 5 in our consolidated financial statements for further detail. Additionally, we are obligated through October 1, 2020 for earnout payments on Propel SSP®. See Note 17 in our consolidated financial statements for further detail. As previously noted, we refinanced our term debt. See Note 8 in our consolidated financial statements for further detail.

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	Payments Due by Period (in thousands)				
	Total	Less than 1 Year	1-3 Years	3-5 Years	More than 5 Years
Contractual Obligations					
Long-term debt	$755,073	$ 17,517	$43,787	$683,769	$ 10,000
Capital lease obligations	10,339	4,346	5,938	55	-
Operating lease obligations	311,457	57,443	103,287	74,750	75,977
Purchase obligations	136,456	-	-	136,456	-
Other long-term liabilities reflected on the registrant's balance sheet under GAAP; deferred income taxes and other	45,795	-	39,187	-	6,608
Total contractual cash obligations	$1,259,120	$ 79,306	$192,199	$895,030	$ 92,585

Environmental Matters

We are subject to various federal, state and local laws and regulations governing, among other things, hazardous materials, air and water emissions, environmental contamination and reclamation and the protection of the environment and natural resources. We have made, and expect to make in the future, expenditures to comply with such laws and regulations, but cannot predict the full amount of such future expenditures. We may also incur fines and penalties from time to time associated with noncompliance with such laws and regulations.

We recorded an additional $1.4 million and $1.0 million in 2017 and 2016, respectively, in future reclamation costs associated with closed facilities. There were no other significant changes to environmental liabilities or future reclamation costs.

We discuss certain environmental matters relating to our various production and other facilities, certain regulatory requirements relating to human exposure to crystalline silica and our mining activity and how such matters may affect our business in the future under “Regulation and Legislation” in this Annual Report on Form 10-K.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with GAAP. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the dates of the financial statements and the reported revenues and expenses during the reporting periods. We evaluate these estimates and assumptions on an ongoing basis and base our estimates on historical experience, current conditions and various other assumptions that are believed to be reasonable under the circumstances. The results of these estimates form the basis for making judgments about the carrying values of assets and liabilities as well as identifying and assessing the accounting treatment with respect to commitments and contingencies. Our actual results may materially differ from these estimates. These critical accounting policies and estimates should be read in conjunction with our consolidated financial statements as filed in this Annual Report on Form 10-K.

Listed below are the accounting policies we believe are critical to our financial statements due to the degree of uncertainty regarding the estimates or assumptions involved, and that we believe are critical to the understanding of our operations.

Impairment of Long-Lived Assets, Definite-Lived Intangible Assets and Goodwill

We periodically evaluate whether current events or circumstances indicate that the carrying value of our long-lived assets, including property, plant and equipment, mineral reserves or mineral rights and definite-lived intangible assets may not be recoverable. If such circumstances are determined to exist, an estimate of future cash flows produced by the asset group or individual assets within the asset group is compared to the carrying value to determine whether an impairment exists. If an asset is determined to be impaired, the loss is measured based on quoted market prices in active markets, if available. If quoted market prices are not available, the estimate of fair value is based on various valuation techniques, including a discounted value of estimated future cash flows. A detailed determination of the fair value may be carried forward from one year to the next if certain criteria have been met. We report an asset to be disposed of at the lower of its carrying value or its estimated net realizable value.

Factors we generally consider important in our evaluation and that could trigger an impairment review of the carrying value of the asset group or individual assets within the asset group include expected operating trends, significant changes in the way assets are used, underutilization of our tangible assets, discontinuance of certain products by us or by our customers, and significant negative industry or economic trends.

The recoverability of the carrying value of our development stage mineral properties is dependent upon the successful development, start-up and commercial production of our mineral deposits and related processing facilities. Our evaluation of mineral properties for potential impairment primarily includes assessing the existence or availability of required permits and evaluating changes in our mineral reserves, or the underlying estimates and assumptions, including estimated production costs. Assessing the economic feasibility requires certain estimates, including the prices of products to be produced and processing recovery rates, as well as operating and capital costs.

The evaluation of goodwill for possible impairment includes a qualitative assessment of macroeconomic conditions, industry and market environments, overall performance of the reporting segment and specific events. If the qualitative assessment indicates the asset may be impaired, then a quantitative assessment is performed which requires estimating fair value using one or a combination of valuation techniques, such as discounted cash flows or based on comparable companies or transactions. These valuations require us to make estimates and assumptions regarding future operating results, cash flows, changes in working capital and capital expenditures, selling prices, profitability, and the cost of capital. Deviations from these assumptions and estimates could produce a materially different result.

Accounts Receivable and Allowance for Doubtful Accounts

Trade accounts receivable are recognized at their invoiced amounts and do not bear interest. Credit is extended based on evaluation of a customer’s financial condition and, generally, collateral is not required. Accounts receivable are generally due between 30 and 60 days, and are stated at amounts due from customers net of an allowance for doubtful accounts. Accounts outstanding longer than the payment terms are considered past due. We determine our allowance by considering a number of factors, including the length of time trade accounts receivable are past due, our previous loss history, the customer’s current ability to pay its obligation to us, and the condition of the general economy and the industry as a whole. Ongoing credit evaluations are performed. We write-off accounts receivable when they are deemed uncollectible, and payments subsequently received on such receivables are credited to the allowance for doubtful accounts.

Equity Awards

We recognize stock based compensation expense using a fair value method. Fair value methods use a valuation model to theoretically value stock option grants even though they are not available for trading and are of longer duration. The Black-Scholes-Merton option-pricing model that we use includes the input of certain variables that are dependent on future expectations, including the expected lives of our options from grant date to exercise date, the volatility of our common stock trending price, and our expected dividend rate of zero. Our estimates of these variables are made for the purpose of using the valuation model to determine an expense for each reporting period and are not subsequently adjusted. We also estimate a forfeiture rate based on our historical experience, which could change over time. We value our restricted stock units at the closing price of our stock as of the date of issuance.

Fair Value of Derivatives

We record derivative instruments used to hedge interest rate exposure on the variable-rate debt obligations at their fair values. Changes in the fair value of derivatives are recorded each period in current earnings or in other comprehensive income, depending on whether a derivative is designated as part of a hedging relationship and, if it is, depending on the type of hedging relationship. For cash flow hedges in which we are hedging the variability of cash flows related to a variable-rate liability, the effective portion of the gain or loss on the derivative instrument is reported in other comprehensive income in the periods during which earnings are impacted by the variability of the cash flows of the hedged item. The ineffective portion of all hedges is recognized in current period earnings. As interest expense is accrued on the debt obligation, amounts in accumulated other comprehensive income (loss) related to the interest rate swaps are reclassified into income to obtain a net cost on the debt obligation equal to the effective yield of the fixed rate of each swap. In the event that an interest rate swap is terminated prior to maturity, gains or losses in accumulated other comprehensive income (loss) remain deferred and are reclassified into earnings in the periods during which the hedged forecasted transaction affects earnings.

The fair values and effectiveness testing of our derivatives are based on prevailing market data and derived from proprietary models based on well recognized financial principles and reasonable estimates about relevant future market conditions including interest rates, counterparty risk, and credit risk. These assumptions could cause material changes in the fair value or effectiveness of our derivative instruments.

Taxes

Deferred taxes are provided on the liability method whereby deferred tax assets are recognized for deductible temporary differences and operating loss and tax credit carry-forwards and deferred tax liabilities are recognized for taxable temporary differences. This approach requires recognition of deferred tax liabilities and assets for the expected future tax consequences of events that have been included in the financial statements or tax returns. Under this method, deferred tax liabilities and assets are determined based upon the difference between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the expenses are expected to reverse. Valuation allowances are provided if, based on the weight of available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

We recognize a tax benefit associated with an uncertain tax position when, in our judgment, it is more likely than not that the position will be sustained upon examination by a taxing authority. For a tax position that meets the more-likely-than-not recognition threshold, we initially and subsequently measure the tax benefit as the largest amount that we judge to have a greater than 50% likelihood of being realized upon ultimate settlement with a taxing authority. The liability associated with unrecognized tax benefits is adjusted periodically due to changing circumstances, such as the progress of tax audits, case law developments and new or emerging legislation. Such adjustments are recognized entirely in the period in which they are identified. The effective tax rate includes the net impact of changes in the liability for unrecognized tax benefits and subsequent adjustments as considered appropriate by management.

We evaluate quarterly the realizability of our deferred tax assets by assessing the need for a valuation allowance and by adjusting the amount of such allowance, if necessary. The factors used to assess the likelihood of realization are our forecast of future taxable income in the appropriate jurisdiction to utilize the asset, and available tax planning strategies that could be implemented to realize the net deferred tax assets. Failure to achieve forecasted taxable income might affect the ultimate realization of the net deferred tax assets. Factors that may affect our ability to achieve sufficient forecasted taxable income include, but are not limited to, the following: a decline in sales or margins, increased competition or loss of market share.

In addition, we operate within multiple taxing jurisdictions and are subject to audit in these jurisdictions. These audits can involve complex issues, which may require an extended time to resolve. We believe that adequate provisions for income taxes have been made for all years.

The largest permanent items in computing both our effective rate and taxable income are the deduction for statutory depletion and the manufacturers' deduction for manufacturers' products. The depletion deduction is dependent upon a mine-by-mine computation of both gross income from mining and taxable income. The manufacturer's deduction for manufacturer's products has been repealed for tax years after 2017.

The Tax Act, which is effective January 1, 2018, subjects the Company to current tax on its global intangible low-taxed income ("GILTI"). To the extent that tax expense is incurred under the GILTI provisions, it will be treated as a component of income tax expense in the period incurred.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest Rate Swaps

Due to our variable-rate indebtedness, we are exposed to fluctuations in interest rates. We use fixed interest rate swaps to manage this exposure. These derivative instruments are recorded on the balance sheet at their fair values. Changes in the fair value of derivatives are recorded each period in current earnings or in other comprehensive income, depending on whether a derivative is designated as part of a hedging relationship and, if it is, depending on the type of hedging relationship. For cash flow hedges in which we are hedging the variability of cash flows related to a variable-rate liability, the effective portion of the gain or loss on the derivative instrument is reported in other comprehensive income in the periods during which earnings are impacted by the variability of the cash flows of the hedged item. The ineffective portion of all hedges is recognized in current period earnings.

We do not use derivative financial instruments for trading or speculative purposes. By their nature, all such instruments involve risk, including the possibility that a loss may occur from the failure of another party to perform according to the terms of a contract (credit risk) or the possibility that future changes in market price may make a financial instrument less valuable or more onerous (market risk). As is customary for these types of instruments, we do not require collateral or other security from other parties to these instruments. In management’s opinion, there is no significant risk of loss in the event of nonperformance of the counterparties to these financial instruments.

We formally designate and document instruments at inception that qualify for hedge accounting of underlying exposures in accordance with GAAP. We assess, both at inception and for each reporting period, whether the financial instruments used in hedging transactions are effective in offsetting changes in cash flows of the related underlying exposure.

As of December 31, 2017, the fair value of the interest rate swap was a liability of $3.2 million.

A hypothetical increase or decrease in interest rates by 1.0% would have had an approximate $0.1 million impact on our interest expense in the year ended December 31, 2017.

Market Risk

We are exposed to various market risks, including changes in interest rates. Market risk related to interest rates is the potential loss arising from adverse changes in interest rates. We do not believe that inflation has a material impact on our financial position or results of operations during periods covered by the financial statements included in this Annual Report on Form 10-K.

Credit Risk

We are subject to risks of loss resulting from nonpayment or nonperformance by our customers. In the year ended December 31, 2017, three customers exceeded 10% of revenues. These customers collectively accounted for 45% of revenues in 2017. In the year ended December 31, 2016, two customers exceeded 10% of revenues. These customers collectively accounted for 42% of revenues in 2016. At December 31, 2017, we had two customers whose receivable balances exceeded 10% of total receivables. Approximately 42% of the accounts receivable balance was from these two customers. We examine the creditworthiness of third-party customers to whom we extend credit and manage our exposure to credit risk through credit analysis, credit approval, credit limits and monitoring procedures, and for certain transactions, we may request letters of credit, prepayments or guarantees, although collateral is generally not required.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The following consolidated financial statements are filed as part of this Annual Report on Form 10-K:

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Fairmount Santrol Holdings Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Fairmount Santrol Holdings Inc. and its subsidiaries as of December 31, 2017 and 2016, and the related consolidated statements of income (loss), comprehensive income (loss), equity and cash flows for each of the three years in the period ended December 31, 2017, including the related notes and financial statement schedule listed in the accompanying index (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2017 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP

Cleveland, Ohio

March 13, 2018

We have served as the Company's auditor since 2010.

Fairmount Santrol Holdings Inc. and Subsidiaries

Consolidated Statements of Income (Loss)

Years Ended December 31, 2017, 2016, and 2015

	Year Ended December 31,		
	2017	2016	2015
	(in thousands, except per share amounts)		
Revenues	$959,795	$535,013	$828,709
Cost of goods sold (excluding depreciation, depletion, and amortization shown separately)	659,758	459,714	608,845
Operating expenses			
Selling, general and administrative expenses	113,240	79,140	85,191
Depreciation, depletion and amortization expense	79,144	72,276	66,754
Goodwill and other asset impairments	-	93,148	87,476
Restructuring charges	-	1,155	9,221
Other operating (income) expense	(1,072)	8,899	1,357
Income (loss) from operations	108,725	(179,319)	(30,135)
Interest expense	56,408	65,367	62,242
Loss (gain) on debt extinguishment and repurchase, net	2,898	(5,110)	-
Other non-operating (income) expense	-	(10)	1,492
Income (loss) before benefit from income taxes	49,419	(239,566)	(93,869)
Benefit from income taxes	(4,666)	(99,441)	(1,939)
Net income (loss)	54,085	(140,125)	(91,930)
Less: Net income attributable to the non-controlling interest	297	67	205
Net income (loss) attributable to Fairmount Santrol Holdings Inc.	$53,788	$(140,192)	$(92,135)
Earnings (loss) per share			
Basic	$0.24	$(0.78)	$(0.57)
Diluted	$0.23	$(0.78)	$(0.57)
Weighted average number of shares outstanding			
Basic	223,993	179,429	161,297
Diluted	229,084	179,429	161,297

The accompanying notes are an integral part of these consolidated financial statements.

Fairmount Santrol Holdings Inc. and Subsidiaries

Consolidated Statements of Comprehensive Income (Loss)

Years Ended December 31, 2017, 2016, and 2015

	Year Ended December 31,		
	2017	2016	2015
	(in thousands)		
Net income (loss)	$54,085	$(140,125)	$(91,930)
Other comprehensive income (loss), before tax			
Foreign currency translation adjustment	555	(774)	(5,051)
Pension obligations	336	425	222
Change in fair value of derivative agreements	5,863	(3,018)	(1,836)
Total other comprehensive income (loss), before tax	6,754	(3,367)	(6,665)
Provision (benefit) for income taxes related to items of other comprehensive income (loss)	2,850	(2,058)	(1,780)
Comprehensive income (loss), net of tax	57,989	(141,434)	(96,815)
Comprehensive income attributable to the non-controlling interest	297	67	205
Comprehensive income (loss) attributable to Fairmount Santrol Holdings Inc.	$57,692	$(141,501)	$(97,020)

The accompanying notes are an integral part of these consolidated financial statements.

Fairmount Santrol Holdings Inc. and Subsidiaries

Consolidated Balance Sheets

December 31, 2017 and 2016

	December 31, 2017	December 31, 2016
	(in thousands)	
Assets		
Current assets		
Cash and cash equivalents	$127,967	$194,069
Accounts receivable, net of allowance for doubtful accounts of $2,003 and $3,055 at December 31, 2017 and 2016, respectively	156,916	78,942
Inventories, net	70,528	52,650
Prepaid expenses and other assets	6,841	7,065
Refundable income taxes	924	21,077
Total current assets	363,176	353,803
Property, plant and equipment, net	785,513	727,735
Deferred income taxes	350	1,244
Goodwill	15,301	15,301
Intangibles, net	93,268	95,341
Other assets	7,711	9,486
Total assets	$1,265,319	$1,202,910
Liabilities and Equity		
Current liabilities		
Current portion of long-term debt	$19,189	$10,707
Accounts payable	70,633	37,263
Accrued expenses	74,007	26,110
Deferred revenue	5,660	75
Total current liabilities	169,489	74,155
Long-term debt	729,741	832,306
Deferred income taxes	3,606	7,057
Other long-term liabilities	42,189	38,272
Total liabilities	945,025	951,790
Commitments and contingent liabilities (Note 17)		
Equity		
Preferred stock: $0.01 par value, 100,000 authorized shares Shares outstanding: 0 at December 31, 2017 and 2016	-	-
Common stock: $0.01 par value, 1,850,000 authorized shares Shares issued: 242,366 and 242,267 at December 31, 2017 and 2016, respectively Shares outstanding: 224,291 and 223,601 at December 31, 2017 and 2016, respectively	2,423	2,422

Additional paid-in capital	299,912	297,649
Retained earnings	318,207	264,852
Accumulated other comprehensive loss	(15,098)	(19,002)
Total equity attributable to Fairmount Santrol Holdings Inc. before treasury stock	605,444	545,921
Less: Treasury stock at cost		
Shares in treasury: 18,075 and 18,666 at December 31, 2017 and 2016, respectively	(285,520)	(294,874)
Total equity attributable to Fairmount Santrol Holdings Inc.	319,924	251,047
Non-controlling interest	370	73
Total equity	320,294	251,120
Total liabilities and equity	$1,265,319	$1,202,910

The accompanying notes are an integral part of these consolidated financial statements.

Fairmount Santrol Holdings Inc. and Subsidiaries

Consolidated Statements of Equity

Years Ended December 31, 2017, 2016, and 2015

	Equity (deficit) attributable to Fairmount Santrol Holdings Inc.									
	Common Stock	Common Stock Units	Additional Paid-in Capital	Retained Earnings	Other Comprehensive Income (Loss)	Treasury Stock	Treasury Stock Units	Subtotal	Non-Controlling Interest	Total
	(in thousands)									
Balances at December 31, 2014	$2,387	160,913	$771,888	$497,179	$(12,809)	$(1,227,663)	77,765	$30,982	$2,492	$33,474
Share-based awards exercised or distributed	4	520	1,763	-	-	-	-	1,767	-	1,767
Stock compensation expense	-	-	4,525	-	-	-	-	4,525	-	4,525
Tax effect of share-based awards exercised	-	-	(1,471)	-	-	-	-	(1,471)	-	(1,471)
Transactions with non-controlling interest	-	-	-	-	-	-	-	-	(1,849)	(1,849)
Net (loss) income	-	-	-	(92,135)	-	-	-	(92,135)	205	(91,930)
Other comprehensive loss	-	-	-	-	(4,884)	-	-	(4,884)	-	(4,884)
Balances at December 31, 2015	$2,391	161,433	$776,705	$405,044	$(17,693)	$(1,227,663)	77,765	$(61,216)	$848	$(60,368)
Re-issuance of treasury stock	-	59,000	(493,233)	-	-	932,789	(59,000)	439,556	-	439,556
Share-based awards exercised or distributed	31	3,168	6,407	-	-	-	(99)	6,438	-	6,438
	-	-	8,870	-	-	-	-	8,870	-	8,870

Stock compensation expense										
Tax effect of share-based awards exercised, forfeited, or expired	-	-	(1,100)	-	-	-	-	(1,100)	-	(1,100)
Transactions with non-controlling interest	-	-	-	-	-	-	-	-	(842)	(842)
Net (loss) income	-	-	-	(140,192)	-	-	-	(140,192)	67	(140,125)
Other comprehensive loss	-	-	-	-	(1,309)	-	-	(1,309)	-	(1,309)
Balances at December 31, 2016	$2,422	223,601	$297,649	$264,852	$(19,002)	$(294,874)	18,666	$251,047	$73	$251,120
Re-issuance of treasury stock	-	591	-	-	-	9,354	(591)	9,354	-	9,354
Share-based awards exercised or distributed	1	99	(8,507)	-	-	-	-	(8,506)	-	(8,506)
Stock compensation expense	-	-	10,770	-	-	-	-	10,770	-	10,770
Impact of adoption of ASU 2016-09, net of tax	-	-	-	(433)	-	-	-	(433)	-	(433)
Net income	-	-	-	53,788	-	-	-	53,788	297	54,085
Other comprehensive income	-	-	-	-	3,904	-	-	3,904	-	3,904
Balances at December 31, 2017	$2,423	224,291	$299,912	$318,207	$(15,098)	$(285,520)	18,075	$319,924	$370	$320,294

The accompanying notes are an integral part of these consolidated financial statements.

Fairmount Santrol Holdings Inc. and Subsidiaries

Consolidated Statements of Cash Flows

Years Ended December 31, 2017, 2016, and 2015

	Year Ended December 31,		
	2017	2016	2015
	(in thousands)		
Net income (loss)	$54,085	$(140,125)	$(91,930)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and depletion	71,397	67,614	62,218
Amortization	12,784	11,641	11,416
Reserve for doubtful accounts	(387)	1,851	1,968
Write-off of deferred financing costs	389	2,618	864
Loss (gain) on debt extinguishment and repurchase, gross	2,898	(8,178)	-
Goodwill and other asset impairments	-	93,148	76,038
Non-cash restructuring charges	-	-	1,162
Inventory write-downs and reserves	1,266	10,302	1,591
Loss on disposal of fixed assets	846	420	8,712
Unrealized loss on interest rate swaps	14	-	49
Deferred income taxes and taxes payable	(5,634)	(82,732)	20,983
Stock compensation expense	10,071	8,870	4,525
Change in operating assets and liabilities:			
Accounts receivable	(77,587)	(4,385)	127,718
Inventories	(19,144)	7,543	59,527
Prepaid expenses and other assets	(2,398)	11,496	23,234
Refundable income taxes	20,154	5,428	(26,506)
Accounts payable	18,575	4,196	(38,698)
Accrued expenses	51,874	11,718	(6,051)
Deferred revenue	5,585	75	-
Net cash provided by operating activities	144,788	1,500	236,820
Cash flows from investing activities			
Proceeds from sale of fixed assets	4,939	5,670	-
Capital expenditures and stripping costs	(69,573)	(30,597)	(113,750)
Leasehold interest payments for sand reserves	(30,000)	-	-
Earnout payments	(4,170)	(1,287)	-
Other investing activities	-	-	(250)
Net cash used in investing activities	(98,804)	(26,214)	(114,000)
Cash flows from financing activities			
Proceeds from borrowings on term loan	689,500	-	-
Payments on term loans	(6,469)	(10,840)	(13,532)
Prepayments on term loans	(832,655)	(155,926)	-
Repurchase of term loans	-	(216,000)	-

Fees for debt restructure and repurchase of term loans	(2,790)	(450)	-
Payments on capital leases and other long-term debt	(4,752)	(5,947)	(6,975)
Proceeds from borrowing on revolving credit facility	50,000	-	-
Payments on revolving credit facility	(5,000)	-	-
Proceeds from option exercises	845	6,438	1,767
Proceeds from primary stock offering	-	439,556	-
Tax payments for withholdings on share-based awards exercised or distributed	(1,321)	(8,092)	(826)
Tax effect of share-based awards exercised, forfeited, or expired	-	(1,100)	(1,472)
Transactions with non-controlling interest	-	(842)	(301)
Other financing activities	-	-	(4,578)
Net cash (used in) provided by financing activities	(112,642)	46,797	(25,917)
Change in cash and cash equivalents related to assets classified as held-for-sale	-	1,376	(1,376)
Foreign currency adjustment	556	(876)	(964)
(Decrease) increase in cash and cash equivalents	(66,102)	22,583	94,563
Cash and cash equivalents:			
Beginning of period	194,069	171,486	76,923
End of period	$127,967	$194,069	$171,486
Supplemental disclosure of cash flow information:			
Interest paid, net of capitalized interest	$59,498	$60,833	$61,395
Income taxes paid (refunded)	(19,278)	(21,311)	(19,898)
Non-cash investing activities:			
Equipment purchased under capital leases	$10,988	$-	$4,552

The accompanying notes are an integral part of these consolidated financial statements.

Fairmount Santrol Holdings Inc. and Subsidiaries

Notes to Consolidated Financial Statements

Years Ended December 31, 2017, 2016, and 2015

(in thousands, except per share and acreage data)

1. Organization

Fairmount Santrol Holdings Inc. and its consolidated subsidiaries (collectively, the “Company”) is a supplier of proppants and sand products. The Company is organized into two segments: Proppant Solutions and Industrial & Recreational Products. This segmentation is based on the end markets served, management structure, and the financial information that is reviewed by the chief operating decision maker in deciding how to allocate resources and assess performance.

The Proppant Solutions business serves the oil and gas markets in the United States, Canada, Argentina, Mexico, China, and northern Europe, providing raw and value-added proppants primarily for use in hydraulic fracturing. The raw sand and substrate for value-added proppants generally consists of high-purity silica sands produced at facilities in Illinois, Minnesota, Wisconsin, and Texas.

The Industrial & Recreational Products (“I&R”) business provides raw and value-added products to the foundry, building products, glass, turf and landscape, and filtration industries. Raw sand for the I&R business is produced at facilities in Ohio, Wisconsin, and Illinois.

In addition to its wholly-owned subsidiaries, the Company owns 90% of a holding company, Technimat LLC, which owns 70% of Santrol (Yixing) Proppant Co., a manufacturer of resin-based proppants located in China. The non-controlling interests in both entities are presented as “non-controlling interest” on the balance sheet.

2. Summary of Significant Accounting Policies

Principle of Consolidation

The consolidated financial statements include the accounts of Fairmount Santrol Holdings Inc. and its wholly-owned and majority-owned subsidiaries. All significant intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles (“GAAP”) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

Revenue Recognition

Revenue is recognized when delivery of products has occurred, the selling price is fixed or determinable, collectability is reasonably assured and title and risk of loss have transferred to the customer. This generally occurs when products leave a distribution terminal or, in the case of direct shipments, when products leave a production facility. In a majority of cases, transportation costs to move product from a production facility to a storage terminal are borne by the Company and capitalized into the cost of inventory. These costs are included in the cost of sales as the product is sold. The Company derives its revenue primarily by mining and processing minerals that its customers purchase for various uses. Its net sales are primarily a function of the price per ton realized and the volumes sold. In a number of instances, its net sales also include a separate charge for transportation services it provides to its customers.

In the Proppant Solutions segment, the Company primarily sells its products under market rate contracts with terms typically ranging from one to eight years. The Company invoices the majority of its customers on a per shipment basis when the customer takes possession of the product.

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Cash and Cash Equivalents

The Company considers all highly liquid debt instruments purchased with a maturity of three months or less to be cash equivalents. At various times, the Company maintains funds on deposit at its banks in excess of FDIC insurance limits.

Accounts Receivable

Trade accounts receivable are stated at the amount management expects to collect, and do not bear interest. Management provides for uncollectible amounts based on its assessment of the current status of individual accounts. Accounts receivable are net of allowance for doubtful accounts of $2,003 and $3,055 as of December 31, 2017 and 2016, respectively.

Inventories

Inventories are stated at the lower of cost or market. Certain subsidiaries determine cost using the last-in, first-out (LIFO) method. If the first-in, first-out (FIFO) method of inventory accounting had been used, inventories would have been higher by $634 and $1,256 at December 31, 2017 and 2016, respectively.

LIFO inventories comprise 22% and 21% of inventories reflected in the accompanying Consolidated Balance Sheets as of December 31, 2017 and 2016, respectively. The cost of inventories of all other subsidiaries is determined using the FIFO method. In the years ended December 31, 2017 and 2016, respectively, the Company recorded $1,266, $10,302 and $1,591 of adjustments to increase the inventory reserve to recognize the decline in value of work-in-process and finished goods inventory, which are recorded in cost of goods sold.

Property, Plant, and Equipment

Property, plant, and equipment are stated at cost. Expenditures, including interest, for property, plant, and equipment and items that substantially increase the useful lives of existing assets are capitalized, while expenditures for repairs and maintenance are expensed as incurred.

Depreciation on property, plant, and equipment is computed on a straight-line basis over the estimated useful lives of the related assets. Amortization of leasehold improvements is computed using the straight-line method over the shorter of the remaining lease term or the estimated useful lives of the improvements. Depletion expense calculated for depletable land and mineral rights is based on cost multiplied by a depletion factor. The depletion factor varies based on production and other factors, but is generally equal to annual tons mined divided by total estimated remaining reserves for the mine.

The estimated useful lives of property and equipment are principally as follows:

Land improvements	3-40 years
Leasehold improvements	10-20 years
Machinery and equipment	2-30 years
Buildings and improvements	10-40 years
Furniture, fixtures, and other	3-10 years

Construction in progress is stated at cost, which includes the cost of construction and other direct costs attributable to the construction. No provision for depreciation is made on construction in progress until such time as the relevant assets are completed and put into use. Construction in progress at December 31, 2017 and 2016 represents machinery and facilities under installation.

The Company capitalizes interest cost incurred on funds used to construct property, plant, and equipment. The capitalized interest is recorded as part of the asset to which it relates and is amortized over the asset's estimated useful life. Interest cost capitalized was $1,063, $1,380, and $4,903 in 2017, 2016, and 2015, respectively.

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Depreciation and depletion expense was $71,397, $67,614, and $62,218 in the years ended December 31, 2017, 2016, and 2015, respectively.

The net book value of long-lived assets and intangible assets are reviewed when circumstances indicate the recoverability of the asset may be impaired. This review is to determine if facts and circumstances suggest that the asset groups or individual assets within the asset groups may be impaired. If these facts and circumstances and the undiscounted cash flows indicate that the carrying amount of the asset group or individual asset may not be recoverable, an impairment loss is recognized equal to an amount by which the carrying value exceeds the fair value of the asset group or individual asset. The facts and circumstances considered by management in performing this assessment include a review of current operating results, trends, and prospects, as well as the effects of obsolescence, demand, competition, and other economic factors. Refer to Note 5 for additional information.

Deferred Revenue

The Company enters into certain contracts with customers that include provisions requiring receipt of payment at the inception of the contract. Deferred revenues are recorded when payment is received or due in advance of delivery of the product. The balance of deferred revenue at December 31, 2017 and 2016 was $5,660 and $75, respectively.

Deferred Financing Costs

Deferred financing costs are amortized over the terms of the related debt obligations. Deferred financing costs associated with terms loans are included in long-term debt and deferred financing costs associated with the revolving credit facility are included in other assets. In connection with certain long-term debt transactions in 2017, 2016 and 2015, the Company wrote off financing costs in the amount of $7,665, $2,618 and $864 respectively. Refer to Note 8 for additional information.

The following table presents deferred financing costs as of December 31, 2017 and 2016:

	December 31, 2017	December 31, 2016
Deferred financing costs	$ 39,782	$ 39,924
Accumulated amortization	(33,207)	(29,530)
Deferred financing costs, net	$ 6,575	$ 10,394

Goodwill

Goodwill is tested annually for impairment at the reporting segment level, and is tested for impairment more frequently if events and circumstances indicate that the asset might be impaired. The impairment testing is first subject to a qualitative assessment which includes a review of macroeconomic conditions, industry and market environments, overall performance of the reporting segment and specific events or changes. If the qualitative assessment indicates that it is more likely than not that the fair value of the reporting unit is less than its carrying amount, then the an impairment loss is recorded for the amount by which the carrying amount (including goodwill) exceeds the reporting segment's fair values, but not to exceed the total amount of the goodwill allocated to the reporting segment. Refer to Note 7 for additional information.

Earnings per Share

Basic and diluted earnings per share is presented for net income (loss) attributable to Fairmount Santrol Holdings Inc. Basic earnings per share is computed by dividing income (loss) available to Fairmount Santrol Holdings Inc. common stockholders by the weighted-average number of outstanding common shares for the period. Diluted earnings per share is computed by increasing the weighted-average number of outstanding common shares to include the additional common shares that would be outstanding after exercise of outstanding stock options and restricted stock units. Potential common shares in the diluted earnings per share calculation are excluded to the extent that they would be anti-dilutive.

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Derivatives and Hedging Activities

Due to its variable-rate indebtedness, the Company is exposed to fluctuations in interest rates. The Company uses interest rate swaps to manage this exposure. These derivative instruments are recorded on the balance sheet at their fair values. Changes in the fair value of derivatives are recorded each period in current earnings or in other comprehensive income, depending on whether a derivative is designated as part of a hedging relationship and, if it is, depending on the type of hedging relationship. For cash flow hedges in which the Company is hedging the variability of cash flows related to a variable-rate liability, the effective portion of the gain or loss on the derivative instrument is reported in other comprehensive income in the periods during which earnings are impacted by the variability of the cash flows of the hedged item. The ineffective portion of all hedges is recognized in current period earnings. As interest expense is accrued on the debt obligation, amounts in accumulated other comprehensive income (loss) related to the interest rate swaps are reclassified into income to obtain a net cost on the debt obligation equal to the effective yield of the fixed rate of each swap. In the event that an interest rate swap is terminated prior to maturity or no longer qualifies for hedge accounting, gains or losses in accumulated other comprehensive income (loss) remain deferred and are reclassified into earnings in the periods during which the hedged forecasted transaction affects earnings.

The Company formally designates and documents instruments at inception that qualify for hedge accounting of underlying exposures in accordance with GAAP. Both at inception and for each reporting period, the Company assesses whether the financial instruments used in hedging transactions are effective in offsetting changes in cash flows of the related underlying exposure.

Foreign Currency Translation

Assets and liabilities of all foreign operations are translated at the rate of exchange in effect on the balance sheet date; income and expenses are translated at the average rates of exchange prevailing during the year. The related translation adjustments are reflected as accumulated other comprehensive income (loss) in equity.

Concentration of Labor

Approximately 16% of the Company’s domestic labor force is covered under two union agreements. These agreements were successfully renegotiated during 2016 and expire in 2019.

Concentration of Credit Risk

At December 31, 2017, the Company had two customers whose receivable balances exceed 10% of total receivables. Approximately 30% and 12% of the accounts receivable balance were from these two customers, respectively. At December 31, 2016, the Company had two customers whose receivable balances exceed 10% of total receivables. Approximately 34% and 11% of the accounts receivable balance were from these two customers, respectively.

Income Taxes

The Company uses the asset and liability method to account for deferred income taxes. Deferred tax assets and liabilities are recognized for the anticipated future tax consequences attributable to differences between financial statement amounts and their respective tax bases. Management reviews the Company’s deferred tax assets to determine whether their value can be realized based upon available evidence. A valuation allowance is established if management believes it is more likely than not that some portion of the deferred tax assets will not be realized.

Changes in valuation allowances from period to period are included in the Company’s tax provision in the period of change.

The Company recognizes a tax benefit associated with an uncertain tax position when the tax position is more-likely-than-not to be sustained upon examination by taxing authorities. The amount recognized is measured as the

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amount of benefit that is greater than 50% likely of being realized upon ultimate settlement. The Company recognizes interest and penalties accrued related to unrecognized tax uncertainties in income tax expense.

Asset Retirement Obligation

The Company estimates the future cost of dismantling, restoring, and reclaiming operating excavation sites and related facilities in accordance with federal, state, and local regulatory requirements. The Company records the future obligation of reclamation costs, which the Company has determined is not materially different than the present value, as an asset retirement obligation and increases the carrying amount of the related asset by a corresponding amount. The related assets and liability are adjusted for changes resulting from the amount of the original obligation estimate. If the asset retirement obligation is settled for more or less than the carrying amount of the liability, a loss or gain will be recognized, respectively.

Research and Development (“R&D”)

The Company’s research and development expenses consist of personnel and other direct and indirect costs for internally-funded project development. Total expenses for R&D for the years ended December 31, 2017, 2016, and 2015 were $5,302, $3,703, and $5,036, respectively, and are recorded in selling, general and administrative expenses in the Consolidated Statements of Income (Loss). Total R&D expenditures represented 0.55%, 0.69%, and 0.61% of revenues in 2017, 2016, and 2015, respectively.

Accumulated Other Comprehensive Income (Loss)

Accumulated other comprehensive income (loss) is a separate line within equity that reports the Company’s cumulative income that has not been reported as part of net income. Items that are included in this line are the income or loss from foreign currency translation, actuarial gains and losses and prior service cost related to pension liabilities, and unrealized gains and losses on certain investments or hedges, net of taxes. The components of accumulated other comprehensive income (loss) attributable to Fairmount Santrol Holdings Inc. at December 31, 2017 and 2016 were as follows:

	December 31, 2017		
	Gross	Tax Effect	Net Amount
Foreign currency translation	$(10,249)	$1,849	$(8,400)
Additional pension liability	(3,253)	1,220	(2,033)
Unrealized gain (loss) on interest rate hedges	(7,283)	2,618	(4,665)
	$(20,785)	$5,687	$(15,098)

	December 31, 2016		
	Gross	Tax Effect	Net Amount
Foreign currency translation	$(10,804)	$2,533	$(8,271)
Additional pension liability	(3,589)	1,291	(2,298)
Unrealized gain (loss) on interest rate hedges	(13,146)	4,713	(8,433)
	$(27,539)	$8,537	$(19,002)

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The following table presents the changes in accumulated other comprehensive income by component for the year ended December 31, 2017:

	Year Ended December 31, 2017			
	Foreign currency translation	Additional pension liability	Unrealized gain (loss) on interest rate hedges	Total
Beginning balance	$(8,271)	$ (2,298)	$ (8,433)	$(19,002)
Other comprehensive income (loss) before reclassifications	(129)	21	(506)	(614)
Amounts reclassified from accumulated other comprehensive income (loss)	-	244	4,274	4,518
Ending balance	$(8,400)	$ (2,033)	$ (4,665)	$(15,098)

The following table presents the reclassifications out of accumulated other comprehensive income during the year ended December 31, 2017:

Details about accumulated other comprehensive income (loss)	Amount reclassified from accumulated other comprehensive income (loss)	Affected line item on the statement of income (loss)
Change in fair value of derivative swap agreements		
Interest rate hedging contracts	$ 6,656	Interest expense
Tax effect	(2,382)	Tax expense
	$ 4,274	Net of tax
Amortization of pension obligations		
Actuarial losses	$ 244	Cost of sales
Total reclassifications for the period	$ 4,518	Net of tax

3. Recent Accounting Pronouncements

Recently Adopted Accounting Pronouncements

In March 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU" or the "Standard") No. 2016-09 – Compensation – Stock Compensation (Topic 718), which simplifies the accounting treatment for excess tax benefits and deficiencies, forfeitures, and cash flow considerations related to share-based payment transactions. The ASU requires all tax effects of share-based payments to be recorded through the income statement, windfall tax benefits to be recorded when the benefit arises, and all share-based payment tax-related cash flows to be reported as operating activities in the statement of cash flows. Regarding withholding requirements, the ASU allows entities to withhold an amount up to the employees' maximum individual tax rates without classifying the award as a liability. The ASU also permits entities to make an accounting policy election for the impact of forfeitures on expense recognition, either recognized when forfeitures are estimated or when forfeitures occur, which is the policy election made by the Company. The Standard was effective for annual periods beginning after December 15, 2016 and interim periods within those annual periods, and early adoption was permitted. The Company's adoption of the standard did not have a material impact on the Company's consolidated financial statements and disclosures.

In January 2017, the FASB issued ASU No. 2017-04 – Intangibles – Goodwill and Other (Topic 350) – Simplifying the Test for Goodwill Impairment. The ASU eliminates Step 2 from the goodwill impairment testing. Step 2 measures a goodwill impairment loss by comparing the implied fair value of a reporting unit's goodwill with the carrying amount of that goodwill. As a result of the ASU, an entity will apply a one-step quantitative test and record the amount of goodwill impairment as the excess of a reporting unit's carrying amount over its fair value, not to exceed the total amount of goodwill allocated to the reporting unit. An entity still has the option to perform the qualitative assessment for a reporting unit to determine if the quantitative impairment test is necessary. The ASU is effective beginning after December 15, 2019 with early adoption permitted, and applied prospectively. The Company has elected to early adopt this ASU, effective the current reporting period, in its impairment testing and analyses. The Company's goodwill is described in Note 7.

Recently Issued Accounting Pronouncements

In May 2014, the FASB issued ASU No. 2014-09 – Revenue from Contracts with Customers (Topic 606). The standard is a comprehensive new revenue recognition model that requires revenue to be recognized in a manner to depict the transfer of goods or services to a customer at an amount that reflects the consideration expected to be received in exchange for those goods or services. The ASU may be applied using either a modified retrospective approach by recording a cumulative-effect adjustment to equity as of the beginning of the fiscal year of adoption or a full retrospective approach. The Standard is effective for annual reporting periods beginning after December 15, 2017 and the Company will report under the ASU beginning with the quarter ended March 31, 2018. The Company will use the modified retrospective approach and apply the new guidance to contracts not completed at the adoption date and not adjust prior reporting periods. The Company has performed a review of its existing customer contracts and does not believe the adoption of the Standard will result in a material impact to its current method of revenue recognition, and will comply with the required expanded disclosures to include a discussion of variable consideration, contract balances, deferred revenue, and disaggregated revenue information.

In February 2016, the FASB issued ASU No. 2016-02 – Leases (ASC 842), which requires lessees to recognize assets and liabilities on their balance sheet related to the rights and obligations created by most leases, while continuing to recognize expense on their income statements over the lease term. The ASU also requires disclosures designed to give financial statement users information regarding the amount, timing, and uncertainty of cash flows arising from leases. The Standard is effective for fiscal years, and related interim periods, beginning after December 15, 2018 and early adoption is permitted. The ASU mandates a modified retrospective transition method. The Company believes the adoption of this Standard will likely have a material impact on its consolidated balance sheets for the recognition of certain operating leases as right-of-use assets and lease liabilities and is in the process of analyzing its lease portfolio and evaluating systems to comply with adoption. The Company's operating lease obligations are described in Note 17 of the consolidated financial statements.

In March 2017, the FASB issued ASU 2017-07 – Compensation – Retirement Benefits (Topic 715) – Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost. The ASU requires that an employer report the service cost component in the same line item in the income statement as other compensation costs arising from services rendered by the pertinent employees during the period. The Standard also requires only the service cost component to be eligible for capitalization when applicable. The ASU is effective for annual reporting periods beginning after December 15, 2017 including interim periods within those annual periods with early adoption permitted. The Company is in the process of evaluating the impact of this new guidance on its consolidated financial statements and disclosures.

In May 2017, the FASB issued ASU 2017-09 – Compensation – Stock Compensation (Topic 718) – Scope of Modification Accounting. The ASU provides further guidance on changes to the terms or conditions of a share-based payment award and which changes require the application of modification accounting. Further, an entity should apply modification accounting unless the following conditions are met:

- The award's fair value is the same immediately before and after the original award is modified;
- The vesting conditions of the modified award are the same immediately before and after the award is modified; and
- The classification of the modified award, as either an equity instrument or liability instrument, is the same immediately before and after the award is modified.

This guidance is effective beginning after December 15, 2017 and early adoption is permitted and should be applied prospectively. The Company has determined this ASU does not apply to its stock compensation accounting as the Company has not modified existing awards and does not anticipate the need to modify awards in the future.

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In August 2017, the FASB issued ASU No. 2017-12 – Derivatives and Hedging (Topic 815) – Targeted Improvements to Accounting for Hedging Activities. The ASU expands and refines hedge accounting for both nonfinancial and financial risk components and aligns the recognition and presentation of the effects of the hedging instrument and the hedged item in the financial statements. Subject matters addressed include risk component hedging, accounting for the hedged item in fair value hedges of interest rate risk, recognition and presentation of the effects of hedging instruments, amounts excluded from the assessment of hedge effectives, and effectiveness testing. The ASU is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years with early adoption permitted. All transition requirement and elections should be applied to existing hedging relationships as of the date of adoption and reflected as of the beginning of the fiscal year of adoption. The Company is in the process of evaluating the impact of this new guidance on its consolidated financial statements and disclosures.

In February 2018, the FASB issued ASU No. 2018-02 – Income Statement – Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income. The FASB is providing ongoing guidance on certain accounting and tax effects of the legislation in the Tax Cuts and Jobs Act (the "Tax Act"), which was enacted in December 2017. Specifically, the ASU allows a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from this legislation and eliminates said stranded tax effects. The ASU relates only to the reclassification of the income tax effects of the Tax Cuts and Jobs Act and the underlying guidance that requires that the effect of a change in tax laws or rates be included in income from continuing operations is not affected. The ASU is effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years with early adoption permitted. The ASU should be applied either in the period of adoption or retrospectively to each period in which the effect of the change in the U.S. federal corporate income tax rate in the Tax Cuts and Jobs Act is recognized. The Company is in the process of evaluating the impact of this new guidance on its consolidated financial statements and disclosures.

4. Inventories, net

At December 31, 2017 and 2016, inventories consisted of the following:

	December 31, 2017	December 31, 2016
Raw materials	$ 7,412	$ 7,465
Work-in-process	14,819	12,681
Finished goods	48,931	33,760
	71,162	53,906
Less: LIFO reserve	(634)	(1,256)
Inventories, net	$ 70,528	$ 52,650

5. Property, Plant, and Equipment, net

At December 31, 2017 and 2016, property, plant, and equipment consisted of the following:

	December 31, 2017	December 31, 2016
Land and improvements	$85,012	$82,991
Mineral reserves and mine development	310,923	250,566
Machinery and equipment	590,584	577,093
Buildings and improvements	186,466	187,458
Furniture, fixtures, and other	3,478	3,415
Construction in progress	54,661	6,748
	1,231,124	1,108,271
Accumulated depletion and depreciation	(445,611)	(380,536)
Property, plant, and equipment, net	$785,513	$727,735

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All of the Company's capital leases are categorized as machinery and equipment. The depreciation of capital leases is recorded in depreciation, depletion, and amortization expenses in the Consolidated Statements of Income (Loss). Their cost and related accumulated depreciation in the balance sheet are as follows:

	December 31, 2017	December 31, 2016
Cost	$ 29,098	$ 18,350
Accumulated depreciation	(14,854)	(10,994)
Net book value	$ 14,244	$ 7,356

Under ASC 360 Property, Plant, and Equipment, the Company is required to evaluate the recoverability of the carrying amount of its long-lived assets whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. Based on the adverse business conditions and the idling of certain assets on an other-than-temporary basis in 2016, the Company evaluated certain of its asset groups that contained mineral reserves and other long-lived assets contained in the Proppant Solutions segment and concluded that the carrying amounts of those assets were not recoverable. Fair value was determined by prices obtained from third parties for the assets and from estimating the net present value of the future cash flows over the life of the assets. Using Level 3 inputs of the fair value hierarchy, critical assumptions for these valuations included future selling prices of products, future operating costs, and the cost of capital. The Company incurred $93,148 and $18,230 of such asset impairments in the years ended December 31, 2016 and 2015, respectively. These impairments are recorded as asset impairments in operating expenses in the Consolidated Statements of Income (Loss). There were no such asset impairments in the year ended December 31, 2017.

On July 18, 2017, the Company entered into a 40-year lease agreement for approximately 3,250 acres of sand reserves in Kermit, Texas. The Company has capitalized the entire $40,000 leasehold interest obligation and related exploratory and transaction costs to mineral reserves and mine development. The initial payment of $20,000 was paid at lease commencement. Another $10,000 was paid in October 2017 upon the issuance of all federal, state, and local permits. The remaining $10,000 is payable upon the earlier of two years from the commencement date of the agreement or the date the Company makes its first sale of sand from this property, which the Company expects within twelve months of the date of this Report. The capitalized leasehold interest payments will begin to be recognized as expense as production occurs. Additionally, the Company is obligated for certain royalty payments based on volumes sold.

In the year ended December 31, 2017, the Company disposed of $988 of property, plant and equipment, which were determined to be no longer in use. These assets were primarily a part of the Proppant Solutions segment. This amount is included in other operating (income) expense in our Consolidated Statements of Income (Loss).

6. Accrued Expenses

At December 31, 2017 and 2016, accrued expenses consisted of the following:

	December 31, 2017	December 31, 2016
Accrued payroll and fringe benefits	$ 11,233	$ 6,657
Accrued bonus	37,166	3,897
Accrued income taxes	504	421
Accrued real estate taxes	5,098	4,821
Accrued leasehold interest payments	10,000	-
Other accrued expenses	10,006	10,314
Accrued expenses	$ 74,007	$ 26,110

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7. Goodwill and Intangible Assets

As of December 31, 2017 and 2016, the balance of goodwill was $15,301 and is attributable entirely to the I&R segment.

Goodwill represents the excess of purchase price over the fair value of net assets acquired. The Company evaluates goodwill on an annual basis and also when management believes indicators of impairment exist. The Company performed a qualitative assessment of the I&R segment as of October 31, 2017 (the Company's annual valuation date) and determined the fair value of this segment was, more likely than not, greater than its carrying value. Based on the Company's assessment in 2015, the Company concluded that the goodwill attributable to the Proppant Solutions segment was fully impaired in the three months ended December 31, 2015 and recognized an impairment charge of $69,246 in that period.

Information regarding acquired intangible assets as of December 31, 2017 and 2016 is as follows:

	December 31, 2017		
	Gross Carrying Amount	Accumulated Amortization	Intangible Assets, net
Acquired technology and patents	$65,788	$ (3,289)	$ 62,499
Supply agreement	50,700	(19,942)	30,758
Other intangible assets	573	(562)	11
Intangible assets	$117,061	$ (23,793)	$ 93,268

	December 31, 2016		
	Gross Carrying Amount	Accumulated Amortization	Intangible Assets, net
Acquired technology and patents	$60,115	$ -	$ 60,115
Supply agreement	50,700	(15,548)	35,152
Other intangible assets	573	(499)	74
Intangible assets	$111,388	$ (16,047)	$ 95,341

Amortization expense of intangible assets was $7,747, $4,662, and $4,537 in years ended December 31, 2017, 2016, and 2015, respectively. Acquired technology represents technology acquired in the SSP acquisition. The carrying value of this asset represents its original cost, plus amounts owed to the seller as deferred purchase price. The Company determined that it is probable additional amounts will be due to the seller and recorded $5,674 and $3,794 in 2017 and 2016, respectively, as additional purchase price. Of this additional purchase price, approximately $5,458 has been paid to the seller and $4,010 was accrued as of December 31, 2017. The Company determined that the proper period to begin the amortization of this intangible was January 1, 2017, which was the first period products using the SSP technology were sold in a full commercial protocol. The Company considered the potential ranges of useful lives and believes a 20-year useful life for the intangible asset is appropriate. The Company's determination of the 20-year useful life of the intangible asset is based upon the period over which the asset is expected to contribute directly or indirectly to the future cash flows of the Company. Refer to Note 17 for additional information.

The value of a supply agreement with FTSI was based on estimates of discounted future cash flows from sales under the agreement. The supply agreement was previously amortized ratably over the life of the agreement, which was 10 years. However, in May 2015, the supply agreement was amended, extending the maturity date from September 2023 to December 2024. The supply agreement is now being amortized over the amended life.

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Estimated future amortization expense related to intangible assets at December 31, 2017 is as follows:

	Amortization
2018	$ 7,694
2019	7,683
2020	7,683
2021	7,683
2022	7,683
Thereafter	54,842
Total	$ 93,268

8. Long-Term Debt

At December 31, 2017 and 2016, long-term debt consisted of the following:

	December 31, 2017	December 31, 2016
Term Loan B	$688,990	$-
Term B-2 Loans	-	719,632
Extended Term B-1 Loans	-	117,634
Industrial Revenue Bond	10,000	10,000
ABL Revolver, Revolving Credit Facility, and other	45,073	88
Capital leases, net	9,884	3,634
Deferred financing costs, net	(5,017)	(7,975)
	748,930	843,013
Less: current portion	(19,189)	(10,707)
Long-term debt including leases	$729,741	$832,306

On April 28, 2016, the Company entered into an amendment to the 2013 Amended Credit Agreement that extended the maturity of a portion of the then existing B-1 Loan to July 15, 2018 (the “2016 Extended Term Loans”). The Company made a prepayment of principal of $69,580 and accrued interest of $227 on April 28, 2016 to the lenders consenting to the amendment.

On October 17, 2016, the Company repurchased $3,000 of the Extended Term B-1 Loans at 91.5% of par. On November 17, 2016, the Company fully prepaid $16,766 of the Term B-1 Loans due March 2017 and fully prepaid $69,580 of the 2016 Extended Term Loans. On November 29, 2016, the Company repurchased, at an average of

96.3% of par, a total of $213,000 of term loans, which consisted of $37,867 of the Extended Term B-1 Loans and $175,133 of the Term B-2 Loans. The related net gain on the October and November 2016 debt repurchases was $5,110. On June 27, 2017, the Company prepaid $50,000 of term loans at par, which consisted of $42,979 of the Term B-2 Loans and $7,021 of the Extended Term B-1 Loans and recognized expenses of $389 relating to the write-off of unamortized capitalized debt issuance costs.

On November 1, 2017 (the “Closing Date”), the Company entered into a new five-year asset-based revolving credit facility (the “ABL Revolver”) with PNC Capital Markets LLC, as administrative agent, which replaced the existing revolving credit facility. The ABL Revolver has a borrowing capacity of up to $125,000 with an option to increase by $50,000 to $175,000. An initial draw of $50,000 upon closing of the ABL Revolver was used to partially refinance existing term debt, pay expenses associated with debt refinancing, and can be later used for funding capital expenditures, and providing ongoing working capital. The ABL Revolver is interest only at a rate derived from LIBOR plus 1.5% to 2.0% (depending on excess availability under the ABL Revolver) or from a Base Rate, which is the higher of the prime rate, the Federal Funds open rate plus 0.5% and the Daily LIBOR Rate plus 1.0%. The interest payments on the ABL Revolver are payable in quarterly installments, with the principal balance due at November 1, 2022. If the Term Loan B is still outstanding, then any balance outstanding under the ABL Revolver is due on May 1, 2022. Availability under the ABL Revolver is based upon an available borrowing base, which includes a specified percentage of eligible accounts receivable and inventory and excludes outstanding letters of credit and applicable reserves. In addition to interest charged on the ABL Revolver, the Company is also obligated to pay certain fees, quarterly in arrears, including letter of credit fees and unused facility fees. The ABL Revolver includes financial covenants requiring a minimum fixed charge coverage ratio of 1.1, based on availability thresholds, and is primarily secured by all accounts receivable and inventory, with security interest second to the Term Loan B on substantially all other assets of the Company.

Additionally, on the Closing Date, the Company entered into an agreement with Barclays Capital Inc., as administrative agent, for a $700,000 Senior Secured Term Loan (the "Term Loan B") to refinance all of its existing Term B-2 Loans and Extended Term B-1 Loans. The Term Loan B was issued with original issue discount at 98.5% of face. The Term Loan B, which has a maturity date of November 1, 2022, requires quarterly interest payments and 2.5% annual principal amortization payments for the first half of the loan period, 5.0% for the second half of the loan period, with the balance payable at the maturity date. Interest accrues at the rate of the three-month LIBOR plus 6.0% with a LIBOR floor of 1.0%. The Term Loan B is secured by a first priority security interest in substantially all assets of the Company and its subsidiaries, except for accounts receivable and inventory, in which it has a second priority security interest. The Company has the option to prepay the Term Loan B. Should the Company choose to refinance the Term Loan B, it would be subject to a 1.02% premium if refinanced at a lower interest rate within one year of the Closing Date or a 1.01% premium if refinanced at a lower interest rate within two years of the Closing Date. In the event of a change in control of 35% or more of the voting interests of the Company and at the request of the lenders, the unpaid principal and interest of the Term Loan B may become immediately due and payable. There are no financial covenants governing the Term Loan B.

As a result of these transactions on the Closing Date, the Company recorded a loss on debt extinguishment of $2,898 and a loss on debt modification of $4,733. The loss on debt modification is recorded in interest expense.

As of December 31, 2017, the Term Loan B and the ABL Revolver had actual interest rates of 7.7% and 3.3%, respectively. As of December 31, 2016, the Term B-2 Loans, Extended Term B-1 Loans, and Revolving Credit Facility had actual interest rates of 4.5%, 4.5%, and 4.7%, respectively.

As of December 31, 2017, the Company was in compliance with all covenants in accordance with the ABL Revolver. As of December 31, 2017, there was $63,416 available unused capacity on the ABL Revolver, $15,558 committed to outstanding letters of credit, and $1,026 withheld for collateral.

The Company has a $10,000 Industrial Revenue Bond outstanding related to the construction of a mining facility in Wisconsin. The bond bears interest, which is payable monthly, at a variable rate. The rate was 1.46% and 0.80% at December 31, 2017 and 2016, respectively. The bond matures on September 1, 2027 and is collateralized by a letter of credit of $10,000.

Maturities of long-term debt are as follows:

	Capital Lease Obligations				
	Lease Payment	Less Interest	Present Value	Other Long-Term Debt	Aggregate Maturities of Debt
Year Ended:					
2018	$4,346	$ 270	$4,076	$ 17,517	$21,593
2019	3,886	149	3,737	17,518	21,255
2020	2,052	36	2,016	26,269	28,285
2021	55	-	55	35,019	35,074
2022	-	-	-	648,750	648,750
Thereafter	-	-	-	10,000	10,000
Subtotal	10,339	455	9,884	755,073	764,957
Less: unamortized discount	-	-	-	(11,010)	(11,010)
Total	$10,339	$ 455	$9,884	$ 744,063	$753,947

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9. Earnings (Loss) per Share

The table below shows the computation of basic and diluted earnings (loss) per share for the years ended December 31, 2017, 2016, and 2015, respectively:

	Year Ended December 31,		
	2017	2016	2015
Numerator:			
Net income (loss) attributable to Fairmount Santrol Holdings Inc.	$53,788	$(140,192)	$(92,135)
Denominator:			
Basic weighted average shares outstanding	223,993	179,429	161,297
Dilutive effect of employee stock options, RSUs, and PRSUs	5,091	-	-
Diluted weighted average shares outstanding	229,084	179,429	161,297
Earnings (loss) per common share – basic	$0.24	$(0.78)	$(0.57)
Earnings (loss) per common share – diluted	$0.23	$(0.78)	$(0.57)

The calculation of diluted weighted average shares outstanding for the year ended December 31, 2017 excludes 6,412 potential common shares, respectively, because the effect of including these potential common shares would be antidilutive. Potentially dilutive shares of 6,572 and 6,990 were excluded from the calculation of diluted weighted average shares outstanding and diluted earnings per share in the years ended December 31, 2016 and 2015, respectively, because the Company was in a loss position in those periods.

As a result of ASU No. 2016-09 – Compensation – Stock Compensation (Topic 718), windfalls and excess tax benefits are no longer included in the calculation of assumed proceeds and the calculation of diluted weighted average shares outstanding. The Company adopted this guidance as of January 1, 2017 on a prospective basis, which could impact the comparability of earnings per share between periods presented. However, the Company was in a loss position for prior periods presented and, accordingly, basic and diluted earnings per share are calculated in the same manner.

10. Derivative Instruments

The Company enters into interest rate swap agreements as a means to partially hedge its variable interest rate risk on debt instruments. The notional value of the swap agreements of $210,000 and $525,225 represents a total of approximately 30% and 63% of term debt outstanding at December 31, 2017 and 2016, respectively. The decline in notional value was due to $105,225 of swap agreements maturing and a swap agreement of $210,000 terminated in November 2017. Upon such termination, the remaining balance of $4,571 in accumulated other comprehensive income will be amortized into interest expense until September 2019, the date of the original expected swap maturity. At December 31, 2017, the Company has one outstanding interest rate swap agreement, which terminates on September 5, 2019. For the portion of the debt that is hedged, the swap agreements effectively fix the variable rate to 2.92% at December 31, 2017 and a range of 0.83% to 3.12% at December 31, 2016.

The Company's derivative financial instruments were previously designated as cash flow hedges. No components of the hedging instruments were excluded from the assessment of hedge effectiveness. The derivative instruments are recorded on the balance sheet at their fair values. Changes in the fair value of derivatives are recorded each period in current earnings or in other comprehensive income, depending on whether a derivative is designated as part of a hedging relationship and, if it is, depending on the type of hedging relationship.

For derivative instruments that are designated and qualify as a cash flow hedge, the effective portion of the gain or loss on the derivative instrument is reported in other comprehensive income in the periods during which earnings are impacted by the variability of the cash flows of the hedged item. The ineffective portion is recognized in current

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period earnings. As interest expense is accrued on the debt obligation, amounts in accumulated other comprehensive income (loss) related to the interest rate swaps are reclassified into income to obtain a net cost on the debt obligation equal to the effective yield of the fixed rate of each swap.

The Company recognizes changes in fair value for derivatives not qualifying for hedge accounting in current period earnings. In the event an interest rate swap is terminated prior to maturity, gains or losses in accumulated other comprehensive income (loss) remain deferred and are reclassified into earnings in the periods in which the hedged forecasted transaction affects earnings.

The Company formally designates and documents instruments at inception that qualify for hedge accounting of underlying exposures in accordance with GAAP. Both at inception and for each reporting period, the Company assesses whether the financial instruments used in hedging transactions are effective in offsetting changes in cash flows of the related underlying exposure.

In December 2017, the Company determined that the remaining swap with a notional value of $210,000 no longer qualified as a cash flow hedge as the underlying transaction was no longer probable of occurring. No gain or loss was recognized and the remaining balance of accumulated other comprehensive income of $3,235 will be amortized into interest expense until September 2019, the date of the expected swap maturity.

The following table summarizes the fair values and the respective classification in the Consolidated Balance Sheets as of December 31, 2017 and 2016:

		Assets (Liabilities)	
Interest Rate Swap Agreements	Balance Sheet Classification	December 31, 2017	December 31, 2016
Designated as cash flow hedges	Other long-term liabilities	$ -	$ (14,488)
Non-qualifying cash flow hedge	Other long-term liabilities	(3,208)	-
Designated as cash flow hedges	Other assets	-	39
		$ (3,208)	$ (14,449)

The Company recognized in interest expense the following in the years ended December 31, 2017, 2016, and 2015, respectively, in order to represent the ineffective portion of interest rate swap agreements designated as hedges and interest rate swap agreements no longer qualifying for hedge accounting treatment:

Derivatives Designated as Location of (Gain) Loss

ASC 815-20 Cash Flow Hedging Relationships	Recognized in Income on Derivative (Ineffective Portion)	Year Ended December 31, 2017	2016	2015
Interest rate swap agreements	Interest expense	$ (78)	$ (7)	$ (51)
		$ (78)	$ (7)	$ (51)

Derivatives Not Designated as ASC 815-20 Cash Flow Hedging Relationships	Location of (Gain) Loss Recognized in Income on Derivative	Year Ended December 31, 2017	2016	2015
Interest rate swap agreements	Interest expense	$ 537	$ -	$ -
		$ 537	$ -	$ -

The Company expects $4,327 to be reclassified from accumulated other comprehensive income (loss) into interest expense within the next twelve months.

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11. Fair Value Measurements

Financial instruments held by the Company include cash equivalents, accounts receivable, accounts payable, long-term debt (including the current portion thereof) and interest rate swaps. The Company is also liable for contingent consideration from the acquisition of Self-Suspending Proppant LLC ("SSP") that is subject to fair value measurement. Fair value is defined as the price that would be received to sell an asset, or paid to transfer a liability, in an orderly transaction between market participants at the measurement date. In determining fair value, the Company utilizes certain assumptions that market participants would use in pricing the asset or liability, including assumptions about risk and/or the risks inherent in the inputs to the valuation technique.

Based on the examination of the inputs used in the valuation techniques, the Company is required to provide the following information according to the fair value hierarchy. The fair value hierarchy ranks the quality and reliability of the information used to determine fair values. Financial assets and liabilities at fair value will be classified and disclosed in one of the following three categories:

Level 1 Quoted market prices in active markets for identical assets or liabilities
Level 2 Observable market based inputs or unobservable inputs that are corroborated by market data
Level 3 Unobservable inputs that are not corroborated by market data

A financial instrument's categorization within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement.

The carrying value of cash equivalents, accounts receivable and accounts payable are considered to be representative of their fair values because of their short maturities. The carrying value of SSP approximates the fair value. The carrying value of the Company's long-term debt (including the current portion thereof) is recognized at amortized cost. The fair value of the Term Loan B, the Extended Term B-1 Loans, and the Term B-2 Loans differs from amortized cost and is valued at prices obtained from a readily-available source for trading non-public debt, which represent quoted prices for identical or similar assets in markets that are not active, and therefore is considered Level 2. The following table presents the fair value as of December 31, 2017 and 2016, respectively, for the Company's long-term debt:

Long-Term Debt Fair Value Measurements	Quoted Prices in Active Markets (Level 1)	Other Observable Inputs (Level 2)	Unobservable Inputs (Level 3)	Total
December 31, 2017				
Term Loan B	$ -	$ 708,750	$ -	$ 708,750
	$ -	$ 708,750	$ -	$ 708,750
December 31, 2016				
Term B-2 Loans	$ -	$ 699,683	$ -	$ 699,683

Extended Term B-1 Loans		-	114,308		-	114,308
	$	-	$ 813,991	$	-	$813,991

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The following table presents the amounts carried at fair value as of December 31, 2017 and 2016 for the Company's other financial instruments. Fair value of interest rate swap agreements is based on the present value of the expected future cash flows, considering the risks involved, and using discount rates appropriate for the maturity date. These are determined using Level 2 inputs.

Recurring Fair Value Measurements	Quoted Prices in Active Markets (Level 1)	Other Observable Inputs (Level 2)	Unobservable Inputs (Level 3)	Total
December 31, 2017				
Interest rate swap agreements	$ -	$ (3,208)	$ -	$(3,208)
	$ -	$ (3,208)	$ -	$(3,208)
December 31, 2016				
Interest rate swap agreements	$ -	$ (14,449)	$ -	$(14,449)
	$ -	$ (14,449)	$ -	$(14,449)

12. Income Taxes

Income (loss) before provision (benefit) for income taxes includes the following components:

	2017	2016	2015
United States	$44,523	$(237,486)	$(94,746)
Foreign	4,896	(2,080)	877
Total	$49,419	$(239,566)	$(93,869)

The components of the provision (benefit) for income taxes are as follows:

	2017	2016	2015
Federal	$(933)	$(19,056)	$(23,515)
State and local	197	674	359
Foreign	1,226	907	1,396
Subtotal	490	(17,475)	(21,760)
Change in deferred taxes	(5,156)	(81,966)	19,821

Total	$(4,666)	$(99,441)	$(1,939)

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The effective tax rate for 2017 was a provision on income, while 2016 and 2015 were provisions on losses. A reconciliation of the statutory federal income tax rate to the Company’s effective tax rate is as follows:

	2017	2016	2015
U.S. statutory rate	35.0%	35.0%	35.0%
Increase (decrease) resulting from:			
State income taxes, net	(2.3)	1.5	0.2
Foreign tax rate differential and adjustment	(1.2)	(0.1)	0.1
U.S. statutory depletion	(30.2)	3.7	9.7
Manufacturers' deduction	0.0	(0.1)	(4.0)
Unremitted foreign earnings	(2.3)	0.2	(4.1)
Goodwill impairment	0.0	0.0	(6.2)
Valuation allowance	12.4	(4.4)	(27.6)
Deferred tax impact from Tax Reform	4.6	0.0	0.0
Change in valuation allowance from Tax Reform	(24.5)	0.0	0.0
Loss carryback	0.0	6.6	0.0
Other items, net	(0.9)	(0.9)	(1.0)
Effective rate	-9.4%	41.5%	2.1%

The Tax Act, effective January 1, 2018, establishes a corporate income tax rate of 21%, replacing the current 35% rate, and creates a territorial tax system rather than a worldwide system, which generally eliminates the U.S. federal income tax on dividends from foreign subsidiaries. The transition to a territorial system includes a one-time transition tax on certain unremitted foreign earnings. The Tax Act impacted the Company’s effective tax rate in several ways including a tax benefit of $4,347 for the impact of revaluing deferred taxes and related valuation allowances considering the new corporate income tax rate; a tax benefit of $5,439 for the reversal of the valuation allowance from the repeal of the Alternative Minimum Tax; tax expense of $3,046 for the impact from the one-time transition tax on unremitted foreign earnings; and a tax benefit of $4,269 for the reduction of the deferred tax liability previously established for unremitted foreign earnings for which the Company did not assert permanent reinvestment.

The Company believes the accounting for the impacts of the revaluation of its deferred taxes and related valuation allowances as a result of the new corporate income tax rate are complete, except for changes in estimates that can result from finalizing the filing of its 2017 U.S. income tax return, which are not anticipated to be material, and changes that may be a direct impact of other provisional amounts recorded as a result of the Tax Act. Additionally, the Company believes the accounting for the impact of the reversal of the valuation allowance from the repeal of the Alternative Minimum Tax in accordance with the Tax Act is complete. Other provisions of the Tax Act, while substantially complete for which a reasonable estimate of such effects have been recorded, are considered provisional as certain items may differ, potentially materially, due to further refinement of the calculations, changes in interpretations and assumptions made, and further guidance that may become available, including primarily the one-time transition tax on unremitted foreign earnings. The SEC has provided up to a one-year measurement period for the Company to finalize the accounting for the impacts of the Tax Act.

The difference between the statutory U.S. tax rate and the Company's effective tax in 2017 is principally due to an increase in the valuation allowance primarily related to federal and state net operating loss carryforwards; tax depletion; and the impact from the Tax Act. The difference between the statutory U.S. tax rate and the Company's effective tax rate in 2016 is principally due to the benefit from a loss carryback; an increase in the valuation allowance primarily related to federal and state net operating loss carryforwards; and tax depletion. The difference between the statutory U.S. tax rate and the Company's effective tax rate in 2015 is due to the accrual of deferred taxes on the cumulative amount of foreign unremitted earnings resulting from a change in the Company's indefinite reinvestment assertion; an increase in the valuation allowance primarily related to U.S. alternative minimum tax credits and U.S. research credits; a goodwill impairment charge for which the Company could not record an income tax benefit; tax depletion; and the manufacturers' deduction.

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Significant components of deferred tax assets and liabilities as of December 31, 2017 and 2016 are as follows:

	2017	2016
Deferred tax assets		
Accrued expenses	$5,399	$2,771
Inventory	601	775
Stock compensation	13,733	18,784
Deferred compensation	564	1,039
Interest rate derivatives	667	5,189
Pension	2,211	3,210
Intangibles	6,146	11,401
Unremitted foreign earnings	1,292	-
Foreign tax credit carryforwards	1,210	1,662
Alternative minimum tax credit carryforwards	5,439	6,509
Research and experimentation tax credit carryforwards	616	540
Net operating loss carryforwards	45,189	72,901
Other assets	799	1,985
Total deferred tax assets before valuation allowance	83,866	126,766
Valuation allowance	(20,220)	(21,959)
Total deferred tax assets after valuation allowance	63,646	104,807
Deferred tax liabilities		
Property, plant, and equipment	(65,941)	(107,089)
Unremitted foreign earnings	-	(905)
Other liabilities	(961)	(2,626)
Total deferred tax liabilities	(66,902)	(110,620)
Net deferred tax assets (liabilities)	$(3,256)	$(5,813)

The deferred tax assets before valuation allowance in the above table for 2016 does not included a deferred tax asset of $4,249 relating to unrealized stock compensation deductions.

Due to enactment of the Tax Act, the year-end balances of U.S. domestic deferred taxes and valuation allowances were revalued considering the reduced corporate rate of 21%. Additionally, the one-time transition tax on unremitted foreign earnings resulted in a reduction of the deferred tax liability previously established for unremitted foreign earnings, for which the Company did not assert permanent reinvestment.

As of December 31, 2017 and 2016, the Company had deferred tax assets relating to U.S. alternative minimum tax credit carryforwards of $5,439 and $6,509, respectively, foreign tax credit carryforwards of $1,210 and $1,662, respectively, research and experimentation tax credit carryforwards of $616 and $540, respectively, federal net operating loss carryforwards of $36,948 and $72,119, respectively, state net operating loss carryforwards of $6,935 and $4,468, respectively, and foreign net operating loss carryforwards $1,306 and $921, respectively. The U.S. alternative minimum tax credit carryforwards will be utilized or refunded before 2022. The foreign tax credit carryforwards will expire in 2024. The research and development tax credit carryforwards and federal net operating loss carryforwards expire between 2034 and 2036. A majority of the state net operating loss carryforwards expire between 2028 and 2036, while the foreign net operating loss carryforwards expire between 2021 and 2037. The Company has provided a valuation allowance to reduce the carrying value of certain of these deferred tax assets, as management has concluded that, based on available evidence, it is more likely than not that the deferred tax assets will not be fully realized. Please refer to Note 23 regarding the effect of Internal Revenue Code ("IRC") Sections 382 and 383 on merger-related matters.

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The Company or its subsidiaries file income tax returns in the United States, Canada, China, Mexico, and Denmark. The Company is subject to income tax examinations for its U.S. Federal income taxes for the preceding three fiscal years and, in general, is subject to state and local income tax examinations for the same periods. The Company is currently under examination by the Internal Revenue Service for the periods related to 2013 through 2016. The Company has tax years that remain open and subject to examination by tax authorities in the following major taxing jurisdictions: Canada for years after 2012, Mexico for years after 2011, and China and Denmark for years after 2013.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

	2017	2016	2015
Unrecognized tax benefits balance - January 1	$3,018	$5,200	$5,327
Increases (decreases) for tax positions in prior years	(811)	(2,685)	(222)
Increases (decreases) for tax positions in current year	158	503	95
Unrecognized tax benefits balance - December 31	$2,365	$3,018	$5,200

At December 31, 2017 and 2016, the Company had $2,365 and $3,018, respectively, of unrecognized tax benefits. If the $2,365 were recognized, $1,846 would affect the effective tax rate. Interest and penalties are recorded in provision for income taxes. At December 31, 2017 and 2016, the Company had $1,642 and $1,827, respectively, of accrued interest and penalties related to unrecognized tax benefits recorded.

13. Common Stock and Stock-Based Compensation

The Company has a single class of par value $0.01 per share common stock. Each share of common stock has identical rights and privileges and is entitled to one vote per share. The Company has authorized, but not issued, a single class of par value $0.01 per share preferred stock.

The Company has several stock plans that allow for granting of options to acquire common shares to employees and key non-employees. As of December 31, 2013, the plans consisted of the FML Holdings, Inc. Non-Qualified Stock Option Plan (the “1997 Plan”), the Long Term Incentive Compensation Plan (the “2006 Plan”), and the FML Holdings, Inc. Stock Option Plan (the “2010 Plan”). At December 31, 2015, the 2006 Plan, and the 2010 Plan were still in existence. A new plan, the FMSA Holdings Inc. 2014 Long Term Incentive Plan (the “LTIP”) was added as of September 11, 2014. The combined plans and the LTIP authorized and issued both non-qualified stock options as well as restricted stock units (“RSUs”) and performance restricted stock units (“PRSUs”). In 2016, the Company modified the LTIP to allow retirement-eligible participants (defined as age 55, plus 10 years of service) to continue to vest in options following retirement, and also allow retired participant to exercise options for up to 10 years from grant date. The modification also provides that, for a one-year period following the date of an employee’s retirement from the Company, the restrictions on the RSUs that were scheduled to lapse shall continue to lapse as if the employee’s employment with the Company had not terminated during such one-year period.

For all stock plans, the options are exercisable for a ten year period. Options are exercisable at times determined by the compensation committee of the Company and, as set forth in each individual option agreement. The options may become exercisable over a period of years or become accelerated if performance or other goals set by the Board are attained, or may be a combination of both. Options may be exercised, in whole or in part, at any time after becoming exercisable, but not later than the date the option expires, which is typically ten years from the grant date. Certain options granted after 2009 contain a seven-year vesting period that may be shortened to five years upon attainment of certain Company performance, except for stock issued under the LTIP Plan, which has a five-year vesting period that may be shortened to three years upon attainment of certain Company performance goals as determined by the compensation committee. All options granted prior to 2010 are fully vested. Options granted under the LTIP since 2016 vest ratably over a three-year period. The awards granted under the 2006 Plan contain a change in control provision that provides for a “double trigger” vesting upon certain changes of ownership of the Company and the termination of the plan participant.

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RSUs granted under the LTIP in 2015 vest after a six-year period and vesting can be accelerated to four years upon attainment of certain Company performance goals as determined by the compensation committee. RSUs granted under the LTIP since 2016 vest ratably over a four-year period. PRSUs granted under the LTIP since 2016 cliff-vest after a three-year period upon attainment of certain Company performance goals as determined by the compensation committee.

The weighted-average fair value of RSUs granted during the years ended December 31, 2017, 2016, and 2015 was $9.83, $2.42, and $8.80, respectively, based on the closing price of the underlying share as of the grant date. The weighted-average fair value of PRSUs granted during the year ended December 31, 2017 and 2016 was $9.87 and $2.27, respectively. There were no PRSUs granted in 2015. The weighted-average fair value of options granted during the years ended December 31, 2017, 2016, and 2015 was $9.73, $2.24, and $8.79, respectively, based on the Black-Scholes-Merton options-pricing model, with the following assumptions:

	2017		2016		2015	
Dividend yield	0.00	%	0.00	%	0.00	%
Expected volatility	91.52	%	97.47	%	45.61	%
Risk-free interest rate	1.92 - 2.14	%	1.26 - 1.47	%	1.65 - 2.03	%
Expected option life	6.0 years		6.0 years		6.5 years	

The Company has no current plans to declare a dividend that would require a dividend yield assumption other than zero. For the year ended December 31, 2015, expected volatility was based on the volatilities of various comparable companies' common stock. In the year ended December 31, 2016, the Company concluded two full years of public trading of its common stock. Therefore, all calculations of expected volatility since 2016 are based on the price of the Company's common stock. The risk-free interest rate is an interpolated rate from the U.S. constant maturity treasury rate for a term corresponding to the expected option life. The Company uses the simplified method to estimate the expected life of the options, which assumes the expected life is the mid-point between the vesting date and the end of the contractual term.

As previously noted in Note 3 and in accordance with ASU No. 2016-09, the Company elected to recognize forfeitures as they occur. This change resulted in a reduction to stock compensation expense of $699 and related tax effect of $266, for a net adjustment of $433 to opening retained earnings in the first quarter of 2017.

The Company recorded $10,071, $8,870, and $4,525 of stock compensation expense related to these options, RSUs, and PRSUs for the years ended December 31, 2017, 2016, and 2015, respectively. The 2016 stock compensation expense includes approximately $2,135 related to the modification of the retirement provisions of the LTIP. Stock compensation expense is included in selling, general, and administrative expenses on the Consolidated Statements of Income (Loss) and in additional paid-in capital on the Consolidated Balance Sheets.

Awards activity during 2017 was as follows:

	Options	Weighted Average Exercise Price, Options	Restricted Stock Units	Weighted Average Price at RSU Issue Date	Performance Restricted Stock Units	Weighted Average Price at PRSU Issue Date
Outstanding at December 31, 2016	13,598	$ 6.45	1,459	$ 5.10	458	$ 2.28
Granted	464	9.73	377	9.83	142	9.87
Exercised	(364)	2.32	(251)	2.62	-	-
Forfeited	(254)	8.13	(68)	6.38	(16)	3.54
Expired	(51)	15.41	-	-	-	-
Outstanding at December 31, 2017	13,393	$ 6.63	1,517	$ 6.63	584	$ 4.10
Exercisable at December 31, 2017	8,261	$ 4.76	-	$ -	-	$ -

Options outstanding as of December 31, 2017 and 2016, respectively, have an aggregate intrinsic value of $18,836 and $80,510 and a weighted average remaining contractual life of 4.8 years and 5.6 years. Options that are exercisable as of December 31, 2017 and 2016, respectively, have an aggregate intrinsic value of $15,629 and $50,492 and a weighted average remaining contractual life of 3.4 years and 4.0 years. The aggregate intrinsic value represents the difference between the fair value of the Company's shares of $5.23 and $11.79 per share at December 31, 2017 and 2016, respectively, and the exercise price of the dilutive options, multiplied by the number of dilutive options outstanding at that date.

(in thousands, except per share and acreage data)

The aggregate intrinsic value of stock options exercised during the years ended December 31, 2017, 2016, and 2015 was $1,428, $17,922, and $1,839, respectively.

Net cash proceeds from the exercise of stock options were $845, $6,438, and $1,767 in the years ended December 31, 2017, 2016, and 2015, respectively.

There was $510, $6,423, and $656 of income tax benefits realized from stock option exercises in the years ended December 31, 2017, 2016, and 2015, respectively.

At December 31, 2017, options to purchase 13,393 common shares were outstanding at a range of exercise prices of $1.43 to $20.52 per share. At December 31, 2016, options to purchase 13,598 common shares were outstanding at a range of exercise prices of $1.43 to $20.52 per share. As of December 31, 2017, unrecognized compensation cost of $9,009, $4,708, and $1,358 related to non-vested stock options, RSUs, and PRSUs, respectively, is expected to be recognized over a weighted-average period of approximately 2.4, 2.8, and 2.0 remaining years, respectively. As of December 31, 2016, unrecognized compensation cost of $11,847, $4,209, and $679 related to non-vested stock options, RSUs, and PRSUs, respectively, is expected to be recognized over a weighted-average period of approximately 3.2, 3.4, and 2.2 remaining years, respectively.

14. Defined Benefit Plans

The Company maintains two defined benefit pension plans, the Wedron pension plan and the Troy Grove pension plan, covering union employees at certain facilities that provide benefits based upon years of service or a combination of employee earnings and length of service.

The following assumptions were used to determine the Company's obligations under the plans:

	Wedron Pension		Troy Grove Pension	
	2017	2016	2017	2016
Discount rate	4.00%	4.00%	4.25%	4.25%
Long-term rate of return on plan assets	7.40%	7.40%	7.40%	7.40%

The difference in the discount rates used for the Wedron Pension and the Troy Grove Pension is due to the differing characteristics of the two plans, including employee characteristics and plan size. The Company uses a cash flow matching approach to determine its discount rate using each plan's projected cash flows and the BPS&M yield curve.

The long term rate of return on assets is based on management's estimate of future long term rates of return on similar assets and is consistent with historical returns on such assets.

The written investment policy for the pension plans includes a target allocation of about 70% in equities and 30% in fixed income investments. Only high-quality diversified securities similar to stocks and bonds are used. Higher-risk securities or strategies (such as derivatives) are not currently used but could be used incidentally by mutual funds held by the plan. The pension plans' obligations are long-term in nature and the investment policy is therefore focused on the long-term. Goals include achieving gross returns at least equal to relevant indices. Management and the plans' investment advisor regularly review and discuss investment performance, adherence to the written investment policy, and the investment policy itself.

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Benefits under the Wedron plan were frozen effective December 31, 2012. Benefits under the Troy Grove plan were frozen effective December 31, 2016. During 2016, the Troy Grove plan was amended to allow unreduced retirement benefits for certain plan participants. The $181 impact of this amendment was recognized in expense in 2016. The plans were underfunded by $1,797 and $2,096 as of December 31, 2017 and 2016, respectively, as shown below:

	2017	2016
Change in benefit obligation		
Benefit obligation at beginning of year	$9,067	$8,812
Service cost	-	84
Interest cost	356	348
Actuarial loss (gain)	495	(82)
Benefit payments	(301)	(276)
Plan amendments	-	181
Benefit obligation at end of year	$9,617	$9,067
Change in plan assets		
Fair value of plan assets at beginning of year	$6,971	$6,613
Actual return on plan assets	1,093	558
Employer contributions	57	76
Benefit payments	(301)	(276)
Fair value of plan assets at end of year	$7,820	$6,971
Accrued benefit cost	$(1,797)	$(2,096)

The accrued benefit cost is included in the Consolidated Balance Sheets in other long-term liabilities.

The following relates to the defined benefit plans for the years ended December 31, 2017, 2016, and 2015, respectively:

	Year Ended December 31,		
	2017	2016	2015
Components of net periodic benefit cost			
Service cost	$ -	$ 84	$ 108
Interest cost	356	348	340
Expected return on plan assets	(508)	(480)	(508)
Amortization of prior service cost	-	-	16

Amortization of net actuarial loss	244	265	280
Curtailment	-	182	-
Net periodic benefit cost	$ 92	$ 399	$ 236

	Year Ended December 31,		
	2017	2016	2015
Changes in other comprehensive income (loss)			
Net actuarial gain (loss)	$ 92	$ 158	$ (75)
Amortization of prior service cost	-	-	16
Amortization of net actuarial gain	244	265	280
Curtailment	-	182	-
Deferred tax asset	(71)	(180)	(124)
Other comprehensive income	$ 265	$ 425	$ 97

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Pension expense for such plans totaled $92, $399, and $236 for the years ended December 31, 2017, 2016, and 2015, respectively. Expected contributions into the plans for the year ended December 31, 2018 are $28.

The net actuarial loss that the Company expects will be amortized from accumulated other comprehensive loss into periodic benefit cost in the year ending December 31, 2018 is $214.

Benefits expected to be paid out over the next ten years:

Year Ending	Benefit Payment
2018	$ 390
2019	412
2020	442
2021	466
2022	496
2023-2027	2,620

Fair value measurements for assets held in the benefit plans as of December 31, 2017 are as follows:

	Quoted Prices in Active Markets (Level 1)	Other Observable Inputs (Level 2)	Unobservable Inputs (Level 3)	Balance at December 31, 2017
Cash	$ 93	$ -	$ -	$ 93
Fixed income	2,079	-	-	2,079
Equity	5,648	-	-	5,648
	$ 7,820	$ -	$ -	$ 7,820

15. Other Benefit Plans

The Company previously participated in a multiemployer defined benefit pension plan. The Company withdrew from the plan in October 2015 with a withdrawal liability of $9,283, which is payable in annual installments until November 2035. The present value and balance of this withdrawal liability was $4,683 as of December 31, 2017.

The Company has a defined contribution plan ("401(k) Plan" or the "Plan") covering substantially all employees. Under the provisions of the 401(k) Plan, the Company matches 50% of the first 5% of each union employee's contribution into the 401(k) Plan. In 2017, the Company modified the 401(k) Plan to match 100% of the first 3% and 50% of the next 2% of each non-union employee's contribution. Company match contributions were $2,221, $1,231, and $1,191, for the years ended December 31, 2017, 2016, and 2015, respectively. Included in these contributions are Company contributions to the 401(k) Plan for union members, which were $606, $365, and $352 for the years ended December 31, 2017, 2016, and 2015, respectively.

The Company may, at its discretion, make additional contributions, which are determined in part based on the Company's return on investable capital, to the Plan. Discretionary contributions accrued at December 31, 2017 were $1,940. There were no discretionary contributions accrued at December 31, 2016. Participant accounts in the 401(k) Plan held 6,370 and 5,947 of common stock shares of the Company as of December 31, 2017 and 2016, respectively.

Effective January 1, 1999, the Company adopted a Supplemental Executive Retirement Plan ("SERP") for certain employees who participate in the Company's 401(k) Plan and/or the Employee Stock Bonus Plan ("ESBP"). The purpose of the SERP is to provide an opportunity for the participants of the SERP to defer compensation and to receive their pro rata share of former ESBP contributions. Due to income restrictions imposed by the IRS code, such contributions were formerly made to the ESBP but, in some instances, were forfeited by these employees to the

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remaining ESBP participant accounts. Accrued Company contributions to the SERP were $106 and $0 at December 31, 2017 and 2016, respectively.

The Company has deferred compensation agreements with various management employees that provide for supplemental payments upon termination. These amounts are being accrued for over the estimated employment periods of these individuals.

16. Self-Insured Plans

Certain subsidiaries, located in Illinois and Michigan, are self-insured for workers' compensation up to $1,000 per occurrence and $3,000 in the aggregate. In July 2016, the Company moved the Michigan self-insured plan over to the Company's group captive insurance company. The Company has an accrued liability of $372 and $180 as of December 31, 2017 and 2016, respectively, for anticipated future payments on claims incurred to date. Management believes these amounts are adequate to cover all required payments.

The Company is also self-insured for medical benefits. The Company has an accrued liability of $2,517 and $3,055 as of December 31, 2017 and 2016, respectively, for anticipated future payments on claims incurred to date. Management believes this amount is adequate to cover all required payments.

17. Commitments and Contingencies

The Company has entered into numerous mineral rights agreements, in which payments under the agreements are expensed as incurred. Certain agreements require annual payments while other agreements require payments based upon annual tons mined and others a combination thereof. Total royalty expense associated with these agreements was $1,957, $1,429, and $1,899 for the years ended December 31, 2017, 2016, and 2015, respectively.

As of December 31, 2017, the Company is obligated for an additional $10,000 in future leasehold interest payments for the July 2017 Kermit, Texas transaction. Please refer to Note 5 for further detail.

The Company has entered into agreements with third party terminal operators whereby certain minimum payments are due regardless of terminal utilization.

The Company leases certain machinery, equipment (including railcars), buildings, and office space under operating lease arrangements. Total rent expense associated with these leases was $53,843, $63,997, and $67,745 for the years ended December 31, 2017, 2016, and 2015, respectively.

Minimum lease payments, primarily for railcars, equipment, office leases, and terminals due under the long-term operating lease obligations are shown below. The table below includes railcar leases, which comprise substantially all of the Company's equipment lease obligations, as well as purchase commitments for guaranteed minimum payments for certain third party terminal operators, which are included in the real estate obligations below:

	Equipment	Real Estate	Total
2018	$ 41,449	$ 15,994	$ 57,443
2019	41,689	15,695	57,384
2020	33,600	12,303	45,903
2021	30,263	9,978	40,241
2022	28,845	5,664	34,509
Thereafter	60,254	15,723	75,977
Total	$ 236,100	$ 75,357	$ 311,457

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The Company is subject to a contingent consideration arrangement in the form of earnout payments, related to the purchase of SSP, which was accounted for as an acquisition of a group of assets. The earnout payments are based on a fixed percentage of the cumulative product margin, less certain adjustments, generated by sales of Propel SSP® and other products incorporating the SSP technology for five years commencing on October 1, 2015. The Company entered into an amendment to the SSP purchase agreement on December 17, 2015. This amendment (a) extends the period during which the threshold aggregate earnout payments equal or exceed $45,000 from the two-year period ending October 1, 2017 until the three-year period ending October 1, 2018; and (b) sets the threshold aggregate earnout payments during the two-year period ending October 1, 2017 to equal or exceed $15,000 and granted the Seller a security interest in 51% of the equity interests in the SSP technology to secure such $15,000. The amendment does not alter the final threshold earnout amount, which continues to be $195,000 (inclusive of the $45,000 payment, if any) by October 1, 2020. In the event the Company does not make the final threshold earnout payment, the Company would continue to retain a portion of the ownership interest in the technology, the right to a portion of future profits and would no longer be obligated for future earnout payments. It would also have the non-exclusive right to license the technology at a negotiated rate. The earnout payments are accrued and capitalized as part of the cost of the acquired technology from the SSP acquisition at the time a payment is probable and reasonably estimable. Based upon current information, the Company has capitalized earnout payments of $9,468, which includes the payment of $3,920 made in November 2017. The seller has elected not to exercise the claw-back of the technology as of October 1, 2017 as a result of the aggregate earnout payments being less than the $15,000 threshold at that date. As of December 31, 2017, the accrued balance of the earnout liability was $4,010, which represents the estimate of the total remaining aggregate earnout payments the Company expects to pay through October 1, 2020.

Certain subsidiaries are defendants in lawsuits in which the alleged injuries are claimed to be silicosis-related and to have resulted, in whole or in part, from exposure to silica-containing products, allegedly including those sold by certain subsidiaries. In the majority of cases, there are numerous other defendants. In accordance with its insurance obligations, the defense of these actions has been tendered to and the cases are being defended by the subsidiaries' insurance carriers. Management believes that the Company's substantial level of existing and available insurance coverage combined with various open indemnities is more than sufficient to cover any exposure to silicosis-related expenses. An estimate of the possible loss, if any, cannot be made at this time.

18. Transactions with Related Parties

The Company had purchases from an affiliated entity for freight, logistic services and consulting services related to its operations in China of $146, $576, and $288 in the years ended December 31, 2017, 2016, and 2015, respectively.

The Company pays American Securities LLC ("American Securities"), in accordance with its policy, for Board of Directors' fees and Company-related expenses, including reimbursement for travel and lodging, market research, and other miscellaneous consulting fees and expenses. Fees and expenses paid to American Securities were $232, $323, and $374 in the years ended December 31, 2017, 2016, and 2015, respectively.

19. Segment Reporting

The Company organizes its business into two reportable segments, Proppant Solutions and Industrial & Recreational Products. The reportable segments are consistent with how management views the markets served by the Company and the financial information reviewed by the chief operating decision maker in deciding how to allocate resources and assess performance.

The chief operating decision maker primarily evaluates an operating segment's performance based on segment gross profit, which does not include any selling, general, and administrative costs or corporate costs.

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	Year Ended December 31,		
	2017	2016	2015
Revenues			
Proppant Solutions	$834,749	$416,144	$710,083
Industrial & Recreational Products	125,046	118,869	118,626
Total revenues	959,795	535,013	828,709
Segment gross profit			
Proppant Solutions	244,042	26,501	175,226
Industrial & Recreational Products	55,995	48,798	44,638
Total segment gross profit	300,037	75,299	219,864
Operating expenses excluded from segment gross profit			
Selling, general, and administrative	113,240	79,140	85,191
Depreciation, depletion, and amortization	79,144	72,276	66,754
Goodwill and other asset impairments	-	93,148	87,476
Restructuring charges	-	1,155	9,221
Other operating (income) expense	(1,072)	8,899	1,357
Interest expense	56,408	65,367	62,242
Loss (gain) on debt repurchase and extinguishment, net	2,898	(5,110)	-
Other non-operating expense (income)	-	(10)	1,492
Income (loss) before benefit from income taxes	$49,419	$(239,566)	$(93,869)

Total assets reported in the Proppant Solutions segment were $1,003,328, $860,165, and $1,152,110 as of December 31, 2017, 2016, and 2015, respectively. Total assets reported in the I&R segment were $115,632, $103,056, and $116,825 as of December 31, 2017, 2016, and 2015, respectively.

The Company's three largest customers accounted for 20%, 14%, and 11% of consolidated net sales in the year ended December 31, 2017. The Company's two largest customers accounted for 30% and 12% of consolidated net sales in the year ended December 31, 2016 and 25% and 18% of consolidated net sales in the year ended December 31, 2015. These customers are part of the Company's Proppant Solutions segment.

20. Restructuring and Other Charges

As a result of challenging conditions in the energy market, the Company began taking actions in early 2015 to adjust its overall operational footprint and reduce costs. The Company's restructuring program primarily consisted of workforce reductions and costs to idle or exit facilities. The Company has completed these activities, however, a return to a continued sustained downturn in the oil and gas market could reinitiate this restructuring process. A summary of the restructuring and other costs recognized for the years ended December 31, 2017, 2016, and 2015, respectively, is as follows:

	Year Ended December 31,		
	2017	2016	2015
Restructuring charges			
Workforce reduction costs, including one-time severance payments	$ -	$ 1,155	$ 1,682
Other exit costs, including multiemployer pension plan withdrawal liability and additional cash costs to exit facilities	-	-	7,539
Total restructuring charges	$ -	$ 1,155	$ 9,221

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While these restructuring activities primarily were driven by the decline in proppant demand in 2015, certain plants supporting the Industrial & Recreational Products segment were adversely impacted as well. A summary of the restructuring and other costs by operating segment for the years ended December 31, 2017, 2016, and 2015, respectively, is as follows:

	Year Ended December 31,		
	2017	2016	2015
Restructuring charges			
Proppant Solutions	$ -	$ -	$ 1,162
Industrial & Recreational Products	-	-	6,377
Corporate	-	1,155	1,682
Total restructuring charges	$ -	$ 1,155	$ 9,221

21. Geographic Information

The following tables show total Company revenues and long-lived assets. Revenues are attributed to geographic regions based on the selling location. Long-lived assets are located in the respective geographic regions.

	Year Ended December 31,		
	2017	2016	2015
Revenues			
Domestic	$943,926	$522,870	$798,750
International	15,869	12,143	29,959
Total revenues	$959,795	$535,013	$828,709

	December 31, 2017	December 31, 2016	December 31, 2015
Long-lived assets			
Domestic	$783,482	$725,280	$ 867,352
International	2,031	2,455	3,645
Long-lived assets	$785,513	$727,735	$ 870,997

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22. Quarterly Financial Data (Unaudited)

The following tables set forth the Company's unaudited quarterly consolidated statements of operations for each of the last four quarters for the periods ended December 31, 2017 and 2016. This unaudited quarterly information has been prepared on the same basis as the Company's annual audited financial statements and includes all adjustments, consisting only of normal recurring adjustments that are necessary to present fairly the financial information for the fiscal quarters presented.

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2017:				
Revenues	$ 172,583	$ 233,226	$ 280,050	$ 273,936
Cost of goods sold	131,752	163,136	180,582	184,288
Operating expenses	40,852	46,064	49,685	54,711
Interest expense, net	12,537	12,983	12,110	18,778
Loss on debt extinguishment, net	-	-	-	2,898
(Benefit) provision for income taxes	(1,148)	520	2,754	(6,792)
Net (loss) income	(11,410)	10,523	34,919	20,053
Net income (loss) attributable to the non-controlling interest	178	40	(25)	104
Net (loss) income attributable to Fairmount Santrol Holdings Inc.	(11,588)	10,483	34,944	19,949
(Loss) earnings per share, basic	$ (0.05)	$ 0.05	$ 0.16	$ 0.09
(Loss) earnings per share, diluted	$ (0.05)	$ 0.05	$ 0.15	$ 0.09
Weighted average number of shares outstanding, basic	223,739	224,015	224,082	224,130
Weighted average number of shares outstanding, diluted	223,739	228,184	226,400	228,242

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2016:				
Revenues	$ 145,458	$ 114,249	$ 134,775	$ 140,531
Cost of goods sold	118,464	114,129	114,873	112,248
Operating expenses	37,270	134,403	44,363	38,582
Interest expense, net	17,262	16,606	16,175	15,324
Gain on repurchase of debt, net	-	-	-	(5,110)
Other non-operating income	(5)	-	-	(5)
Benefit for income taxes	(15,754)	(63,019)	(20,013)	(655)
Net loss	(11,779)	(87,870)	(20,623)	(19,853)
Net income (loss) attributable to the non-controlling interest	(3)	16	2	52

Net loss attributable to Fairmount Santrol Holdings Inc.	(11,776)	(87,886)	(20,625)	(19,905)
Loss per share, basic	$ (0.07)	$ (0.54)	$ (0.11)	$ (0.09)
Loss per share, diluted	$ (0.07)	$ (0.54)	$ (0.11)	$ (0.09)
Weighted average number of shares outstanding, basic	161,446	161,647	183,620	212,609
Weighted average number of shares outstanding, diluted	161,446	161,647	183,620	212,609

Selling, general and administrative expenses included $144, $1,333 and $6,835 of Merger transaction expenses for the three months ended June 30, September 30 and December 31, 2017, respectively. Interest expense includes debt modification expenses of $4,733 for the three months ended December 31, 2017.

Operating expenses include restructuring charges of $1,155 for the three months ended June 30, 2016. Also included in operating expenses is other asset impairments of $76, $90,579, $0, and $2,494 for the three months ended March 31, June 30, September 30, and December 31, 2016, respectively.

23. Proposed Merger with Unimin Corporation

On December 11, 2017, the Company entered into a merger agreement with Unimin Corporation (“Unimin”) and certain other parties with respect to the proposed combination of the businesses of Unimin and Fairmount Santrol. The merger agreement provides that, upon the satisfaction or waiver of the conditions contained in the agreement, a direct wholly owned subsidiary of Unimin will be merged with and into Fairmount Santrol, with Fairmount Santrol surviving such merger and becoming a direct wholly owned subsidiary of Unimin (the "Merger"). In accordance with the terms of the Merger agreement, Fairmount Santrol stockholders in the aggregate (including holders of certain Fairmount Santrol equity awards) will receive $170,000 in cash and 35% of the common stock of Unimin, with SCR-Sibelco NV ("Sibelco"), the existing parent company of Unimin, owning the remaining 65%. The Merger is subject to, among other things, approval by Fairmount Santrol's stockholders, listing of Unimin's common stock on the New York Stock Exchange ("NYSE"), and certain regulatory approvals. Upon completion of the Merger, the Company would delist and no longer trade on the NYSE. The transaction is expected to close in mid-2018, subject to satisfaction of the closing conditions. Were the transaction to close, IRC Sections 382 and 383 could limit post-merger annual utilization of U.S. federal net operating losses and tax credits.

The Merger agreement contains certain termination rights and the Company may be required to pay Unimin a termination fee of $52,000.

In the year ended December 31, 2017, the Company incurred $8,312 of expenses associated with the Merger which are recorded in selling, general and administrative expenses in the Consolidated Statements of Income (Loss).

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed by us in reports that we file or submit under the Securities Exchange Act of 1934, as amended (“the Exchange Act”), is recorded, processed, summarized, and reported within the time periods specified in the Commission’s rules and forms, and that such information is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow for timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. Management is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Under the supervision and with the participation of our management, including the Chief Executive Officer (“CEO”) (principal executive officer) and the Chief Financial Officer (“CFO”) (principal financial officer), we carried out an evaluation of the effectiveness of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, as of December 31, 2017. Our CEO and CFO concluded that our disclosure controls and procedures were effective at the reasonable assurance level as of December 31, 2017.

Management’s Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Under the supervision and with the participation of the Chief Executive Officer and the Chief Financial Officer, we conducted an evaluation of our internal control over financial reporting based on criteria specified in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”). Based on our assessment we concluded that, as of December 31, 2017, our internal control over financial reporting was effective based on the criteria in “Internal Control - Integrated Framework” (2013) issued by the COSO. The effectiveness of our internal control over financial reporting has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.

Remediation of Previously-Reported Material Weaknesses

As previously reported in our amended Annual Report on Form 10-K/A for the year ended December 31, 2016, our management concluded that our internal control over financial reporting and our disclosure controls and procedures were ineffective as of December 31, 2016 as a result of the following material weaknesses:

We did not design and maintain effective controls in the determination of long-lived asset groups for property, plant, and equipment and other intangible assets and the assessment of recoverability in accordance with U.S. GAAP, as our controls were not designed to (i) appropriately identify asset groups, (ii) assess whether events occurred which would indicate the carrying value of the asset groups may not be recoverable, and to the extent such events did occur, (iii) appropriately perform a recoverability assessment.

To remediate the material weaknesses described above and enhance our internal control over financial reporting, during the quarter ended December 31, 2017, management conducted a thorough review of its internal controls over the appropriate identification of asset groups under ASC 360, Property, Plant and Equipment, the periodic evaluation of indicators of impairment of long-lived assets and the recoverability of the carrying value of property and equipment when indicators of impairment exist. Following this review, management re-designed existing control activities and, where determined necessary, implemented new control activities related to the execution and review of the identification of asset groups, the periodic evaluation of indicators of impairment and, when such events occur, the assessment of the recoverability of long lived assets, including the review of the model, data and assumptions used in the recoverability assessment. As a result of the above actions, and the evidence obtained in validating the design and operating effectiveness of the controls, management has determined that the material weaknesses have been remediated as of December 31, 2017.

Changes in Internal Control over Financial Reporting

As described above under Remediation of Previously-Reported Material Weaknesses, there were changes in our internal control over financial reporting during the quarter ended December 31, 2017 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

Except as set forth below, the information required by Items 10, 11, 12, 13 and 14 will appear in an amendment to this Report to be filed on or before April 30, 2018, pursuant to General Instruction G(3) of Form 10-K.

The information set forth below is provided as required by Item 10 and the listing standards of the NYSE.

The following table sets forth information with respect to our current executive officers, including their ages, as of March 13, 2018. There are no family relationships between any of our executive officers.

Name	Age	Position
Jenniffer D. Deckard	52	President and Chief Executive Officer
Michael F. Biehl	62	Executive Vice President, Chief Financial Officer
Gerald L. Clancey	48	Executive Vice President, Chief Commercial Officer
Brian J. Richardson	45	Executive Vice President, Chief People Officer
George W. Magaud	54	Executive Vice President, Chief Strategy & Innovation Officer
Robert B. Larson	46	Executive Vice President, Engineering and Supply Chain Operations
Daniel N. Gerber	65	Executive Vice President, Operations
David J. Crandall	51	Executive Vice President, General Counsel and Secretary

Executive Officers of the Registrant

Jenniffer D. Deckard, age 52, has served as President, Chief Executive Officer and Director of Fairmount Santrol since 2013. Previously, Ms. Deckard served as President from January 2011 until May 2013, Vice President of Finance and Chief Financial Officer from 1999 until 2011, Corporate Controller from 1996 to 1999 and Accounting Manager from 1994 until 1996. Ms. Deckard joined the Board of RPM International Inc. (NYSE: RPM) in 2015 and serves as a member of RPM's Governance and Nominating Committee. In her local community, Ms. Deckard serves on the boards of The Cleveland Foundation, Edwin's Foundation, The First Tee of Cleveland, The Industrial Minerals Association – North America, and The National Industrial Sand Association. She also serves on the Case Western Reserve University's Weatherhead School of Management's Visiting Committee and the Board of Directors for the Fairmount Santrol Foundation. Ms. Deckard received a B.S. from the University of Tulsa, her C.P.A. certification from the State of Missouri, and an M.B.A. from Case Western Reserve University.

Michael F. Biehl, age 62, has served as Executive Vice President and Chief Financial Officer since 2016. Prior to joining Fairmount Santrol, Mr. Biehl served as Executive Vice President and Chief Financial Officer for publicly traded Chart Industries, Inc. for almost 15 years. Prior to that, he held management positions at the former Oglebay Norton Company and Ernst & Young LLP. Mr. Biehl received a B.B.A from Ohio University and M.B.A. from Northwestern University's Kellogg School of Management. He continues to be a licensed C.P.A. in Ohio and is a member of both the OSCPA and AICPA. Locally, Mr. Biehl is actively involved at St. Joseph Academy and currently serves as Chairman of its Board of Directors.

Gerald L. Clancey, age 48, has served as Executive Vice President, Chief Commercial Officer since 2015. In this role, he has responsibility for Domestic and International Sales into the Proppant and Industrial & Recreational (I&R) channels as well as leadership for Supply Chain and Logistics. Previously, Mr. Clancey served as Executive Vice President of Supply Chain and I&R since 2011, Vice President of Sales for I&R from 2002 to 2011 and General Sales Manager for the company's TechniSand resin-coated foundry division from 1998 to 2002. He was previously

President of the Foundry Educational Foundation and served several terms on its Board of Directors. Mr. Clancey received a B.S. from Kent State University and M.B.A. from the University of Notre Dame.

Brian J. Richardson, age 45, has served as Executive Vice President, Chief People Officer since 2015. In this capacity he provides leadership for our Human Resources, Information Technology, Risk Management, Sustainable Development and Internal Communications functions. Prior to joining the company, Mr. Richardson was Sr. Vice President of Human Resources for the Global Finishes Group of The Sherwin-Williams Company. Mr. Richardson serves on the National Board of Directors of the Alzheimer's Association, where he is a member of the Executive Committee and Chair of the Strategic Planning Committee. Locally, he serves on the Board of Directors for the United Way of Greater Cleveland, where he is a member of the Executive Committee and Chair of the Human

Resources Committee. Mr. Richardson received a B.A. Finance from Baldwin-Wallace College and M.B.A. from The Ohio State University.

George W. Magaud, age 54, has served as Executive Vice President, Chief Strategy & Innovation Officer since 2015. In this role, he leads the company's Strategic Development efforts as well as the Marketing and R&D organizations. Prior to this, he served as Executive Vice President, Strategic Development since joining the company in 2014. Previously, Mr. Magaud worked for Lafarge where he held positions in Strategy and Business Development, Marketing and Product Development, as well as Operations in Europe and in the United States. Mr. Magaud received his undergraduate degree from Yale University and a business degree from Institut d'Etudes Politiques de Paris.

Robert B. Larson, age 46, has served as Executive Vice President, Engineering and Supply Chain Operations since April 2016. Previously, Mr. Larson served as Senior Vice President of Engineering, Process & Technology since 2015 and Vice President of Engineering from 2011 to 2015. He served as both a Manager and then Director of Engineering from 2003 until 2011. Mr. Larson currently serves as the Chairman of the Engineering and Technology committee for The Industrial Minerals Association of North America. He holds a B.S. in Electrical Engineering from the University of Illinois and M.B.A. from the University of Michigan's Ross School of Business.

Daniel N. Gerber, age 65, has served as Executive Vice President, Operations since 2016. Previously, Mr. Gerber served as Senior Vice President and Vice President of Operations from 2010 until 2016 and Director of Operations and Manager of Illinois Operations within the Industrial Sand Division, from 2004 until 2010. Prior to joining the company, Mr. Gerber was Vice President of Operations for Better Materials Corporation as well as the US Silica Corporation. He currently serves as the Vice Chairman of National Industrial Sand Association. Mr. Gerber received a B.S. in Mining Engineering from the University of Wisconsin-Platteville.

David J. Crandall, age 51, has served as Executive Vice President, General Counsel and Secretary since January 2017. Previously, Mr. Crandall served as Sr. Vice President, General Counsel and Secretary from January 2016 to December 2016 and Vice President, General Counsel and Secretary from January 2011 to December 2015. Prior to joining Fairmount Santrol, he was a Partner at Calfee, Halter & Griswold, L.L.P, where he practiced general corporate and merger and acquisition law. He graduated Phi Beta Kappa, Magna Cum Laude with a B.S. in Economics from Allegheny College and graduated Cum Laude from the Syracuse University College of Law.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

The following documents are filed as part of this Annual Report on Form 10-K:

A) The consolidated financial statements of Fairmount Santrol Holdings Inc. and Subsidiaries contained in Part II, Item 8 of the Annual Report on Form 10-K:
- Consolidated Statements of Income (Loss) for the years ended December 31, 2017, 2016, and 2015
- Consolidated Statements of Comprehensive Income (Loss) for the years ended December 31, 2017, 2016, and 2015
- Consolidated Balance Sheets as of December 31, 2017 and 2016
- Consolidated Statements of Equity for the years ended December 31, 2017, 2016, and 2015
- Consolidated Statements of Cash Flows for the years ended December 31, 2017, 2016, and 2015

B) Schedule II – Valuation and Qualifying Accounts and Reserves for the years ended December 31, 2017, 2016, and 2015, contained on page 116 of this Annual Report on Form 10-K

C) The exhibits listed in the Exhibit Index beginning on page 117 of this Annual Report on Form 10-K

Fairmount Santrol Holdings Inc. and Subsidiaries

Schedule II – Valuation and Qualifying Accounts and Reserves

Years Ended December 31, 2017, 2016, and 2015

(in thousands)

	Beginning Balance	Charged to Cost and Expenses	Charged to Other Accounts	Deductions	Ending Balance
Allowance for Doubtful Accounts:					
Year ended December 31, 2017	$ 3,055	$ (387)	$ -	$ (665)	$ 2,003
Year ended December 31, 2016	2,470	1,851	-	(1,266)	3,055
Year ended December 31, 2015	4,255	1,968	-	(3,753)	2,470
Valuation Allowance for Net Deferred Tax Assets:					
Year ended December 31, 2017	$ 21,959	$ (5,988)	$ 4,249	$ -	$ 20,220
Year ended December 31, 2016	27,230	(5,271)	-	-	21,959
Year ended December 31, 2015	1,309	25,921	-	-	27,230

FAIRMOUNT SANTROL HOLDINGS INC.

EXHIBIT INDEX

The following Exhibits are filed with this Annual Report on Form 10-K or are incorporated by reference to a prior filing in accordance with Rule 12b-32 under the Securities and Exchange Act of 1934. All Exhibits not so designated are incorporated by reference to a prior filing as indicated.

(x) Filed herewith

(*) Management contract or compensatory plan or arrangement

Exhibit No.	Description
2.1	Interests Purchase Agreement, dated as of April 30, 2013, by and among Fairmount Minerals, Ltd., Soane Energy LLC and Self-Suspending Proppant LLC (incorporated by reference to Exhibit 2.1 on Form S-1, filed on September 18, 2014).
2.2	Agreement and Plan of Merger, dated as of December 11, 2017, by and among Fairmount Santrol Holdings Inc., SCR-Sibelco NV, Unimin Corporation, Bison Merger Sub, Inc., and Bison Merger Sub I, LLC (incorporated by reference to Exhibit 2.1 on Form 8-K, filed on December 12, 2017).
3.1	Form of Third Amended and Restated Certificate of Incorporation of FMSA Holdings Inc. (incorporated by reference to Exhibit 3.1 on Form S-1, filed on September 18, 2014).
3.2	Form of Fourth Amended and Restated Bylaws of FMSA Holdings Inc. (incorporated by reference to Exhibit 3.2 on Form S-1, filed on September 18, 2014).
3.3	Certificate of Amendment of the Third Amended and Restated Certificate of Incorporation of FMSA Holdings Inc., filed July 17, 2015 (incorporated by reference to Exhibit 3.1 on Form 8-K, filed July 21, 2015).
4.1	Specimen Common Stock Certificate (incorporated by reference to Exhibit 4.1 on Form S-1, filed on September 26, 2014).
10.1	Form of Fourth Amended and Restated Stockholders Agreement (incorporated by reference to Exhibit 10.7 on Form S-1, filed on September 18, 2014).
10.2*	Form of Indemnification Agreement (incorporated by reference to Exhibit 10.8 on Form S-1, filed on September 18, 2014).
10.3*	Form of FMSA Holdings Inc. Non-Qualified Stock Option Plan (incorporated by reference to Exhibit 10.9 on Form S-1, filed on September 18, 2014).
10.4*	Form of Stock Option Agreement for FMSA Holdings Inc. Non-Qualified Stock Option Plan (incorporated by reference to Exhibit 10.9 on Form S-1, filed on September 18, 2014).

10.5*	Amendment I to the FMSA Holdings Inc. Non-Qualified Stock Option Plan Stock Option Agreement (incorporated by reference to Exhibit 10.10 on Form S-1, filed on September 18, 2014).
10.6*	Form of FMSA Holdings Inc. Long Term Incentive Compensation Plan (incorporated by reference to Exhibit 10.11 on Form S-1, filed on September 18, 2014).
10.7*	Form of Stock Option Agreement for FMSA Holdings Inc. Long Term Incentive Compensation Plan (incorporated by reference to Exhibit 10.12 on Form S-1, filed on September 18, 2014).
10.8*	Amendment I to the FMSA Holdings Inc. Long Term Incentive Compensation Plan Stock Option Agreement (incorporated by reference to Exhibit 10.13 on Form S-1, filed on September 18, 2014).
10.9*	Form of FMSA Holdings Inc. Stock Option Plan (incorporated by reference to Exhibit 10.14 on Form S-1, filed on September 18, 2014).
10.10*	Form of Stock Option Agreement for FMSA Holdings Inc. Stock Option Plan (incorporated by reference to Exhibit 10.15 on Form S-1, filed on September 18, 2014).

Exhibit No.	Description
10.11*	Amendment I to the FMSA Holdings Inc. Stock Option Agreement (incorporated by reference to Exhibit 10.16 on Form S-1, filed on September 18, 2014).
10.12*	Fairmount Santrol Holdings Inc. 2014 Long Term Incentive Plan, as amended (incorporated by reference to Appendix A to the Company's Definitive Proxy Statement, filed on April 6, 2017).
10.13*	Form of Stock Option Agreement for FMSA Holdings Inc. 2014 Long Term Incentive Plan (incorporated by reference to Exhibit 10.18 on Form S-1, filed on September 18, 2014).
10.14*	Form of Notice of Grant of Stock Option for FMSA Holdings Inc. 2014 Long Term Incentive Plan (incorporated by reference to Exhibit 10.19 on Form S-1, filed on September 18, 2014).
10.15*	Form of Restricted Stock Unit Agreement for FMSA Holdings Inc. 2014 Long Term Incentive Plan (incorporated by reference to Exhibit 10.21 on Form S-1, filed on September 18, 2014).
10.16*	Form of Notice of Grant of Restricted Stock Unit for FMSA Holdings Inc. 2014 Long Term Incentive Plan (incorporated by reference to Exhibit 10.22 on Form S-1, filed on September 18, 2014).
10.17*	Form of Executive Change in Control Severance Plan (incorporated by reference to Exhibit 10.1 on Form 8-K, filed on December 16, 2015).
10.18*	Omnibus Amendment to Outstanding Stock Option Agreements under the FMSA Holdings Inc. 2014 Long Term Incentive Plan (incorporated by reference to Exhibit 10.2 on Form 8-K, filed on December 16, 2015).
10.19*	Omnibus Amendment to Outstanding Restricted Stock Unit Agreements under the FMSA Holdings Inc. 2014 Long Term Incentive Plan (incorporated by reference to Exhibit 10.3 on Form 8-K, filed on December 16, 2015).
10.20	Amendment No. 1 to the Interests Purchase Agreement dated April 30, 2013, by and among Fairmount Minerals Ltd. (n/k/a Fairmount Santrol Inc.), Soane Energy LLC and Self-Suspending Proppant LLC, dated December 17, 2015 (incorporated by reference to Exhibit 10.1 on Form 8-K, filed on December 18, 2015).
10.21	Omnibus Amendment, dated May 20, 2016, to the Interests Purchase Agreement, dated April 30, 2013, by and among Fairmount Minerals, Ltd., Soane Energy LLC, and Self-Suspending Proppant LLC (incorporated by reference to Exhibit 10.3 on Form 10-Q, filed on August 4, 2016).
10.22	Second Omnibus Amendment, dated September 9, 2016, to the Interests Purchase Agreement, dated April 30, 2013, by and among Fairmount Minerals, Ltd., Soane Energy LLC, and Self-Suspending Proppant LLC (incorporated by reference to Exhibit 10.31 on Form 10-K, filed March 9, 2017).
10.23*	Omnibus Amendment to Outstanding Stock Option Agreements under FMSA Holdings Inc. 2006 Long Term Incentive Compensatory Plan (incorporated by reference to Exhibit 10.1 on Form 10-Q, filed on November 3, 2016).
10.24*	Omnibus Amendment to Outstanding Stock Option Agreements under FMSA Holdings Inc. 2010 Stock Option Plan (incorporated by reference to Exhibit 10.2 on Form 10-Q, filed on November 3, 2016).

10.25*	Amended and Restated Omnibus Amendment to Outstanding Stock Option Agreements under FMSA Holdings Inc. 2014 Long Term Incentive Plan (incorporated by reference to Exhibit 10.3 on Form 10-Q, filed on November 3, 2016).
10.26*	Severance Agreement by and between Fairmount Santrol Holdings Inc. and Michael F. Biehl, dated May 6, 2016 (incorporated by reference to Exhibit 10.1 to Form 10-Q, filed on May 10, 2016).
10.27	Sixth Amendment to Second Amended and Restated Credit and Guaranty Agreement, dated as of April 28, 2016, among Fairmount Santrol Inc., the lenders party thereto, and Barclays Bank plc, as administrative agent (incorporated by reference to Exhibit 10.1 on Form 8-K, filed on May 2, 2016).

Exhibit No.	Description
10.28	Amendment No. 1 to the FMSA Holdings Inc. 2014 Long Term Incentive Plan, dated February 1, 2017, by Fairmount Santrol Holdings Inc (incorporated by reference to Exhibit 10.37 on Form 10-K, filed March 9, 2017).
10.29	Lease Agreement, dated as of July 18, 2017, for real property located in Winkler County, Texas (incorporated by reference to Exhibit 10.1 on Form 10-Q, filed on November 9, 2017).
10.30(x)	First Amendment to Lease Agreement.
10.31(x)	Term Loan Credit and Guaranty, dated as of November 1, 2017, by and among the Company, as borrower, the lenders from time to time party thereto, and Barclays Bank LC, as lead arranger, sole bookrunner and administrative agent.
10.32(x)	Revolving Credit and Guaranty Agreement, dated as of November 1, 2017, by and among the Company, as borrower, the subsidiary borrowers from time to time party thereto, the financial institutions from time to time party thereto, and PNC Capital Markets LLC, as lead arranger, sole bookrunner and administrative agent.
21.1(x)	List of Subsidiaries of Fairmount Santrol Holdings Inc.
23.1(x)	Consent of Independent Registered Public Accounting Firm, PricewaterhouseCoopers LLP.
31.1(x)	Certification pursuant to Rule 13a-14(a) or 15d-14(a) of the Principal Executive Officer.
31.2(x)	Certification pursuant to Rule 13a-14(a) or 15d-14(a) of the Principal Financial Officer.
32.1(x)	Statement Required by 18 U.S.C. Section 1350 by the Principal Executive Officer.
32.2(x)	Statement Required by 18 U.S.C. Section 1350 by the Principal Financial Officer.
95.1(x)	Mine Safety Disclosure Exhibit
99.1(x)	Consent of GZA GeoEnvironmental, Inc.
101.INS(x)	XBRL Instance Document
101.SCH(x)	XBRL Taxonomy Extension Schema Document
101.CAL(x)	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF(x)	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB(x)	XBRL Taxonomy Extension Label Linkbase Document
101.PRE(x)	XBRL Taxonomy Extension Presentation Linkbase Document

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on March 13, 2018.

FAIRMOUNT SANTROL HOLDINGS INC.

By: /s/ Jenniffer D. Deckard
Jenniffer D. Deckard
President, Chief Executive Officer

Pursuant to the requirements of the Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Name	Title	Date
/s/ Jenniffer D. Deckard Jenniffer D. Deckard	President, Chief Executive Officer, and Director (Principal Executive Officer)	March 13, 2018
/s/ Michael F. Biehl Michael F. Biehl	Executive Vice President and Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	March 13, 2018
/s/ William E. Conway William E. Conway	Director	March 13, 2018
/s/ Michael G. Fisch Michael G. Fisch	Director	March 13, 2018
/s/ Charles D. Fowler Charles D. Fowler	Director	March 13, 2018
/s/ Stephen J. Hadden Stephen J. Hadden	Director	March 13, 2018
/s/ Michael C. Kearney Michael C. Kearney	Director	March 13, 2018
/s/ William P. Kelly William P. Kelly	Director	March 13, 2018
/s/ Matthew F. LeBaron Matthew F. LeBaron	Director	March 13, 2018

/s/ Michael E. Sand Michael E. Sand	Director	March 13, 2018
/s/ Lawrence N. Schultz Lawrence N. Schultz	Director	March 13, 2018