Table of Contents

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The information in this preliminary prospectus supplement is not complete and may be changed. A registration statement relating to the securities has become effective under the Securities Act of 1933, as amended. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell the securities described herein and we are not soliciting an offer to buy such securities in any jurisdiction where the offer or sale is not permitted.

Subject to Completion, dated July 20, 2016

PRELIMINARY PROSPECTUS SUPPLEMENT
(To Prospectus dated July 14, 2016)

25,000,000 Shares

Fairmount Santrol Holdings Inc.

COMMON STOCK

Fairmount Santrol Holdings Inc. is offering for sale 25,000,000 shares of its common stock. The underwriters have agreed to purchase our common stock from us at a price of $ per share, which will result in approximately $ million of proceeds to us (before offering expenses). The underwriter may offer shares of our common stock from time to time for sale in one or more transactions on the New York Stock Exchange ("NYSE"), in the over-the-counter market, through negotiated transactions or otherwise at market prices prevailing at the time of sale, at prices related to prevailing market prices or at negotiated prices. See "Underwriting."

Our common stock, par value $0.01 per share, is listed on the NYSE under the symbol "FMSA." The last reported sale price of our common stock on the NYSE on July 19, 2016, was $6.46 per share.

Investing in our securities involves risk. Before you invest in our common stock, you should carefully consider each of the factors described under " Risk Factors " beginning on page S-9 of this prospectus supplement, as well as in the accompanying prospectus and the documents we have filed with the Securities and Exchange Commission that are incorporated by reference.

To the extent the underwriters sell more than 25,000,000 shares of common stock, the underwriters have the option to purchase up to 3,750,000 additional shares of common stock from us on the same terms and conditions as set forth above within 30 days from the date of this prospectus supplement. If the underwriters exercise the option in full, the total underwriting discount will be $, and the total proceeds, before expenses, to us will be $.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed on the adequacy or accuracy of this prospectus supplement. Any representation to the contrary is a criminal offense.

The underwriters expect to deliver the shares on or about , 2016. Charles D. Fowler, a director and the chairman of the executive committee of the Board of Directors of the Company, has informed us that he intends to purchase up to approximately $10 million in shares of our common stock in this offering. However, there can be no assurance that Mr. Fowler will participate in this offering, and if he does participate, there can be no assurance as to the number of shares that Mr. Fowler will purchase.

Morgan Stanley *Wells Fargo Securities* *Barclays*

The date of this prospectus supplement is July , 2016

TABLE OF CONTENTS

Prospectus Supplement

SUMMARY	S-1
RISK FACTORS	S-9
FORWARD-LOOKING STATEMENTS	S-13
USE OF PROCEEDS	S-16
PRICE RANGE OF COMMON STOCK AND DIVIDEND POLICY	S-17
CAPITALIZATION	S-18
MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS FOR NON-U.S. HOLDERS	S-19
UNDERWRITING	S-23
LEGAL MATTERS	S-27
EXPERTS	S-27
WHERE YOU CAN FIND MORE INFORMATION	S-27

Prospectus

INFORMATION REQUIRED IN PROSPECTUS	
ABOUT THIS PROSPECTUS	1
WHERE YOU CAN FIND MORE INFORMATION	1
SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS	2
RISK FACTORS	5
USE OF PROCEEDS	5
DESCRIPTION OF CAPITAL STOCK	6
DESCRIPTION OF WARRANTS	10
DESCRIPTION OF UNITS	12
PLAN OF DISTRIBUTION	13
VALIDITY OF SECURITIES	14
EXPERTS	14

You should read this prospectus supplement along with the accompanying prospectus dated July 14, 2016. This prospectus supplement and the accompanying prospectus form one single document and both contain information you should consider when making your investment decision. You should rely only on the information contained or incorporated by reference in this prospectus supplement, the accompanying prospectus and any related free writing prospectus prepared by us or on our behalf. We have not, and the underwriters have not, authorized anyone to provide you with information that is different. If the information contained in this prospectus supplement is inconsistent with the accompanying prospectus, you should rely on this prospectus supplement. The information contained or incorporated by reference in this prospectus supplement, the accompanying prospectus and any related free writing prospectus prepared by us or on our behalf may only be accurate as of their respective dates. Our business, financial condition, results of operations and prospects may have changed since those dates.

The distribution of this prospectus supplement and the accompanying prospectus and the offering of the common stock in certain jurisdictions may be restricted by law. Persons who come into possession of this prospectus supplement and the accompanying prospectus should inform themselves about and observe any such restrictions. This prospectus supplement and the accompanying prospectus do not constitute, and may not be used in connection with, an offer or solicitation by anyone in any jurisdiction in which such offer or solicitation is not authorized or in which the person making such offer or solicitation is not qualified to do so or to any person to whom it is unlawful to make such offer or solicitation.

INDUSTRY AND MARKET DATA

The market data and certain other statistical information used throughout this prospectus supplement are based on independent industry publications, government publications and other published independent sources. Investors are cautioned not to place undue reliance on the market related research statistics. The market data regarding supply and demand is difficult to quantify as the proppant industry continues to evolve and many market participants are privately held, making accurate estimates of supply capacity and market demand difficult to qualify. Some data is also based on our good faith estimates. Although these are third-party sources, we acknowledge our responsibility for all disclosures in this prospectus supplement. The industry in which we operate is subject to a high degree of uncertainty and risk due to a variety of factors, including those described in the section entitled "Risk Factors." These and other factors could cause results to differ materially from those expressed in these publications.

TRADEMARKS AND TRADE NAMES

We own or have rights to various trademarks, service marks and trade names that we use in connection with the operation of our business. This prospectus supplement may also contain trademarks, service marks and trade names of third parties, which are the property of their respective owners. Our use or display of third parties' trademarks, service marks, trade names or products in this prospectus supplement is not intended to, and does not imply a relationship with, or endorsement or sponsorship by us. Solely for convenience, the trademarks, service marks and trade names referred to in this prospectus may appear without the ®, TM or SM symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks, service marks and trade names.

SUMMARY

The following summary is qualified in its entirety by the more detailed information included elsewhere or incorporated by reference in this prospectus supplement and the accompanying prospectus. Because this is a summary, it may not contain all the information that may be important to you. You should read the entire prospectus supplement and the accompanying prospectus as well as the documents incorporated by reference before making an investment decision. Some of the statements in this prospectus supplement are forward-looking statements. See "Forward-Looking Statements." 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.

Our Company

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. We offer the broadest range of proppants available in the market today, including high quality sand and a variety of resin-coated and other value-added products. All of our frac sand exceeds American Petroleum Institute ("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 Industrial & Recreational ("I&R") markets.

Our asset base as of December 31, 2015 includes 798 million tons of proven and probable mineral reserves, which we believe is one of the largest reserve bases in the industry. Due to the continuing challenging conditions in the oil and gas industry, we have adjusted our operations to minimize our costs and consolidate into what we believe is our lowest-cost footprint. As of May 2016, we have 10 sand processing facilities (5 of which are active) with 16.3 million tons of annual sand processing capacity. In 2015, we closed our sand processing facilities in Readfield, Wisconsin and Wexford, Michigan, and idled our facilities in Brewer, Missouri, Shakopee, Minnesota, and Hager City, Wisconsin, and in 2016 idled our Wisconsin facilities in Maiden Rock and Menomonie. We also have 9 coating facilities (6 of which are active) with 2.3 million tons of annual coating capacity. Our coating facilities include operations in Mexico, Denmark and China, through which we serve international oil and gas markets. In 2015, we closed our resin-coating facility in Bridgman, Michigan and idled resin-coating facilities in Voca, Texas and Cutler, Illinois and an SSP-coating facility in Fresno, Texas.

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 2011, our employees have demonstrated our commitment to our communities by donating nearly 67,000 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 30 of our facilities now generate zero waste to landfills. Additionally, we executed upon annual initiatives to reduce our carbon emissions and have planted over 395,000 trees since 2011 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."

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 41 proppant distribution terminals and a fleet of approximately 10,200 railcars (net of subleases). We have expanded our unit train capabilities to now include two production facilities and seven 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 ten transloading terminals and opened seven new terminals in 2015, and discontinued activity at two transloading terminals in 2016.

Our operations are organized into two segments based on the primary end markets we serve: (i) Proppant Solutions and (ii) I&R 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, northern Europe and the United Arab Emirates. Our I&R Products 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 2015, our Proppant Solutions segment sold 6.2 million tons of proppant with revenues of $710 million (86% of total company revenues) and contribution margin of $71 million, which represent decreases of 14%, 42%, and 84%, respectively, from 2014. Proppant Solutions represented approximately 91% and 87% of total company revenues for 2014 and 2013, respectively. For 2015, our I&R Products segment had sales volume of 2.3 million tons with revenues of $119 million and contribution margin of $25 million, which represent decreases of 5%, 5%, and 27%, respectively, from 2014.

Recent Developments

On July 14, 2016, we announced preliminary results for the quarter ended June 30, 2016.

Second-quarter 2016 revenues are expected to be between $113 million and $115 million. Overall volumes sold are expected to be between 1.9 million and 2.0 million tons for the second quarter. The expected declines, as compared with our first-quarter 2016 results, are due to increased pressures on all proppant volumes—particularly within our coated proppant offerings—and to lower prices across our Proppant Solutions segment. Partially offsetting these declines was a strong performance from our I&R Products segment which is expected to deliver a sequential increase in volume.

During the second quarter of 2016, we re-evaluated our facilities footprint, giving consideration to both market dynamics and to the full impact of the recently implemented capacity expansion at our primary, lower-cost facility in Wedron, Illinois. As a result, we expect to take impairment charges related to certain, higher-cost idled facilities, which in total we expect to be approximately $91 million for the second quarter of 2016.

We expect a second-quarter 2016 net loss of between $91 million and $93 million, or $(0.56) to $(0.58) per diluted share. Our estimated net loss range includes the $91 million of expected charges from non-cash impairments noted above, estimated stock compensation expense of $3 million and an estimated $17 million related to inventory write-downs, restructuring charges and fees committed for additional cost reduction initiatives.

For the second quarter 2016, we expect an Adjusted EBITDA in the range of $(22) million to $(24) million. The Adjusted EBITDA estimate excludes the expected impact of non-cash stock compensation expense and impairment charges which in total are anticipated to be approximately $94 million. The Adjusted EBITDA estimate includes expected charges related to inventory write-downs, restructuring charges and fees committed for additional cost reduction initiatives, which in total are expected to approximate $17 million.

As of June 30, 2016, our cash and cash equivalents are expected to be between $60 million and $62 million. This balance is net of second quarter payments of $71.4 million for principal prepayment and fees associated with extending $69.6 million of our B-1 term loans, which were due in the first quarter of 2017. We also have approximately $18 million available on our revolving credit facility for estimated total liquidity of $78 million to $80 million as of June 30, 2016.

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 non-cash income or expenses. We believe EBITDA and adjusted EBITDA are useful because they allow management to more effectively evaluate our operational performance and compare the results of our operations from period to period without regard to our financing methods or capital structure.

Fairmount Santrol
Non-GAAP Financial Measures
(unaudited)

	Three Months Ended June 30, 2016	
	Low	**High**
Reconciliation of Adjusted EBITDA		
Net (loss) income attributable to Fairmount Santrol Holdings Inc.	**$ (91.0)**	**$ (93.0)**
Interest expense, net	17.0	17.0
Provision (benefit) for income taxes	(60.0)	(60.0)
Depreciation, depletion, and amortization expense	18.0	18.0
EBITDA	**(116.0)**	**(118.0)**
Non-cash stock compensation expense (1)	3.0	3.0
Impairment of long-lived assets (2)	91.0	91.0
Adjusted EBITDA	**$ (22.0)**	**$ (24.0)**

(1) Represents the non-cash expense for stock-based awards issued to our employees and our outside directors.
(2) Charges associated with the impairment of mineral reserves and other long-lived assets.

We have not finished closing our books for our second fiscal quarter ended June 30, 2016 and our independent registered public accounting firm has not completed its review of our results for our second quarter. As such, all amounts reported in this section of the prospectus supplement are preliminary estimates. Our actual results may differ materially from these estimates due to the completion of our financial closing procedures, final adjustments and other developments that may arise between now and the time the financial results for our second quarter are finalized. The preliminary financial data included in this prospectus supplement has been prepared by, and is the responsibility of our management. PricewaterhouseCoopers LLP has not audited, reviewed, compiled or performed any procedures with respect to the preliminary financial data. Accordingly, PricewaterhouseCoopers LLP does not express an opinion or any other form of assurance with respect thereto.

Corporate History Information

We were incorporated as a Delaware corporation in 1986. Our predecessor companies began operations over 120 years ago. In August 2010, we partnered with American Securities LLC ("American Securities") when affiliated funds managed by American Securities (collectively with American Securities, the "AS Group") acquired indirect control over ASP FML Holdings, LLC ("ASP FML"), who acquired 51% of our stock (the "AS Group Acquisition").

On October 3, 2014, we completed an initial public offering of 25 million shares of our common stock at an offering price of $16.00 per share (the "IPO"). We are listed under the ticker symbol "FMSA" on the New York Stock Exchange.

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 prospectus supplement.

THE OFFERING

Issuer	Fairmount Santrol Holdings Inc.
Common Stock Offered	25,000,000 shares of our common stock (28,750,000 shares if the underwriters exercise their option to purchase additional shares of common stock in full).
Common Stock to be Outstanding After this Offering	187,663,428 shares (191,413,428 shares if the underwriters exercise their option to purchase additional shares of common stock in full).
Use of Proceeds	We estimate the net proceeds from this offering will be approximately $ ($ if the underwriters exercise their option in full), after deducting the underwriting discount and estimated offering expenses. We intend to use the net proceeds from this offering for general corporate purposes. Our general corporate purposes include, but are not limited to, working capital, repayment, redemption or refinancing of debt, leases, capital expenditures, investments in or loans to subsidiaries and joint ventures and satisfaction of other obligations. Pending such use, the net proceeds may be invested in short-term, investment grade, interest-bearing securities, certificates of deposit or indirect or guaranteed obligations of the United States. See "Use of Proceeds."
Dividend policy	We do not anticipate paying any cash dividends on our common stock. In addition, our revolving credit facility and term loans place certain restrictions on our ability to pay cash dividends.
New York Stock Exchange Symbol	FMSA
Risk Factors	You should carefully consider the information set forth in the section of this prospectus supplement entitled "Risk Factors" as well as the other information included in or incorporated by reference in this prospectus supplement and the accompanying prospectus before deciding whether to invest in our common stock.

The information above excludes 15,781,131 shares of common stock issuable upon the exercise of stock options outstanding as of July 18, 2016 under our equity incentive plans, as well as 1,946,256 shares of common stock reserved for issuance under our 2014 Long-Term Incentive Plan, or the LTIP.

Unless we specifically state otherwise, the information in this prospectus supplement assumes that the underwriters do not exercise their option to purchase additional shares of our common stock.

SUMMARY HISTORICAL CONSOLIDATED FINANCIAL AND OPERATING DATA

The following table sets forth our summary historical consolidated financial and operating data as of the dates and for the periods indicated. We have derived the summary historical consolidated financial and operating data as of and for the year ended December 31, 2011 from our unaudited consolidated financial statements. We have derived the summary historical consolidated financial and operating data as of, and for the years ended December 31, 2012, 2013, 2014 and 2015 from our audited consolidated financial statements, which are incorporated by reference into this prospectus supplement. We have derived the summary historical consolidated financial and operating data for the three months ended March 31, 2015 and as of and for the three months ended March 31, 2016 from our unaudited condensed consolidated financial statements that are incorporated by reference into this prospectus supplement. Our unaudited condensed consolidated financial statements have been prepared on the same basis as our audited consolidated financial statements and, in our opinion, include all adjustments, consisting of normal recurring adjustments, that we consider necessary for a fair presentation of our financial position, results of operations and cash flows for such periods. Historical results are not necessarily indicative of future results.

The summary historical consolidated data presented below should be read in conjunction with "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the related notes and other financial data incorporated by reference into this prospectus supplement.

	Year Ended December 31,					Three Months Ended March 31,	
	2011	2012	2013	2014	2015	2015	2016
	(In thousands)						
Statement of Income Data:							
Revenue	$ 909,742	$ 885,190	$ 988,386	$1,356,458	$ 828,709	$301,490	$145,458
Income (loss) from operations	296,903	278,426	227,956	311,664	(30,135)	56,805	(10,276)
Income (loss) before provision for income taxes	217,855	219,842	149,876	248,036	(93,869)	41,497	(27,533)
Net income (loss)	146,098	149,473	104,657	170,623	(91,930)	30,880	(11,779)
Net income (loss) attributable to Fairmount Santrol Holdings, Inc.	145,183	148,886	103,961	170,450	(92,135)	30,759	(11,776)
Earnings (loss) per share:							
Basic	0.95	0.96	$ 0.67	$ 1.08	$ (0.57)	$ 0.19	$ (0.07)
Diluted	0.90	0.91	$ 0.63	$ 1.03	$ (0.57)	$ 0.18	$ (0.07)
Statement of Cash Flows Data:							
Net cash provided by (used in):							
Operating activities	$ 167,861	$ 186,433	$ 174,635	$ 205,276	$ 235,994	$ 77,420	$ (8,586)
Investing activities	(102,572)	(107,366)	(579,517)	(138,331)	(114,000)	(31,855)	(13,156)
Financing activities	(49,202)	(119,070)	410,515	(7,677)	(25,091)	(3,945)	(6,024)
Other Financial Data:							
Capital expenditures	$ 77,827	$ 109,016	$ 111,514	$ 143,491	$ 113,750	$ (31,855)	$ (13,744)
EBITDA (1)	303,227	303,659	248,877	368,084	34,922	72,907	8,318
Adjusted EBITDA (1)	335,110	318,650	292,584	397,291	138,100	75,114	10,047

	Year Ended December 31,					Three Months Ended March 31,	
	2011	2012	2013	2014	2015	2015	2016
	(In thousands)						
Operating Data:							
Proppant Solutions:							
Total tons sold	3,402	3,765	5,117	7,188	6,204	1,778	1,526
Revenue	$ 807,848	$ 757,851	$ 856,212	$1,232,232	$ 710,083	$272,869	$ 117,463
Segment contribution margin	339,050	316,251	296,320	430,779	70,810	83,819	12,608
Industrial & Recreational Products:							
Total tons sold	2,296	2,375	2,462	2,426	2,301	531	587
Revenue	$ 101,893	$ 127,339	$ 132,174	$ 124,226	$ 118,626	$ 28,621	$ 27,995
Segment contribution margin	29,142	37,837	34,765	34,473	25,249	7,076	8,846
Balance Sheet Data (at period end):							
Cash and cash equivalents	$ 51,765	$ 11,866	$ 17,815	$ 76,923	$ 171,486		$ 143,872
Total assets	646,176	679,601	1,283,431	1,514,016	1,354,249		1,315,970
Long term debt (including current portion)	947,447	831,195	1,262,146	1,252,639	1,223,106		1,219,904
Total liabilities	1,094,168	965,529	1,448,789	1,480,542	1,414,617		1,389,609
Total equity (deficit)	(447,992)	(285,928)	(165,358)	33,474	(60,368)		(73,639)

(1) EBITDA and Adjusted EBITDA are non-GAAP financial measures. For a definition of EBITDA and Adjusted EBITDA and a reconciliation to net income, see "—Non GAAP Financial Measures" below.

Non-GAAP Financial Measures

We define EBITDA as net income before interest expense, income tax expense, depreciation, depletion, and amortization. We define Adjusted EBITDA as EBITDA before non-cash stock-based compensation, management fees and reimbursement of expenses to our financial sponsor, transaction expenses, impairment of assets, loss on extinguishment of debt, gain or loss on disposal of assets, and other non-cash income or expenses. Management believes EBITDA and Adjusted EBITDA are useful because they allow management to more effectively evaluate our operating performance and compare the results of our operations from period to period without regard to our financing methods, capital structure or non-reoccurring or non-operating expenses.

Disclosure in this prospectus supplement of EBITDA and Adjusted EBITDA, which are "non-GAAP financial measures," as defined under the rules of the SEC, are intended as supplemental measures of our performance that are not required by, or presented in accordance with, GAAP. EBITDA and Adjusted EBITDA should not be considered as alternatives to net income, cash flow provided by operating activities or any other performance measure derived in accordance with GAAP. Our presentation of EBITDA and Adjusted EBITDA should not be construed to imply that our future results will be unaffected by unusual or non-recurring items. EBITDA and Adjusted EBITDA are included in this prospectus supplement because they are key metrics used by management to assess our operating performance. Adjusted EBITDA is also used by our lenders to evaluate our compliance with covenants. Additionally, performance targets associated with our annual incentive plans and stock-based compensation vesting targets are tied to our Adjusted EBITDA.

We believe these measures are meaningful to our investors to enhance their understanding of our financial performance. Although EBITDA and Adjusted EBITDA are not necessarily measures of our ability to fund our cash needs, we understand that they are frequently used by securities analysts, investors and other interested

parties as measures of financial performance. Our calculation of Adjusted EBITDA may not be comparable to the similarly titled measure reported by other companies.

The following tables set forth a reconciliation of net income, the most directly comparable GAAP financial measure, to EBITDA and Adjusted EBITDA.

	Year Ended December 31,					Three Months Ended March 31,	
	2011	2012	2013	2014	2015	2015	2016
	(In thousands)						
Net income (loss) attributable to Fairmount Santrol Holdings, Inc.	$145,183	$148,886	$103,961	$170,450	$ (92,135)	$30,759	$(11,776)
Interest expense, net	64,665	56,714	61,926	60,842	62,242	15,308	17,262
Provision (benefit) for income taxes	71,757	70,369	45,219	77,413	(1,939)	10,617	(15,754)
Depreciation, depletion, and amortization expense	21,622	27,690	37,771	59,379	66,754	16,223	18,586
EBITDA	303,227	303,659	248,877	368,084	34,922	72,907	8,318
Non-cash stock based compensation (1)	17,539	11,434	10,133	16,571	4,525	1,883	1,653
Management fees and reimbursement of expenses paid to sponsor (2)	1,119	1,274	2,928	864	—	—	—
Transaction expenses (3)	—	1,414	12,462	638	—	—	—
Impairment of long-lived assets (4)	—	273	—	—	2,635	—	76
Loss on extinguishment of debt (5)	12,682	—	11,760	—	—	—	—
(Gain) / Loss on disposal of assets (6)	—	596	6,424	1,921	7,915	—	—
IPO-related fees	—	—	—	9,213	—	—	—
Non-recurring payments relating to sponsor buyout (7)	543	—	—	—	—	—	—
Other non-recurring charges (8)	—	—	—	—	465	—	—
Impairment of goodwill (9)	—	—	—	—	69,246	—	—
Restructuring and other charges (10)	—	—	—	—	17,528	324	—
Write-off of deferred financing costs (11)	—	—	—	—	864	—	—
Adjusted EBITDA	$335,110	$318,650	$292,584	$397,291	$138,100	$75,114	$ 10,047

(1) Represents cost of stock-based awards issued to our employees attributable to each year presented.
(2) Includes fees and expenses paid to American Securities for consulting and management services provided pursuant to a management consulting agreement. The agreement was terminated upon the Initial Public Offering of the Company in October 2014. See “Certain Relationships and Related Party Transactions—American Securities.”
(3) These expenses are associated with the evaluation of potential acquisitions of assets or businesses, some of which were completed.
(4) Represents the impairment charges related to certain closed facilities in 2012 and expenses associated with the impairment of a foreign production facility in 2015.
(5) Upon entering into new credit facilities, we were required to write-off a portion of the remaining unamortized deferred financing fees related to the previous credit facilities.
(6) Includes the non-cash loss related to the sale and disposal of certain assets, including property, plant and equipment, discontinued inventory and an investment in foreign operations.
(7) Represents the employer portion of income taxes on options that were exercised in connection with the AS Group Acquisition.
(8) Expenses associated with an audit of our Employee Stock Bonus Plan.
(9) Expenses associated with the impairment of goodwill in the Proppant Solutions segment.
(10) Expenses associated with restructuring activities and plant closures, including pension withdrawal and other liabilities, asset impairments and severance payments.
(11) Represents the write-off of deferred financing fees in relation to the amendment of our Revolving Credit Facility.

RISK FACTORS

This offering and an investment in our common stock involve a high degree of risk. You should refer to the other information set forth or incorporated by reference in this prospectus supplement and the accompanying prospectus, including the "Risk Factors" sections of our Annual Report on Form 10-K for the year ended December 31, 2015 and our Quarterly Report on Form 10-Q for the quarter ended March 31, 2016 and our consolidated financial statements and the related notes incorporated by reference in this prospectus supplement and the accompanying prospectus. If any of these 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 This Offering and Ownership of Our Common Stock

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

As of December 31, 2015, the AS Group indirectly owns approximately 44.1% of our outstanding common stock, and management and other employees own a substantial portion of the remainder of our stock. As a result, the portion of our stock held by the investing public taken as a whole is approximately 15% as of March 6, 2016. Consequently, the AS Group and 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 will 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.

We have also renounced our interest in certain business opportunities. See "—Our amended and restated certificate of incorporation contains a provision renouncing our interest and expectancy in certain corporate opportunities."

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.

The stock markets in general have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. These 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;

- 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; 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 to issue preferred stock without stockholder approval. If our board of directors 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 of directors to be acted upon at meetings of stockholders;
- providing that the board of directors 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 of directors or for proposing matters that can be acted upon by stockholders at stockholder meetings;
- giving the Board of Directors 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. There is no guarantee that the price of our common stock that will prevail in the market will ever exceed the price that you pay in this offering.

Future sales of our common stock in the public market could reduce our stock price, and any additional capital raised by us through the sale of equity or convertible securities may dilute your ownership in us.

We may sell additional shares of common stock in subsequent public offerings. We may also issue additional shares of common stock or convertible securities. After the completion of this offering, we will have outstanding 187,663,428 shares of common stock. Following the completion of this offering, assuming no exercise of the underwriters' option to purchase additional shares, the AS Group will indirectly own 71,156,624 shares of our common stock, or approximately 37.9% of our total outstanding shares, all of which are restricted from immediate resale under the federal securities laws and are subject to the lock-up agreements with the underwriters described in "Underwriting," but may be sold into the market in the future.

We cannot predict the size of future issuances of our common stock or securities convertible into common stock or the effect, if any, that future issuances and sales of shares of our common stock will have on the market price of our common stock. Sales of substantial amounts of our common stock (including shares issued in connection with an acquisition), or the perception that such sales could occur, may adversely affect prevailing market prices of our common stock.

The underwriters of this offering may waive or release parties to the lock-up agreements entered into in connection with this offering, which could adversely affect the price of our common stock.

We, ASP FML, and all of our directors and executive officers will enter into lock-up agreements with respect to their common stock, pursuant to which they are subject to certain resale restrictions for a period of 90 days following the effectiveness date of the registration statement of which this prospectus supplement forms a part. Morgan Stanley & Co. LLC may, at any time and without notice, release all or any portion of the common stock subject to the foregoing lock-up agreements. If the restrictions under the lock-up agreements are waived, then common stock will be available for sale into the public markets, which could cause the market price of our common stock to decline and impair our ability to raise capital.

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.

FORWARD-LOOKING STATEMENTS

This prospectus supplement (including the information incorporated by reference herein) contains forward-looking statements. These statements relate to our plans, expectations, estimates and beliefs of future events or our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from those expressed or implied by any forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “could,” “would,” “should,” “expect,” “plan,” “anticipate,” “target,” “project,” “intend,” “believe,” “estimate,” “predict,” “potential,” “pro forma,” “seek” or “continue” or the negative of those terms or other comparable terminology. These statements are only predictions and we can give no assurance that such expectations will prove to be correct. Some of the things that could cause our actual results to differ substantially from our expectations are:

- 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;
- 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;
- decreased demand for 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 due to lower proppant demand from the oil and gas industry;
- our ability to protect our intellectual property rights;
- our ability to successfully develop and market Propel SSP;
- our ability to succeed in competitive markets;
- 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 that the U.S. dollar. We are exposed to fluctuations in the 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 economic conditions, such as the recent United Kingdom vote to exit the European Union, 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 all of our Northern White frac sand and a portion of our I&R sand sold into our markets;
- the availability of raw materials to support our manufacturing of resin-coated 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 property, including our mineral reserves, plant, equipment, goodwill and intangible assets as a result of continuing depressed 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;
- substantial costs related to mines, resin coating facilities and terminals that have been closed;
- potential disruption of our operations due to severe weather conditions, such as tornados and electrical storms, which frequently 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;
- our ability to maintain satisfactory labor relations;
- silica-related health issues and corresponding litigation;
- 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; and
- other factors referenced in this prospectus supplement and any accompanying prospectus, including those set forth or referenced under the caption “Risk Factors,” and in our filings with the SEC, including those set forth or discussed in the “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” sections of those reports.

We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, after the date of this prospectus supplement to conform them to actual results. All of the forward-looking statements are qualified in their entirety by reference to the factors discussed in and incorporated by reference into the section captioned "Risk Factors," and by any cautionary language in this prospectus supplement and the accompanying prospectus. We caution you that these risk factors may not be exhaustive. We operate in a continually changing business environment, and new risk factors emerge from time to time. Management cannot predict such new risk factors, nor can it assess the impact, if any, of such new risk factors on our businesses or the extent to which any factor or combination of factors, may cause actual results to differ materially from those projected in any forward-looking statements. In light of these risks, uncertainties and assumptions, the forward-looking events discussed in this prospectus supplement or in documents incorporated by reference herein might not occur.

USE OF PROCEEDS

We estimate the net proceeds from this offering will be approximately $ ($ if the underwriters exercise their option in full), after deducting the underwriting discount and estimated offering expenses payable by us. We intend to use the net proceeds from this offering for general corporate purposes. Our general corporate purposes include, but are not limited to, working capital, repayment, redemption or refinancing of debt, leases, capital expenditures, investments in or loans to subsidiaries and joint ventures and satisfaction of other obligations. Pending such use, the net proceeds may be invested in short-term, investment grade, interest-bearing securities, certificates of deposit or indirect or guaranteed obligations of the United States. Pursuant to the terms of our credit facility, we may be required in certain circumstances to use up to one-half of the net proceeds to pre-pay term loans outstanding under the facility. As of March 31, 2016, we had $1.2 billion in term loans at an average interest rate of 4.5%. Our term loans mature in March 2017, July 2018 and September 2019. As of June 30, 2016, we had nothing outstanding under our revolving credit facility. Affiliates of certain of the underwriters are lenders under our credit facility and as such may receive a pro rata share of the amount used from the net proceeds of this offering to repay indebtedness under the credit facility. See “Underwriting.”

PRICE RANGE OF COMMON STOCK AND DIVIDEND POLICY

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 New York Stock Exchange. 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 New York Stock Exchange composite tape:

	Sales Price	
	High	Low
Fiscal 2014		
October 3, 2014 – December 31, 2014	$16.98	$6.43
Fiscal 2015		
January 1, 2015 – March 31, 2015	$ 7.48	$4.91
April 1, 2015 – June 30, 2015	9.49	7.14
July 1, 2015 – September 30, 2015	8.25	2.60
October 1, 2015 – December 31, 2015	3.45	2.21
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 – July 19, 2016	8.83	6.32

Holders of Record

On June 30, 2016, there were 162,020,334 shares of our common stock outstanding, which were held by approximately 61 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.

Dividend Policy

We do not anticipate declaring or paying any cash dividends to holders of our common stock in the foreseeable future. We currently intend to retain future earnings, if any, to finance the growth of our business. Our future dividend policy is within the discretion of our board of directors and will depend upon then-existing conditions, including our results of operations, financial condition, capital requirements, investment opportunities, statutory restrictions on our ability to pay dividends and other factors our board of directors may deem relevant. In addition, our revolving credit facility and term loans place restrictions on our ability to pay cash dividends.

CAPITALIZATION

The following table sets forth our cash and cash equivalents and capitalization as of March 31, 2016:

- on an actual basis; and
- on an as adjusted basis, to give effect to this offering (assuming no exercise of the underwriters' option to purchase additional shares).

This table should be read in conjunction with the sections "Use of proceeds" and "Management's Discussion and Analysis of Financial Condition and Results of Operation" and our financial statements, including the accompanying notes, appearing in our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2016, which is incorporated by reference into this prospectus supplement.

	As of March 31, 2016	
	Actual	As Adjusted
	(Unaudited, in thousands)	
Cash and cash equivalents [1]	$ 143,872	
Long-term indebtedness, including current portion:		
Revolving credit facility and other [2]	88	88
Term loans [1]	1,215,558	1,215,558
Industrial revenue bond	10,000	10,000
Capital leases, net	7,856	7,856
Deferred financing costs, net	(13,598)	(13,598)
Total long-term debt, including current portion	1,219,904	1,219,904
Shareholders' equity (deficit)		
Common stock, par value $0.01 per share, 1,850,000 shares authorized, 161,503 shares issued and outstanding, actual; 1,850,000 shares authorized, 186,503 shares issued and outstanding, as adjusted	2,392	
Additional paid-in capital	777,720	
Retained earnings	393,268	
Accumulated other comprehensive income (loss)	(19,666)	(19,666)
Treasury stock, 77,765 actual; 52,765 as adjusted	(1,227,663)	
Noncontrolling interests	310	310
Total Stockholders' equity (deficit)	(73,639)	
Total capitalization	$ 1,146,265	

(1) On April 28, 2016, the Company entered into an amendment to the 2013 Amended Credit Agreement that extended the maturity of approximately $70 million of the B-1 term loans to July 15, 2018, in addition to prepaying approximately $70 million of B-1 term loans, for $1.7 million in refinancing fees. The extension and prepayment are not reflected in the above Actual or As Adjusted balances as of March 31, 2016.

(2) As of March 31, 2016 and June 30, 2016, we had nothing outstanding under our revolving credit facility.

MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS FOR NON-U.S. HOLDERS

The following is a summary of the material U.S. federal income tax consequences related to the purchase, ownership and disposition of our common stock by a non-U.S. holder (as defined below), that holds our common stock as a "capital asset" (generally property held for investment). This summary is based on the provisions of the Internal Revenue Code of 1986, as amended (the "Code"), U.S. Treasury regulations and administrative rulings and judicial decisions, all as in effect on the date hereof, and all of which are subject to change, possibly with retroactive effect. We have not sought any ruling from the U.S. Internal Revenue Service (the "IRS") with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS or a court will agree with such statements and conclusions.

This summary does not address all aspects of U.S. federal income taxation that may be relevant to non-U.S. holders in light of their personal circumstances. In addition, this summary does not address the Medicare contribution tax on certain investment income, any U.S. federal estate and gift tax laws, any state, local or foreign tax laws or any tax treaties. This summary also does not address tax considerations applicable to investors that may be subject to special treatment under the U.S. federal income tax laws, such as (without limitation):

- banks, insurance companies or other financial institutions;
- tax-exempt or governmental organizations;
- dealers in securities or foreign currencies;
- traders in securities that use the mark-to-market method of accounting for U.S. federal income tax purposes;
- persons subject to the alternative minimum tax;
- partnerships or other pass-through entities for U.S. federal income tax purposes or holders of interests therein;
- persons deemed to sell our common stock under the constructive sale provisions of the Code;
- persons that acquired our common stock through the exercise of employee stock options or otherwise as compensation or through a tax-qualified retirement plan;
- certain former citizens or long-term residents of the United States; and
- persons that hold our common stock as part of a straddle, appreciated financial position, synthetic security, hedge, conversion transaction or other integrated investment or risk reduction transaction.

PROSPECTIVE INVESTORS ARE ENCOURAGED TO CONSULT THEIR TAX ADVISORS WITH RESPECT TO THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATION, AS WELL AS ANY TAX CONSEQUENCES OF THE PURCHASE, OWNERSHIP AND DISPOSITION OF OUR COMMON STOCK ARISING UNDER THE U.S. FEDERAL ESTATE AND GIFT TAX LAWS OR UNDER THE LAWS OF ANY STATE, LOCAL, NON-U.S. OR OTHER TAXING JURISDICTION OR UNDER ANY APPLICABLE TAX TREATY.

Non-U.S. Holder Defined

For purposes of this discussion, a "non-U.S. holder" is a beneficial owner of our common stock that for U.S. federal income tax purposes is neither a partnership nor any of the following:

- an individual who is a citizen or resident of the United States;
- a corporation (or other entity taxable as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the United States, any state thereof or the District of Columbia;

- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust (i) whose administration is subject to the primary supervision of a U.S. court and which has one or more United States persons who have the authority to control all substantial decisions of the trust or (ii) which has made a valid election under applicable U.S. Treasury regulations to be treated as a United States person.

If a partnership (including an entity treated as a partnership for U.S. federal income tax purposes) holds our common stock, the tax treatment of a partner in the partnership generally will depend upon the status of the partner and upon the activities of the partnership. Accordingly, we urge partners in partnerships (including entities treated as partnerships for U.S. federal income tax purposes) considering the purchase of our common stock to consult their tax advisors regarding the U.S. federal income tax considerations of the purchase, ownership and disposition of our common stock by such partnership.

Distributions

As described in the section entitled "Price Range of Common Stock and Dividend Policy—Dividend Policy," we do not plan to make any distributions on our common stock for the foreseeable future. However, if we do make distributions of cash or property on our common stock, those payments will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. To the extent those distributions exceed our current and accumulated earnings and profits, the distributions will be treated as a non-taxable return of capital to the extent of the non-U.S. holder's tax basis in our common stock and thereafter as capital gain from the sale or exchange of such common stock. See "—Gain on Disposition of Common Stock." Subject to the discussion below on backup withholding and FATCA withholding, distributions made to a non-U.S. holder on our common stock generally will be subject to U.S. withholding tax at a rate of 30% of the gross amount of the distribution unless an applicable income tax treaty provides for a lower rate. To receive the benefit of a reduced treaty rate, a non-U.S. holder must provide the withholding agent with an IRS Form W-8BEN or W-8BEN-E (or other appropriate form) certifying qualification for the reduced rate. A non-U.S. holder that does not timely furnish the applicable withholding agent with the required certification, but that qualifies for a reduced treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS.

Dividends paid to a non-U.S. holder that are effectively connected with a trade or business conducted by the non-U.S. holder in the United States (and, if required by an applicable income tax treaty, are treated as attributable to a permanent establishment maintained by the non-U.S. holder in the United States) generally will be taxed on a net income basis at the rates and in the manner generally applicable to United States persons (as defined under the Code). Such effectively connected dividends will not be subject to U.S. withholding tax if the non-U.S. holder satisfies certain certification requirements by providing the withholding agent with a properly executed IRS Form W-8ECI certifying eligibility for exemption. If the non-U.S. holder is a foreign corporation, it may also be subject to a branch profits tax (at a 30% rate or such lower rate as specified by an applicable income tax treaty) on its effectively connected earnings and profits (as adjusted for certain items).

Gain on Disposition of Common Stock

Subject to the discussion below on backup withholding and FATCA withholding, a non-U.S. holder generally will not be subject to U.S. federal income tax on any gain realized upon the sale or other disposition of our common stock unless:

- the non-U.S. holder is an individual who is present in the United States for a period or periods aggregating 183 days or more during the calendar year in which the sale or disposition occurs and certain other conditions are met;

- the gain is effectively connected with a trade or business conducted by the non-U.S. holder in the United States (and, if required by an applicable tax treaty, is attributable to a permanent establishment maintained by the non-U.S. holder in the United States); or
- our common stock constitutes a U.S. real property interest by reason of our status as a United States real property holding corporation ("USRPHC") for U.S. federal income tax purposes.

A non-U.S. holder described in the first bullet point above will be subject to U.S. federal income tax at a rate of 30% (or such lower rate as specified by an applicable income tax treaty) on the amount of such gain, which generally may be offset by U.S. source capital losses.

A non-U.S. holder whose gain is described in the second bullet point above generally will be taxed on a net income basis at the rates and in the manner generally applicable to United States persons (as defined under the Code) unless an applicable income tax treaty provides otherwise. If the non-U.S. holder is a corporation, it may also be subject to a branch profits tax (at a 30% rate or such lower rate as specified by an applicable income tax treaty) on its effectively connected earnings and profits (as adjusted for certain items) which will include such gain.

Generally, a corporation is a USRPHC if the fair market value of its U.S. real property interests equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests and its other assets used or held for use in a trade or business. It is likely that we are a USRPHC for U.S. federal income tax purposes. If we are, or become, a USRPHC, as long as our common stock is considered to be regularly traded on an established securities market, within the meaning of applicable Treasury regulations, only a non-U.S. holder that actually or constructively owns or owned at any time during the shorter of the five-year period ending on the date of the disposition or the non-U.S. holder's holding period for the common stock, more than 5% of our common stock will be taxable on gain recognized on the disposition of our common stock as a result of our status as a USRPHC. If our common stock were not considered to be regularly traded on an established securities market, and we were considered a USRPHC, all non-U.S. holders generally would be subject to U.S. federal income tax on a taxable disposition of our common stock, and a 15% withholding tax would apply to the gross proceeds from the sale of our common stock by such non-U.S. holders.

Non-U.S. holders should consult their tax advisors with respect to the application of the foregoing rules to their ownership and disposition of our common stock.

Backup Withholding and Information Reporting

Any dividends paid to a non-U.S. holder must be reported annually to the IRS and to the non-U.S. holder. Copies of these information returns may be made available to the tax authorities in the country in which the non-U.S. holder resides or is established. Payments of dividends to a non-U.S. holder generally will not be subject to backup withholding if the non-U.S. holder establishes an exemption by properly certifying its non-U.S. status on an IRS Form W-8BEN or W-8BEN-E or other appropriate version of IRS Form W-8.

Payments of the proceeds from a sale or other disposition by a non-U.S. holder of our common stock effected by or through a U.S. office of a broker generally will be subject to information reporting and backup withholding (at the applicable rate) unless the non-U.S. holder establishes an exemption by properly certifying its non-U.S. status on an IRS Form W-8BEN or W-8BEN-E or other appropriate version of IRS Form W-8 and certain other conditions are met. Information reporting and backup withholding generally will not apply to any payment of the proceeds from a sale or other disposition of our common stock effected outside the United States by a foreign office of a broker. However, unless such broker has documentary evidence in its records that the holder is a non-U.S. holder and certain other conditions are met, or the non-U.S. holder otherwise establishes an exemption, information reporting will apply to a payment of the proceeds of the disposition of our common stock effected outside the United States by such a broker if it has certain relationships within the United States.

Backup withholding is not an additional tax. Rather, the U.S. income tax liability (if any) of persons subject to backup withholding will be reduced by the amount of tax withheld. If withholding results in an overpayment of taxes, a refund may be obtained, provided that the required information is timely furnished to the IRS.

Additional Withholding Requirements

Sections 1471 through 1474 of the Code, and the Treasury regulations and administrative guidance issued thereunder ("FATCA"), impose a 30% withholding tax on any dividends on our common stock and on the gross proceeds from a disposition of our common stock in each case if paid to a "foreign financial institution" or a "non-financial foreign entity" (each as defined in the Code) (including, in some cases, when such foreign financial institution or entity is acting as an intermediary), unless (i) in the case of a foreign financial institution, such institution enters into an agreement with the U.S. government to withhold on certain payments, and to collect and provide to the U.S. tax authorities substantial information regarding U.S. account holders of such institution (which includes certain equity and debt holders of such institution, as well as certain account holders that are foreign entities with U.S. owners), (ii) in the case of a non-financial foreign entity, such entity certifies that it does not have any "substantial United States owners" (as defined in the Code) or provides the withholding agent with a certification identifying the direct and indirect substantial United States owners of the entity, or (iii) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules. Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States governing these rules may be subject to different rules. Under certain circumstances, a holder might be eligible for refunds or credits of such taxes.

Payments subject to FATCA withholding generally include dividends paid on our common stock currently, and will include gross proceeds from sales or other dispositions of such common stock after December 31, 2018. Non-U.S. holders are encouraged to consult their tax advisors regarding the possible implications of the FATCA withholding rules.THE FOREGOING DISCUSSION IS FOR GENERAL INFORMATION ONLY AND SHOULD NOT BE VIEWED AS TAX ADVICE. INVESTORS CONSIDERING THE PURCHASE OF OUR COMMON STOCK ARE URGED TO CONSULT THEIR OWN TAX ADVISORS REGARDING THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS AND THE APPLICABILITY AND EFFECT OF U.S. FEDERAL ESTATE AND GIFT TAX LAWS AND ANY STATE, LOCAL OR FOREIGN TAX LAWS AND TAX TREATIES.

UNDERWRITING

Under the terms and subject to the conditions in an underwriting agreement dated the date of this prospectus supplement, the underwriters named below, for whom Morgan Stanley & Co. LLC is acting as representative, have severally agreed to purchase, and we have agreed to sell to them, severally, the number of shares indicated below:

Name	Number of Shares
Morgan Stanley & Co. LLC	
Wells Fargo Securities, LLC	
Barclays Capital Inc.	
Total:	25,000,000

The underwriters and the representative are collectively referred to as the "underwriters" and the "representative," respectively. The underwriters are offering the shares of common stock subject to their acceptance of the shares from us and subject to prior sale. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the shares of common stock offered by this prospectus supplement are subject to the approval of certain legal matters by their counsel and to certain other conditions. The underwriters are obligated to take and pay for all of the shares of common stock offered by this prospectus supplement if any such shares are taken. However, the underwriters are not required to take or pay for the shares covered by the underwriters' option to purchase additional shares described below.

The underwriter may offer the shares of common stock from time to time for sale in one or more transactions on the NYSE, in the over-the-counter market, through negotiated transactions or otherwise at market prices prevailing at the time of sale, at prices related to prevailing market prices or at negotiated prices, subject to receipt and acceptance by it and subject to its right to reject any order in whole or in part. In connection with the sale of the shares of common stock offered hereby, the underwriter may be deemed to have received compensation in the form of underwriting discounts. The underwriter may effect such transactions by selling shares of common stock to or through dealers, and such dealers may receive compensation in the form of discounts, concessions or commissions from the underwriter and/or purchasers of shares of common stock for whom they may act as agents or to whom they may sell as principal.

Charles D. Fowler, a director and the chairman of the executive committee of the Board of Directors of the Company, has informed us that he intends to purchase up to approximately $10 million in shares of our common stock in this offering. However, there can be no assurance that Mr. Fowler will participate in this offering, and if he does participate, there can be no assurance as to the number of shares that Mr. Fowler will purchase.

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus supplement, to purchase up to 3,750,000 additional shares of common stock at the public offering price listed on the cover page of this prospectus supplement, less underwriting discounts and commissions. To the extent the option is exercised, each underwriter will become obligated, subject to certain conditions, to purchase about the same percentage of the additional shares of common stock as the number listed next to the underwriter's name in the preceding table bears to the total number of shares of common stock listed next to the names of all underwriters in the preceding table.

The estimated offering expenses payable by us, exclusive of the underwriting discounts and commissions, are approximately $500,000. We have also agreed to reimburse the underwriters for certain of their expenses in an amount up to $30,000 as set forth in the underwriting agreement.

The underwriters have informed us that they do not intend sales to discretionary accounts to exceed 5% of the total number of shares of common stock offered by them.

Our common stock is listed on the New York Stock Exchange under the trading symbol "FMSA".

We and all directors and officers and certain of the holders of our outstanding stock and stock options have agreed that, without the prior written consent of Morgan Stanley & Co. LLC on behalf of the underwriters, we and they will not, during the period ending 90 days after the date of this prospectus supplement (the "restricted period"):

- offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of common stock or any securities convertible into or exercisable or exchangeable for shares of common stock;
- file any registration statement with the Securities and Exchange Commission relating to the offering of any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock; or
- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock.

whether any such transaction described above is to be settled by delivery of common stock or such other securities, in cash or otherwise. In addition, each such person agrees that, without the prior written consent of Morgan Stanley & Co. LLC on behalf of the underwriters, such other person will not, during the restricted period, make any demand for, or exercise any right with respect to, the registration of any shares of common stock or any security convertible into or exercisable or exchangeable for common stock.

The restrictions described in the immediately preceding paragraph to do not apply to:

- the sale of shares to the underwriters; or
- the issuance by the Company of shares of common stock upon the exercise of an option or a warrant or the conversion of a security outstanding on the date of this prospectus supplement (or certain transfers or withholdings or sales by individual holders to the Company pursuant to the exercise of stock option/incentive plan grants); or
- certain permitted bona fide gifts; or
- the issuance by the Company of stock options, restricted stock, shares of common stock or other equity incentive awards pursuant to the Company's equity compensation or director compensation plans as in effect as of the date of this prospectus supplement and which has been disclosed or incorporated by reference herein; or
- the establishment of a trading plan pursuant to Rule 10b5-1 under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), for the transfer of shares of common stock, provided that (i) such plan does not provide for the transfer of common stock during the restricted period and (ii) to the extent a public announcement or filing under the Exchange Act, if any, is required of or voluntarily made regarding the establishment of such plan, such announcement or filing shall include a statement to the effect that no transfer of common stock may be made under such plan during the restricted period.

Morgan Stanley & Co. LLC, in its sole discretion, may release the common stock and other securities subject to the lock-up agreements described above in whole or in part at any time with or without notice.

In order to facilitate the offering of the common stock, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the common stock. Specifically, the underwriters may sell more shares than they are obligated to purchase under the underwriting agreement, creating a short position. A short sale is covered if the short position is no greater than the number of shares available for purchase by the underwriters under the option. The underwriters can close out a covered short sale by exercising the option or purchasing shares in the open market. In determining the source of shares to close out a covered short sale, the underwriters will consider, among other things, the open market price of shares compared to the price available

under the option. The underwriters may also sell shares in excess of the option, creating a naked short position. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in this offering. As an additional means of facilitating this offering, the underwriters may bid for, and purchase, shares of common stock in the open market to stabilize the price of the common stock. These activities may raise or maintain the market price of the common stock above independent market levels or prevent or retard a decline in the market price of the common stock. The underwriters are not required to engage in these activities and may end any of these activities at any time.

We and the underwriters have agreed to indemnify each other against certain liabilities, including liabilities under the Securities Act.

The underwriters and certain of their affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. The underwriters and certain of their affiliates have, from time to time, performed, and may in the future perform, various commercial and investment banking and financial advisory services for the issuer and its affiliates, for which they received or may in the future receive customary fees and expenses. Affiliates of certain of the underwriters are lenders under our credit facility and as such may receive a pro rata share of the amount used from the net proceeds of the offering to repay indebtedness under our credit facility.

In the ordinary course of their various business activities, the underwriters and certain of their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers, and such investment and securities activities may involve securities and/or instruments of the issuer or its affiliates. If the underwriters or their affiliates have a lending relationship with us, certain of those underwriters or their affiliates routinely hedge, and certain other of those underwriters or their affiliates may hedge, their credit exposure to us consistent with their customary risk management policies. Typically, the underwriters and their affiliates would hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in our securities or the securities of our affiliates, including potentially the shares of common stock offered hereby. Any such credit default swaps or short positions could adversely affect future trading prices of the shares of common stock offered hereby. The underwriters and certain of their affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

A prospectus supplement in electronic format may be made available on websites maintained by one or more underwriters, or selling group members, if any, participating in this offering. The representative may agree to allocate a number of shares of common stock to underwriters for sale to their online brokerage account holders. Internet distributions will be allocated by the representative to underwriters that may make Internet distributions on the same basis as other allocations.

Selling Restrictions

European Economic Area

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a "Relevant Member State") an offer to the public of any shares of our common stock may not be made in that Relevant Member State, except that an offer to the public in that Relevant Member State of any

shares of our common stock may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

(a) to any legal entity which is a qualified investor as defined in the Prospectus Directive;

(b) to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the representatives for any such offer; or

(c) in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of shares of our common stock shall result in a requirement for the publication by us or any underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares of our common stock in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares of our common stock to be offered so as to enable an investor to decide to purchase any shares of our common stock, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State, the expression "Prospectus Directive" means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State), and includes any relevant implementing measure in the Relevant Member State, and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

United Kingdom

Each underwriter has represented and agreed that:

(a) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) received by it in connection with the issue or sale of the shares of our common stock in circumstances in which Section 21(1) of the FSMA does not apply to us; and

(b) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the shares of our common stock in, from or otherwise involving the United Kingdom.

Canada

The shares may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the shares must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus supplement (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 (or, in the case of securities issued or guaranteed by the government of a non-Canadian jurisdiction, section 3A.4) of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

LEGAL MATTERS

The validity of the common stock offered hereby will be passed upon for us by Calfee, Halter & Griswold LLP, Cleveland, Ohio. Certain legal matters will be passed upon for the underwriters by Latham & Watkins LLP, Houston, Texas.

EXPERTS

The financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting) incorporated in this Prospectus Supplement by reference to the Annual Report on Form 10-K for the year ended December 31, 2015 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and special reports, proxy statements and other information with the SEC. The reports, proxy statements and other information that we file electronically with the SEC are available to the public free of charge at the SEC's website at *www.sec.gov* . You may also read and copy any document we file with the SEC, at prescribed rates, at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of its Public Reference Room. You can also inspect our reports, proxy statements and other information at the offices of the New York Stock Exchange, 20 Broad Street, New York, New York 10005.

We "incorporate by reference" into this prospectus supplement the information we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus supplement. Some information contained in this prospectus supplement updates the information incorporated by reference into this prospectus supplement, and information that we subsequently file with the SEC will automatically update information in this prospectus supplement, as well as our other filings with the SEC. In other words, in the case of a conflict or inconsistency between information in this prospectus supplement and/or information incorporated by reference into this prospectus supplement, you should rely on the information contained in the document that was filed later. We incorporate by reference the documents listed below and any filings we make with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), after the initial filing of the registration statement that contains this prospectus supplement and prior to the time that we sell all the securities offered under this prospectus supplement, other than the portions of such documents that by statute, by designation in such documents, or otherwise are not deemed to be filed with the SEC or are not required to be incorporated herein by reference:

- Annual report on Form 10-K for the year ended December 31, 2015;
- Amended annual report on Form 10-K/A for the year ended December 31, 2015;
- Quarterly report on Form 10-Q for the quarter ended March 31, 2016;
- The information in our Definitive Proxy Statement on Schedule 14A filed on April 7, 2016 that is specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2015;
- Current reports on Form 8-K filed on March 3, 2016, May 2, 2016 and May 12, 2016; and

- The description of our common stock included under the caption "Description of Capital Stock" contained in the prospectus forming part of our Registration Statement on Form S-1 (File No. 333-198322), which description has been incorporated by reference in Item 1 of our Registration Statement on Form 8-A, filed pursuant to Section 12 of the Exchange Act, on September 30, 2014 including any amendment or report filed for the purpose of updating such description.

We will provide to each person, including any beneficial owner, to whom this prospectus supplement is delivered any or all of these filings (other than an exhibit to a filing unless that exhibit is specifically incorporated by reference into that filing) at no cost, upon written or oral request. You may request these documents by writing to or telephoning us at the following address and number:

Corporate Secretary
Fairmount Santrol Holdings Inc.
8834 Mayfield Road
Chesterland, Ohio 44026
(800) 255-7263

You should rely only on the information incorporated by reference or set forth in this prospectus supplement, the applicable prospectus, or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We have not authorized anyone else to provide you with additional or different information. We are only offering these securities in states where the offer is permitted. You should not assume that the information in this prospectus supplement, the applicable prospectus or any related free writing prospectus is accurate as of any date other than the dates on the front of those documents.

Table of Contents

PROSPECTUS

$500,000,000

FAIRMOUNT SANTROL HOLDINGS INC.

Common Stock
Preferred Stock
Warrants
Units

We may, from time to time, offer and sell the securities identified above in one or more offerings. The aggregate initial offering price of all securities sold under this prospectus will not exceed $500,000,000.

We will provide the specific terms of these securities in supplements to this prospectus. We may also authorize one or more free writing prospectuses to be provided to you in connection with these offerings. The prospectus supplement and any related free writing prospectus may also supplement, update or amend the information contained in this prospectus. You should read this prospectus, the applicable prospectus supplement and any related free writing prospectus, as well as the documents incorporated by reference, carefully before you invest. This prospectus may not be used to offer and sell our securities unless accompanied by a prospectus supplement describing the method and terms of the offering of those securities.

Our common stock is traded on the New York Stock Exchange under the symbol "FMSA."

Investing in our securities involves a high degree of risk. Please read the risk factors discussed or incorporated by reference under the section of the prospectus captioned " Risk Factors " on page 5.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is July 14, 2016.

TABLE OF CONTENTS

	Page		Page
Information Required in Prospectus		Description of Capital Stock	6
About This Prospectus	1	Description of Warrants	10
Where You Can Find More Information	1	Description of Units	12
Special Note Regarding Forward-Looking Statements	2	Plan of Distribution	13
Risk Factors	5	Validity of Securities	14
Use of Proceeds	5	Experts	14

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission ("SEC") using a "shelf" registration procedure. Pursuant to that procedure and under this prospectus, we may offer and sell up to a total aggregate offering price of $500,000,000:

- Common Stock;
- Preferred Stock;
- Warrants; and
- Units

The securities described above may be offered and sold in combination and in one or more offerings. Each time we offer and sell securities under the registration statement of which this prospectus is a part, we will file with the SEC a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement and any related free writing prospectus that we may authorize may also add, update, or change information contained in this prospectus. You should carefully read this prospectus, the applicable prospectus supplement and any free writing prospectuses we have authorized for use in connection with a specific offering, together with the additional information described under the heading "Where You Can Find More Information," in their entirety. They contain information that you should consider when making your investment decision.

The registration statement that contains this prospectus contains additional information about our company and the securities offered under this prospectus. That registration statement can be read at the SEC website or at the SEC offices mentioned under the heading "Where You Can Find More Information."

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and special reports, proxy statements and other information with the SEC. The reports, proxy statements and other information that we file electronically with the SEC are available to the public free of charge at the SEC's website at www.sec.gov. You may also read and copy any document we file with the SEC, at prescribed rates, at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of its Public Reference Room. You can also inspect our reports, proxy statements and other information at the offices of the New York Stock Exchange, 20 Broad Street, New York, New York 10005.

We "incorporate by reference" into this prospectus the information we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus. Some information contained in this prospectus updates the information incorporated by reference into this prospectus, and information that we subsequently file with the SEC will automatically update information in this prospectus, as well as our other filings with the SEC. In other words, in the case of a conflict or inconsistency between information in this prospectus and/or information incorporated by reference into this prospectus, you should rely on the information contained in the document that was filed later. We incorporate by reference the documents listed below and any filings we make with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), after the initial filing of the registration statement that contains this prospectus and prior to the time that we sell all the securities offered under this prospectus, other than the portions of such documents that by statute, by designation in such documents, or otherwise are not deemed to be filed with the SEC or are not required to be incorporated herein by reference:

- Annual report on Form 10-K for the year ended December 31, 2015;

- Amended annual report on Form 10-K/A for the year ended December 31, 2015;
- Quarterly report on Form 10-Q for the quarter ended March 31, 2016;
- Current reports on Form 8-K filed on March 3, 2016, May 2, 2016 and May 12, 2016; and
- The description of our common stock included under the caption "Description of Capital Stock" contained in the prospectus forming part of our Registration Statement on Form S-1 (File No. 333-198322), which description has been incorporated by reference in Item 1 of our Registration Statement on Form 8-A, filed pursuant to Section 12 of the Exchange Act, on September 30, 2014 including any amendment or report filed for the purpose of updating such description.

We will provide to each person, including any beneficial owner, to whom this prospectus is delivered any or all of these filings (other than an exhibit to a filing unless that exhibit is specifically incorporated by reference into that filing) at no cost, upon written or oral request. You may request these documents by writing to or telephoning us at the following address and number:

Corporate Secretary
Fairmount Santrol Holdings Inc.
8834 Mayfield Road
Chesterland, Ohio 44026
(800) 255-7263

You should rely only on the information incorporated by reference or set forth in this prospectus, the applicable prospectus supplement, or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We have not authorized anyone else to provide you with additional or different information. We may only use this prospectus to sell securities if it is accompanied by a prospectus supplement. We are only offering these securities in states where the offer is permitted. You should not assume that the information in this prospectus, the applicable prospectus supplement or any related free writing prospectus is accurate as of any date other than the dates on the front of those documents.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus (including the information incorporated by reference herein) contains, and any accompanying prospectus supplement will contain, forward-looking statements. These statements relate to our plans, expectations, estimates and beliefs of future events or our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from those expressed or implied by any forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as "may," "will," "could," "would," "should," "expect," "plan," "anticipate," "target," "project," "intend," "believe," "estimate," "predict," "potential," "pro forma," "seek" or "continue" or the negative of those terms or other comparable terminology. These statements are only predictions and we can give no assurance that such expectations will prove to be correct. Some of the things that could cause our actual results to differ substantially from our expectations are:

- 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;

- 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;
- decreased demand for 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 due to lower proppant demand from the oil and gas industry;
- our ability to protect our intellectual property rights;
- our ability to successfully develop and market Propel SSP ™ ;
- our ability to succeed in competitive markets;
- loss of, or reduction in, business from our largest customers;
- our exposure to the credit risk of our customers and any potential material nonpayment, bankruptcies and/or nonperformance by our customers;
- our transactions in, and operating subsidiaries with, functional currencies other that the U.S. dollar. We are exposed to fluctuations in the 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 economic conditions, such as the recent United Kingdom vote to exit the European Union, 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 all of our Northern White frac sand and a portion of our Industrial & Recreational sand sold into our markets;
- the availability of raw materials to support our manufacturing of resin-coated 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 property, including our mineral reserves, plant, equipment, goodwill and intangible assets as a result of continuing depressed 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;
- substantial costs related to mines, resin coating facilities and terminals that have been closed;
- potential disruption of our operations due to severe weather conditions, such as tornados and electrical storms, which frequently 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;
- our ability to maintain satisfactory labor relations;
- silica-related health issues and corresponding litigation;
- 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; and
- other factors referenced in this prospectus and any accompanying prospectus supplement, including those set forth or referenced under the caption "Risk Factors," and in our filings with the SEC, including those set forth or discussed in the "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" sections of those reports.

We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, after the date of this prospectus to conform them to actual results. All of the forward-looking statements are qualified in their entirety by reference to the factors discussed in and incorporated by reference into the section captioned "Risk Factors," and by any cautionary language in this prospectus and any accompanying prospectus supplement. We caution you that these risk factors may not be exhaustive. We operate in a continually changing business environment, and new risk factors emerge from time to time. Management cannot predict such new risk factors, nor can it assess the impact, if any, of such new risk factors on our businesses or the extent to which any factor or combination of factors, may cause actual results to differ materially from those projected in any forward-looking statements. In light of these risks, uncertainties and assumptions, the forward-looking events discussed in this prospectus or in documents incorporated by reference herein might not occur.

RISK FACTORS

Investing in our securities involves risks. Before deciding whether to purchase any of our securities, you should carefully consider the risks involved in an investment in our securities, as set forth in:

- Item 1A, Risk Factors, in our Annual Report on Form 10-K for our fiscal year ended December 31, 2015; and
- the other risks described in any prospectus supplement or in any of the documents incorporated by reference in this prospectus.

USE OF PROCEEDS

We intend to use the net proceeds from the sale of the securities for other general corporate purposes unless otherwise indicated in the applicable prospectus supplement or in any free writing prospectuses we have authorized relating to a specific issuance of securities. Our general corporate purposes include, but are not limited to, working capital, repayment, redemption or refinancing of debt, leases, capital expenditures, investments in or loans to subsidiaries and joint ventures, funding of possible acquisitions and satisfaction of other obligations. Pending any such use, the net proceeds from the sale of the securities may be invested in short-term, investment grade, interest-bearing instruments. We will include a more detailed description of the use of proceeds of any specific offering in the applicable prospectus supplement relating to an offering of securities under this prospectus.

DESCRIPTION OF CAPITAL STOCK

The following summary of the capital stock and amended and restated certificate of incorporation and amended and restated bylaws of Fairmount Santrol Holdings Inc. does not purport to be complete and is qualified in its entirety by reference to the provisions of applicable law and to our amended and restated certificate of incorporation and amended and restated bylaws.

Common Stock

Our amended and restated certificate of incorporation authorizes us to issue up to 1,850,000,000 shares of common stock, par value $0.01 per share. As of June 24, 2016, there were 161,993,134 shares of common stock outstanding, net of treasury shares, held by 62 direct registered stockholders.

Except as provided by law or in a preferred stock designation, holders of common stock are entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders, will have the exclusive right to vote for the election of directors and do not have cumulative voting rights. Except as otherwise required by law, holders of common stock are not entitled to vote on any amendment to the amended and restated certificate of incorporation (including any certificate of designations relating to any series of preferred stock) that relates solely to the terms of any outstanding series of preferred stock if the holders of such affected series are entitled, either separately or together with the holders of one or more other such series, to vote thereon pursuant to the amended and restated certificate of incorporation (including any certificate of designations relating to any series of preferred stock) or pursuant to the Delaware General Corporation Law (the "DGCL"). Subject to prior rights and preferences that may be applicable to any outstanding shares or series of preferred stock, holders of common stock are entitled to receive ratably in proportion to the shares of common stock held by them such dividends (payable in cash, stock or otherwise), if any, as may be declared from time to time by our board of directors out of funds legally available for dividend payments. All outstanding shares of common stock are fully paid and non-assessable. The holders of common stock have no preferences or rights of conversion, exchange, pre-emption or other subscription rights. There are no redemption or sinking fund provisions applicable to the common stock. In the event of any voluntary or involuntary liquidation, dissolution or winding-up of our affairs, holders of common stock will be entitled to share ratably in our assets in proportion to the shares of common stock held by them that are remaining after payment or provision for payment of all of our debts and obligations and after distribution in full of preferential amounts to be distributed to holders of outstanding shares of preferred stock, if any.

Preferred Stock

Our amended and restated certificate of incorporation authorizes our board of directors, subject to any limitations prescribed by law, without further stockholder approval, to establish and to issue from time to time one or more series of preferred stock, par value $0.01 per share. Each such series of preferred stock will cover the number of shares and will have the powers, preferences, rights, qualifications, limitations and restrictions determined by the board of directors, which may include, among others, dividend rights, liquidation preferences, voting rights, conversion rights, preemptive rights and redemption rights. Except as provided by law or in a preferred stock designation, the holders of preferred stock will not be entitled to vote at or receive notice of any meeting of stockholders.

Anti-Takeover Effects of Provisions of Our Amended and Restated Certificate of Incorporation, our Amended and Restated Bylaws and Delaware Law

Some provisions of Delaware law, our amended and restated certificate of incorporation and our amended and restated bylaws contain provisions that could make the following transactions more difficult: acquisitions of us by means of a tender offer, a proxy contest or otherwise or removal of our directors. These provisions may also have the effect of preventing changes in our management. It is possible that these provisions could make it

more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in our best interests, including transactions that might result in a premium over the market price for our shares.

These provisions are expected to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with us. We believe that the benefits of increased protection and our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging these proposals because, among other things, negotiation of these proposals could result in an improvement of their terms.

Delaware Law

Section 203 of the DGCL prohibits a Delaware corporation, including those whose securities are listed for trading on the NYSE, from engaging in any business combination (as defined in Section 203) with any interested stockholder (as defined in Section 203) for a period of three years following the date that the stockholder became an interested stockholder, unless:

- the business combination or the transaction which resulted in the stockholder becoming an interested stockholder is approved by the board of directors before the date the interested stockholder attained that status;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced; or
- on or after such time the business combination is approved by the board of directors and authorized at a meeting of stockholders by at least two-thirds of the outstanding voting stock that is not owned by the interested stockholder.

A corporation may elect not to be subject to Section 203 of the DGCL. We have elected to not be subject to the provisions of Section 203 of the DGCL.

Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws

Provisions of our amended and restated certificate of incorporation and amended and restated bylaws may delay or discourage transactions involving an actual or potential change in control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares, or transactions that our stockholders might otherwise deem to be in their best interests. Therefore, these provisions could adversely affect the price of our common stock.

Among other things our amended and restated certificate of incorporation and amended and restated bylaws:

- establish advance notice procedures with regard to stockholder proposals relating to the nomination of candidates for election as directors or new business to be brought before meetings of our stockholders. These procedures provide that notice of stockholder proposals must be timely given in writing to our corporate secretary prior to the meeting at which the action is to be taken. Generally, to be timely, notice must be received at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary date of the annual meeting for the preceding year. Our amended and restated bylaws specify the requirements as to form and content of all stockholders' notices. These requirements may preclude stockholders from bringing matters before the stockholders at an annual or special meeting;
- provide our board of directors the ability to authorize undesignated preferred stock. This ability makes it possible for our board of directors to issue, without stockholder approval, preferred stock with voting

or other rights or preferences that could impede the success of any attempt to change control of us. These and other provisions may have the effect of deferring hostile takeovers or delaying changes in control or management of our company;

- provide that the authorized number of directors may be changed only by resolution of the board of directors;
- provide that all vacancies, including newly created directorships, shall, except as otherwise required by law or, if applicable, the rights of holders of a series of preferred stock, be filled exclusively by the affirmative vote of a majority of directors then in office, even if less than a quorum;
- at any time after the earlier to occur of (i) the close of business on the tenth business day following the date at which American Securities LLC and its affiliates no longer collectively beneficially own more than 35% of the outstanding shares of our common stock, and (ii) the close of business on the business day following public disclosure that American Securities LLC elected that the following shall occur,
- provide that any action required or permitted to be taken by the stockholders must be effected at a duly called annual or special meeting of stockholders and may not be effected by any consent in writing in lieu of a meeting of such stockholders, subject to the rights of the holders of any series of preferred stock with respect to such series (prior to such time, such actions may be taken without a meeting by written consent of holders of common stock having not less than the minimum number of votes that would be necessary to authorize such action at a meeting);
- provide that our bylaws may be amended by the stockholders only by the affirmative vote of the holders of at least two-thirds of our then outstanding common stock (prior to such time, our bylaws may be amended by the affirmative vote of the holders of a majority of our then outstanding common stock);
- provide that special meetings of our stockholders may only be called by the board of directors, (prior to such time, a special meeting may also be called at the request of stockholders holding a majority of the outstanding shares of our common stock);
- provide that certain provisions of our certificate of incorporation may be amended by the affirmative vote of the holders of at least 75% of our then outstanding common stock (prior to such time, our certificate of incorporation may amended by the affirmative vote of the majority of our then outstanding common stock);
- provide that, subject to the rights of the preferred stockholders, if any, any director may be removed only for cause and upon the affirmative vote of the holders of at least 75% of our then outstanding common stock (prior to such time, subject to the rights of the preferred stockholders, if any, any director may be removed, with or without cause, upon the affirmative vote of the holders of a majority of our outstanding common stock);
- provide for our board of directors to be divided into three classes of directors, with each class as nearly equal in number as possible, serving staggered three year terms, other than directors which may be elected by holders of preferred stock, if any. This system of electing and removing directors may tend to discourage a third party from making a tender offer or otherwise attempting to obtain control of us, because it generally makes it more difficult for stockholders to replace a majority of the directors;
- provide that we renounce any interest in certain business opportunities presented to American Securities LLC or any of its officers, directors, agents, members, affiliates and subsidiaries (other than business opportunities presented to such person in his or her capacity as an officer or director of the company) and that to the fullest extent permitted by law they have no obligation to offer us those opportunities, other than opportunities relating to hydraulic fracturing proppants; and
- provide that our bylaws can be amended or repealed by the board of directors.

Forum Selection

Our amended and restated certificate of incorporation provides that unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will, to the fullest extent permitted by applicable law, be the sole and exclusive forum for:

- any derivative action or proceeding brought on our behalf;
- any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers, employees or agents to us or our stockholders;
- any action asserting a claim against us arising pursuant to any provision of the DGCL, our amended and restated certificate of incorporation or our bylaws; or
- any action asserting a claim against us that is governed by the internal affairs doctrine, in each such case subject to such Court of Chancery having personal jurisdiction over the indispensable parties named as defendants therein.

Our amended and restated certificate of incorporation also provides that any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock will be deemed to have notice of and to have consented to this forum selection provision. However, it is possible that a court could find our forum selection provision to be inapplicable or unenforceable.

Limitation of Liability and Indemnification Matters

Our amended and restated certificate of incorporation limits the liability of our directors for monetary damages for breach of their fiduciary duty as directors, except for liability:

- for any breach of their duty of loyalty to us or our stockholders;
- for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law;
- for unlawful payment of dividend or unlawful stock repurchase or redemption, as provided under Section 174 of the DGCL; or
- for any transaction from which the director derived an improper personal benefit.

Any amendment, repeal or modification of these provisions will be prospective only and would not affect any limitation on liability of a director for acts or omissions that occurred prior to any such amendment, repeal or modification.

Our amended and restated certificate of incorporation and amended and restated bylaws also provide that we will indemnify and advance expenses to our directors and officers to the fullest extent permitted by Delaware law. Under Delaware law we may purchase insurance on behalf of any officer, director, employee or other agent for any liability arising out of that person's actions as our officer, director, employee or agent, regardless of whether Delaware law would permit indemnification. We entered into indemnification agreements with each of our current directors and officers. These agreements require us to indemnify these individuals to the fullest extent permitted under Delaware law against liability that may arise by reason of their service to us, and to advance expenses incurred as a result of any proceeding against them as to which they could be indemnified. We believe that the limitation of liability, indemnification and advancement of expenses provisions in our amended and restated certificate of incorporation and the indemnification agreements will facilitate our ability to continue to attract and retain qualified individuals to serve as directors and officers.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, LLC.

Listing

Our common stock is listed on the New York Stock Exchange under the symbol "FMSA."

DESCRIPTION OF WARRANTS

The following description, together with the additional information that we include in any applicable prospectus supplements and in any related free writing prospectus that we may authorize to be distributed to you, summarizes the material terms and provisions of the warrants that we may offer under this prospectus. While the terms we have summarized below will apply generally to any warrants that we may offer under this prospectus, we will describe the particular terms of any warrants in more detail in the applicable prospectus supplement. The terms of any warrants offered under a prospectus supplement may differ from the terms described below.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of warrant agreement that describes the terms of the warrants we are offering, and any supplemental agreements, before the issuance of the related warrants. The following summaries of material terms and provisions of the warrants are subject to, and qualified in their entirety by reference to, all the provisions of the warrant agreement and any supplemental agreements applicable to a particular warrant. We urge you to read the applicable prospectus supplements related to the particular warrants that we may offer under this prospectus, as well as any related free writing prospectuses and the complete warrant agreement and any supplemental agreements that contain the terms of the warrants.

We may issue (either separately or together with other offered securities) warrants to purchase underlying preferred stock, common stock or any combination thereof issued by us ("offered warrants"). Such warrants may be issued independently or together with any such securities and may be attached or separate from the securities. We may issue the warrants under separate warrant agreements (each a "warrant agreement") to be entered into between us and a bank or trust company, as warrant agent (the "warrant agent"), identified in the prospectus supplement. The warrant agent will act solely as our agent and will not assume any obligation or relationship of agency for or with holders of beneficial owners of warrants.

General

You should read the prospectus supplement for the material terms of the offered warrants, including the following:

- The title and aggregate number of the warrants.
- The title, rank, aggregate principal amount and terms of the underlying preferred stock or common stock purchasable upon exercise of the warrants.
- The principal amount of underlying preferred stock or common stock that may be purchased upon exercise of each warrant, and the price or the manner of determining the price at which this principal amount may be purchased upon exercise.
- The currency or currencies, including composite currencies, in which the price of such warrants may be payable.
- The price at which and the currencies, including composite currencies, in which the securities purchasable upon exercise of such warrants shall commence and the date on which such right will expire.
- If applicable, the minimum or maximum amount of such warrants which may be exercised at any one time.
- If applicable, the title, rank, aggregate principal amount and terms of the securities with which such warrants are issued and the number of such warrants issued with each such security.
- If applicable, the date on and after which such warrants and related securities will be separately transferable.
- Any optional redemption terms.

- Whether certificates evidencing the warrants will be issued in registered or bearer form and, if registered, where they may be transferred and exchanged.
- Any other material terms of the warrants.

The prospectus supplement will also contain a discussion of the United States federal income tax considerations relevant to the offering.

Warrant certificates will be exchangeable for new warrant certificates of different denominations. No service charge will be imposed for any permitted transfer or exchange of warrant certificates, but we may require payment of any tax or other governmental charge payable in connection therewith. Warrants may be exercised and exchanged and warrants in registered form may be presented for registration of transfer at the corporate trust office of the warrant agent or any other office indicated in the prospectus supplement or term sheet.

Exercise of Warrants

Each offered warrant will entitle the holder thereof to purchase the amount of underlying preferred stock, common stock or any combination thereof at the exercise price set forth in, or calculable from, the prospectus supplement relating to the offered warrants. After the close of business on the expiration date, unexercised warrants will be void.

Warrants may be exercised by payment to the warrant agent of the applicable exercise price and by delivery to the warrant agent of the related warrant certificate, properly completed. Warrants will be deemed to have been exercised upon receipt of the exercise price and the warrant certificate or certificates. Upon receipt of this payment and the properly completed warrant certificates, we will, as soon as practicable, deliver the amount of underlying preferred stock, common stock or any combination thereof purchased upon exercise.

If fewer than all of the warrants represented by any warrant certificate are exercised, a new warrant certificate will be issued for the unexercised warrants. The holder of a warrant will be required to pay any tax or other governmental charge that may be imposed in connection with any transfer involved in the issuance of underlying preferred stock, common stock or other combination thereof purchased upon exercise.

Amendments and Supplements to Warrant Agreement

We and the warrant agent may amend or supplement the warrant agreement for a series of warrants without the consent of the holders of the warrants issued thereunder to effect changes that are not inconsistent with the provisions of the warrants and that do not materially and adversely affect the interests of the holders of the warrants.

No Rights as Holders of Underlying Preferred Stock or Common Stock

Before the warrants are exercised, holders of the warrants are not entitled to payments of principal of, premium, if any, or dividends on the preferred stock, common stock or any combination thereof, as applicable, or to exercise any rights whatsoever as holders of the underlying preferred stock or common stock.

DESCRIPTION OF UNITS

The following description, together with the additional information that we include in any applicable prospectus supplements and in any related free writing prospectus that we may authorize to be distributed to you, summarizes the material terms and provisions of the units that we may offer under this prospectus. While the terms we have summarized below will apply generally to any units that we may offer under this prospectus, we will describe the particular terms of any series of units in more detail in the applicable prospectus supplement. The terms of any units offered under a prospectus supplement may differ from the terms described below.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of unit agreement that describes the terms of the series of units we are offering, and any supplemental agreements, before the issuance of the related series of units. The following summaries of material terms and provisions of the units are subject to, and qualified in their entirety by reference to, all the provisions of the unit agreement and any supplemental agreements applicable to a particular series of units. We urge you to read the applicable prospectus supplements related to the particular series of units that we may offer under this prospectus, as well as any related free writing prospectuses and the complete unit agreement and any supplemental agreements that contain the terms of the units.

General

We may issue units comprised of one or more of the securities offered hereby in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date.

We will describe in the applicable prospectus supplement the terms of the series of units being offered, including:

- the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any provisions of the governing unit agreement that differ from those described below; and
- any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units.

The provisions described in this section, as well as those described under “Description of Capital Stock” and “Description of Warrants” will apply to each unit and to any common stock, preferred stock or warrant included in each unit, respectively.

Issuance in Series

We may issue units in such amounts and in such numerous distinct series as we determine.

Enforceability of Rights by Holders of Units

Each unit agent will act solely as our agent under the applicable unit agreement and will not assume any obligation or relationship of agency or trust with any holder of any unit. A single bank or trust company may act as unit agent for more than one series of units. A unit agent will have no duty or responsibility in case of any default by us under the applicable unit agreement or unit, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a unit may, without the consent of the related unit agent or the holder of any other unit, enforce by appropriate legal action its rights as holder under any security included in the unit.

Title

We, and any unit agent and any of their agents, may treat the registered holder of any unit certificate as an absolute owner of the units evidenced by that certificate for any purpose and as the person entitled to exercise the rights attaching to the units so requested, despite any notice to the contrary.

PLAN OF DISTRIBUTION

We may sell any combination of the securities offered pursuant to this prospectus through agents, through underwriters or dealers or directly to one or more purchasers, or through a combination of these methods.

Underwriters, dealers and agents that participate in the distribution of the securities offered pursuant to this prospectus may be underwriters as defined in the Securities Act of 1933, as amended (the "Securities Act"), and any discounts or commissions received by them from us and any profit on the resale of the offered securities by them may be treated as underwriting discounts and commissions under the Securities Act. If a material arrangement with any underwriter, broker, dealer or agent is entered into for the sale of the offered securities, a prospectus supplement will be filed, if necessary, under the Securities Act disclosing the material terms and conditions of such arrangement. Any underwriters or agents will be identified and their compensation (including underwriting discount) will be described in the prospectus supplement. The prospectus supplement will also describe other terms of the offering, including any discounts or concessions allowed or reallowed or paid to dealers and any securities exchanges on which the offered securities may be listed.

The distribution of the securities offered under this prospectus may occur from time to time in one or more transactions at a fixed price or prices, which may be changed, at market prices prevailing at the time of sale, at prices related to such prevailing market prices or at negotiated prices.

If the prospectus supplement indicates, we will authorize dealers or our agents to solicit offers by certain institutions to purchase offered securities from us pursuant to contracts that provide for payment and delivery on a future date. We must approve all institutions, but they may include, among others:

- commercial and savings banks;
- insurance companies;
- pension funds;
- investment companies; and
- educational and charitable institutions.

An institutional purchaser's obligations under any contract to purchase our securities will only be subject to the condition that the purchase of the offered securities at the time of delivery is allowed by the laws that govern the purchaser. The dealers and our agents will not be responsible for the validity or performance of these contracts.

We may have agreements with the underwriters, dealers and agents to indemnify them against certain civil liabilities, including liabilities under the Securities Act, or to contribute with respect to payments which the underwriters, dealers or agents may be required to make as a result of those certain civil liabilities.

When we issue the securities offered by this prospectus, they may be new securities without an established trading market. If we sell a security offered by this prospectus to an underwriter for public offering and sale, the underwriter may make a market for that security, but the underwriter will not be obligated to do so and could discontinue any market making without notice at any time. Therefore, we cannot give any assurances to you concerning the liquidity of any security offered by this prospectus.

Underwriters and agents and their affiliates may be customers of, engage in transactions with, or perform services for us or our subsidiaries in the ordinary course of their businesses.

VALIDITY OF SECURITIES

The validity of the securities described in this prospectus has been passed upon by Calfee, Halter & Griswold LLP, The Calfee Building, 1405 East Sixth Street, Cleveland, Ohio 44114.

EXPERTS

The financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting) incorporated in this Prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2015 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

Table of Contents

25,000,000 Shares

Fairmount Santrol Holdings Inc.

COMMON STOCK

PROSPECTUS SUPPLEMENT

July , 2016

Morgan Stanley

Wells Fargo Securities

Barclays