Memorial Resource Development Corp.
Form 424B1
November 14, 2014
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Filed pursuant to Rule 424(b)(1)
Registration No. 333-199103

PROSPECTUS

30,000,000 Shares

Memorial Resource Development Corp.

Common Stock

$23.00 per share

MRD Holdco LLC and certain former management members of WildHorse Resources, LLC (collectively, the selling stockholders) are offering 30,000,000 shares of Memorial Resource Development Corp. s common stock. The selling stockholders have granted the underwriters a 30-day option to purchase up to an additional 4,500,000 shares of common stock. We will not receive any proceeds from the sale of shares by the selling stockholders, including any shares that the selling stockholders may sell pursuant to the underwriters option to purchase additional shares of common stock.

Our common stock is listed on the NASDAQ Global Select Market under the symbol MRD. We are a controlled company as defined under the NASDAQ listing rules because the group consisting of affiliates of Natural Gas Partners beneficially owns over 50% of our shares of outstanding common stock. See Principal and Selling Stockholders.

On November 12, 2014, the last reported sale price of our common stock on the NASDAQ Global Select Market was $23.53 per share.

Investing in our common stock involves risks that are described in the Risk Factors section beginning on page 23 of this prospectus.

We are an emerging growth company as that term is used in the Jumpstart Our Business Startups Act of 2012, and as such, we have elected to take advantage of certain reduced public company reporting requirements for this prospectus and future filings. See Risk Factors and Summary Emerging Growth Company Status.

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

	Per Share	Total
Public Offering Price	$ 23.00	$ 690,000,000
Underwriting Discounts and Commissions(1)	$ 0.7475	$ 22,425,000
Proceeds, Before Expenses, to the Selling Stockholders	$ 22.2525	$ 667,575,000

(1) See Underwriting for a description of underwriting compensation payable in connection with this offering.

The underwriters expect to deliver the shares of common stock on or about November 18, 2014.

Joint Book-Running Managers

Citigroup **Barclays**
BofA Merrill Lynch **BMO Capital Markets** **Goldman, Sachs & Co.** **J.P. Morgan**
Raymond James **RBC Capital Markets** **Wells Fargo Securities**

Co-Managers

Credit Suisse	**Scotiabank / Howard Weil**	**Simmons & Company International**	**Stephens Inc.**
Stifel	**Wunderlich Securities**	**Credit Agricole CIB**	**Natixis**

The date of this prospectus is November 12, 2014.

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You should rely only on the information contained in this prospectus. Neither we, the selling stockholders, nor the underwriters have authorized any person to provide you with any information or represent anything about us or this offering that is not contained in this prospectus. If given or made, any such other information or representation should not be relied upon as having been authorized by us. The selling stockholders are not making an offer in any jurisdiction where an offer or sale is not permitted. The information contained in this prospectus is current only as of its date.

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Commonly Used Defined Terms

As used in this prospectus, unless we indicate otherwise:

- the Company, we, our, us and our company or like terms refer collectively to (i) Memorial Resource Development Corp. and its subsidiaries (other than MEMP and its subsidiaries) for periods after the restructuring transactions described below and (ii) our predecessor (as described below) other than MEMP and its subsidiaries for periods prior to the restructuring transactions;

- selling stockholders refers to MRD Holdco LLC and certain former management members of WildHorse Resources, LLC named herein;

- Memorial Production Partners, MEMP and the Partnership refer to Memorial Production Partners LP individually and collectively with its subsidiaries, as the context requires. We own the general partner of MEMP as well as 50% of MEMP s incentive distribution rights;

- MEMP GP refers to Memorial Production Partners GP LLC, the general partner of the Partnership, which we own;

- MRD Holdco refers to MRD Holdco LLC, a holding company controlled by the Funds that, together as part of a group owns a majority of our common stock;

- MRD LLC refers to Memorial Resource Development LLC, which historically owned our predecessor s business and was merged into MRD Operating LLC, our subsidiary, subsequent to our initial public offering;

- WildHorse Resources refers to WildHorse Resources, LLC, which owns our interest in the Terryville Complex and is our 100% owned subsidiary;

- our predecessor refers collectively to MRD LLC and its former consolidated subsidiaries, consisting of Classic Hydrocarbons Holdings, L.P., Classic Hydrocarbons GP Co., L.L.C., Black Diamond Minerals, LLC, Beta Operating Company, LLC, MEMP GP, BlueStone, MRD Operating LLC, WildHorse Resources, Tanos Energy LLC and each of their respective subsidiaries, including MEMP and its subsidiaries;

- the Funds refers collectively to Natural Gas Partners VIII, L.P., Natural Gas Partners IX, L.P. and NGP IX Offshore Holdings, L.P., which collectively control MRD Holdco;

- restructuring transactions means the transactions described beginning on page 11 that took place in connection with and shortly after the closing of our initial public offering, and pursuant to which we acquired substantially all of the assets of MRD LLC (not including its interests in BlueStone, MRD Royalty, MRD Midstream, Golden Energy Partners LLC or Classic Pipeline);

- BlueStone refers to BlueStone Natural Resources Holdings, LLC, a subsidiary of MRD Holdco that sold substantially all of its assets in July 2013 for approximately $117.9 million;

NGP refers to Natural Gas Partners, a family of private equity investment funds organized to make direct equity investments in the energy industry, including the Funds;

MRD Royalty refers to MRD Royalty LLC, a subsidiary of MRD Holdco that owns certain immaterial leasehold interests and overriding royalty interests in Texas and Montana;

MRD Midstream refers to MRD Midstream LLC, a subsidiary of MRD Holdco that owns an indirect interest in certain immaterial midstream assets in North Louisiana; and

Classic Pipeline refers to Classic Pipeline & Gathering, LLC, a subsidiary of MRD Holdco that owns certain immaterial midstream assets in Texas.

Industry and Market Data

The market data and certain other statistical information used throughout this prospectus are based on independent industry publications, government publications or other published independent sources. Some data is

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also based on our good faith estimates. Although we believe these third-party sources are reliable and that the information is accurate and complete, neither we nor the selling stockholders have independently verified the information.

Equivalency

This prospectus presents certain production and reserves-related information on an equivalency basis. When we refer to oil and natural gas in equivalents, we are doing so to compare quantities of oil with quantities of natural gas. In calculating equivalents, we use a generally recognized standard in which one Bbl of oil and/or NGLs is equivalent to six Mcf of natural gas. This calculation is based on an approximate energy equivalency and does not imply or reflect a value or price relationship.

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SUMMARY

This summary highlights information appearing elsewhere in this prospectus. You should read the entire prospectus carefully, including Risk Factors beginning on page 23 and the historical and pro forma financial statements and the related notes to those financial statements. Certain oil and gas industry terms, including the terms proved reserves, probable reserves and possible reserves, used in this prospectus are defined in the Glossary of Oil and Natural Gas Terms in Appendix A of this prospectus.

Because we control MEMP through our ownership of its general partner, we are required to consolidate MEMP for accounting and financial reporting purposes even though we only own a minority of its limited partner interests. Our financial statements include two reportable business segments: (i) the MRD Segment, which reflects all of our operations except for MEMP and its subsidiaries, and (ii) the MEMP Segment, which reflects the operations of MEMP and its subsidiaries. Except with respect to our consolidated and combined financial statements or as otherwise indicated, the description of our business, properties, strategies and other information in this summary does not include the business, properties or results of operations of BlueStone, MRD Royalty, MRD Midstream and Classic Pipeline (the assets of which are included in our predecessor but were not conveyed to us in the restructuring transactions) or MEMP. Our proved reserves as of December 31, 2013 have been prepared by Netherland, Sewell & Associates, Inc., our independent reserve engineers (NSAI), and our probable and possible reserves as of December 31, 2013 have been prepared by our internal reserve engineers and audited by NSAI, all of which are reflected in our reserve reports (which we collectively refer to as our reserve report), summaries of which are included in Appendices B-1 and B-2 of this prospectus. Our proved reserves within the Terryville Complex as of September 30, 2014 have been prepared by NSAI (which we refer to as our recent reserve report), a summary of which is included in Appendix C of this prospectus.

Information expressed on a pro forma basis in this summary gives effect to certain transactions as if they had occurred on September 30, 2014 for pro forma balance sheet purposes and on January 1, 2013 for pro forma statements of operations purposes. For a description of these transactions, please read Summary Historical Consolidated and Combined Pro Forma Financial Data and Corporate History and Structure.

Overview

We are an independent natural gas and oil company focused on the exploitation, development, and acquisition of natural gas, NGL and oil properties with a majority of our activity in the Terryville Complex of North Louisiana, where we are targeting overpressured, liquids-rich natural gas opportunities in multiple zones in the Cotton Valley formation. As of December 31, 2013, our total leasehold position was 347,458 gross (205,818 net) acres, of which 60,041 gross (51,522 net) acres are in what we believe to be the core of the Terryville Complex. We are focused on creating shareholder value primarily through the development of our sizeable horizontal inventory. As of December 31, 2013, we had 1,582 gross (1,091 net) identified horizontal drilling locations, of which 1,431 gross (994 net) identified horizontal drilling locations are located in the Terryville Complex. These total gross identified horizontal drilling locations represent an inventory of over 42 years based on our expected 2014 drilling program. We believe our inventory to be repeatable and capable of generating high returns based on the extensive production history in the area, the results of our horizontal wells drilled to date, and the consistent reservoir quality across multiple target formations.

As of December 31, 2013, we had estimated proved, probable and possible reserves of approximately 1,126 Bcfe, 800 Bcfe and 1,711 Bcfe, respectively. As of such date, we operated 98% of our proved reserves, 71% of which were natural gas. For the nine months ended September 30, 2014, 56% of our pro forma MRD Segment revenues were attributable to natural gas production, 22% to NGLs and 22% to oil. For the nine months ended September 30, 2014, we generated pro forma MRD Segment Adjusted EBITDA of $259 million and pro forma net loss of $914 million, and made pro forma capital expenditures of $268 million. For the year ended

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December 31, 2013, we generated pro forma MRD Segment Adjusted EBITDA of $159 million and pro forma net loss of $2.9 million, and made pro forma total capital expenditures of $203 million. Please see Summary Historical Consolidated and Combined Pro Forma Financial Data Adjusted EBITDA for an explanation of the basis for the pro forma presentation and our use of Adjusted EBITDA to measure the MRD Segment s profitability.

Our average net daily production for the nine months ended September 30, 2014 was approximately 208 MMcfe/d (approximately 76% natural gas, 17% NGLs and 7% oil) and our reserve life was 14.8 years. The Terryville Complex represented 84% of our total net production for the nine months ended September 30, 2014. As of December 31, 2013, we produced from 95 horizontal wells and 800 vertical wells. Since January 1, 2014, in the Terryville Complex we have completed and brought online 21 horizontal wells through September 30, 2014, bringing our total number of producing horizontal wells to 41 in our primary formations.

The following chart provides information regarding our production growth and the increasing proportion of our horizontal well production since the beginning of 2012.

Our Properties

Cotton Valley Overview

The Cotton Valley formation extends across East Texas, North Louisiana and Southern Arkansas. The formation has been under development since the 1930s and is characterized by thick, multi-zone natural gas and oil reservoirs with well-known geologic characteristics and long-lived, predictable production profiles. Over 21,000 vertical wells have been completed throughout the play. In 2005, operators started redeveloping the Cotton Valley using horizontal drilling and advanced hydraulic fracturing techniques. To date, operators have drilled over 600 horizontal Cotton Valley wells. Some large, analogous redevelopment projects in the Cotton Valley include the Nan-Su-Gail Field in Freestone County, East Texas, where over 40 horizontal wells have been drilled by operators such as Devon Energy Corporation and Marathon Oil Corporation, and the Carthage

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Complex in Panola County, East Texas, where operators such as ExxonMobil Corporation, BP America, Memorial Production Partners LP and Anadarko Petroleum Corporation have drilled over 153 horizontal wells.

Cotton Valley Terryville Complex Horizontal Redevelopment

We are currently engaged in the horizontal redevelopment of the Terryville Complex in Lincoln Parish, Louisiana utilizing horizontal drilling and completion techniques similar to those employed at the Nan-Su-Gail Field, Carthage Complex in East Texas and other major resource plays across the United States. We have assembled a largely contiguous acreage position in the Terryville Complex of approximately 60,041 gross (51,522 net) acres as of December 31, 2013. The majority of our current and planned development is focused in and around what we believe to be the core of the Terryville Complex.

We entered the Terryville Complex via an acquisition from Petrohawk Energy Corporation in April 2010, with the goal of redeveloping the field with horizontal drilling and modern completion techniques. Since that acquisition, we have completed multiple bolt-on acquisitions and in-fill leases to build our current position. We believe the Terryville Complex, which has been producing since 1954, is one of North America s most prolific natural gas fields, characterized by high recoveries relative to drilling and completion costs, high initial production rates with high liquids yields, long reserve life, multiple stacked producing zones, available infrastructure and a large number of service providers.

After initially drilling eight vertical pilot wells in the Terryville Complex, we commenced a horizontal drilling program in 2011 to further delineate and define our position. In 2013, we shifted our operational focus to full-scale horizontal redevelopment of the Terryville Complex, going from two rigs to four rigs by the end of that year. Additionally, in the fourth quarter of 2013, we moved to drilling on multi-well pads that allow us to more efficiently drill wells and control costs as we develop our stacked pay zones. We intend to dedicate approximately $304 million of our $351 million drilling and completion budget in 2014 to develop multiple zones within the Terryville Complex, where we expect to drill 33 gross (29 net) horizontal wells and 3 gross (2.7 net) vertical wells. Our horizontal redevelopment program in the Terryville Complex will be focused on increasing our well performance and recoveries.

Within the Terryville Complex, as of December 31, 2013, we had 945 Bcfe, 688 Bcfe and 1,643 Bcfe of estimated proved, probable and possible reserves, respectively, and a drilling inventory consisting of 1,431 gross (994 net) identified horizontal drilling locations, including 91 gross (72 net) drilling locations to which we have attributed proved undeveloped reserves as of December 31, 2013. Since initiating our horizontal drilling program in 2011, we have drilled 44 gross (38 net) horizontal wells. Within the Terryville Complex, on a proved reserves basis, we operate approximately 99% of our existing acreage and hold an average working interest of approximately 74% across our acreage. Our high operating control allows us to more efficiently and economically manage the redevelopment of this extensive resource.

We believe seismic data, as well as information gathered from the results of our existing 275 vertical and 46 horizontal wells throughout the field, support the existence of at least ten stacked pay zones across the Terryville Complex. Our redevelopment program currently targets four of the stacked pay zones in the Cotton Valley formation zones we term the Upper Red, Lower Red, Lower Deep Pink and Upper Deep Pink, all of which we are developing with horizontal wells through pad drilling. These four zones have an overall thickness ranging from 400 to 890 feet across our acreage position. We believe the overpressured nature of this section of the Cotton Valley formation is highly productive when accessed through horizontal drilling and fracture stimulation technologies. These qualities, when combined with the liquids-rich nature of the natural gas, high initial rates of production and competitive well costs, produce what we believe to be amongst the highest rate of return wells in the nation. Further, there are additional opportunities for redevelopment in the zones above the four main zones. NSAI has audited over $1 billion PV-10 and 677 Bcfe in our possible reserve category as of December 31, 2013 for the redevelopment of these additional zones. Please see Reserves.

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Our well results have shown consistency in initial production, decline rates and estimated ultimate recovery. The consistency of these results gives us confidence that the full-scale redevelopment of the Terryville Complex that we began in 2013 will continue to be successful. The table below details certain information on estimated ultimate recoveries and production on a gross basis for our 41 existing horizontal wells currently producing from our four primary target zones in the Terryville Complex to the extent such data is available as of the dates and for the periods presented below. The wells below highlight the consistency of our drilling results in the four primary target zones in which we plan to focus our future development activity.

Well Name	Lateral Length (Feet)	EUR (Bcfe)(1)	Producing Wells EUR Bcfe/ 1,000	First Production	Days Producing	Cumulative Production (Bcfe)	Gross Wellhead Flow Rates 0-30	After Processing (MMcfe/d)(2)(3) 0-90	91-180	181-360	D&C ($MM)
Upper Red											
LD Barnett 23H-2	4,015	12.3	3.1	1/30/2012	975	5.0	14.5	12.0	7.7	5.6	6.7
Colquitt 20 17H-1	4,357	11.5	2.6	7/30/2012	793	4.3	17.5	12.6	7.2	5.1	7.8
Dowling 22 15H-1	5,376	9.4	1.8	9/22/2012	739	5.7	16.3	15.6	11.1	8.2	8.8
Nobles 13H-1	4,216	9.1	2.1	11/17/2012	683	4.6	21.5	16.7	9.9	6.5	7.8
Sidney McCullin 16 21H-1	4,604	13.8	3.0	1/19/2013	620	5.0	17.4	14.2	10.8	8.4	8.1
Wright 14 11 HC-1	5,250	11.9	2.3	5/27/2013	492	5.5	19.6	18.1	16.1	8.4	8.8
BF Fallin 22 15H-1	5,122	12.3	2.4	6/17/2013	471	3.9	14.8	13.7	11.8	5.9	7.5
Dowling 20 17H-1	4,327	9.0	2.1	7/22/2013	436	2.6	15.2	11.0	5.7	4.5	10.7
Gleason 31H-1	3,692	2.4	0.7	8/12/2013	415	0.6	2.9	2.3	1.6	1.2	9.5
Burnett 26H-1	2,405	5.5	2.3	9/22/2013	374	1.2	6.9	5.6	3.5	2.4	6.9
Drewett 17 8H-1	4,010	15.6	3.9	11/13/2013	322	3.9	22.1	18.6	11.9		7.7
Wright 13 12 HC-2	6,009	24.0	4.0	12/21/2013	284	4.6	22.7	19.6	16.3		8.5
LA Minerals 15 22H-2	5,814	17.3	3.0	1/21/2014	253	3.4	17.8	16.1	13.4		8.8
Wright 13 24 HC-3	6,606	20.9	3.2	4/14/2014	170	3.4	30.3	24.6			10.8
Wright 13 24 HC-1	6,678	15.5	2.3	4/14/2014	170	2.8	25.0	20.4			11.8
TL McCrary 14 11 HC-5	5,875	30.0	5.1	4/14/2014	170	3.0	22.9	23.3			10.2
LA Minerals 19 30 HC-2	6,912	15.1	2.2	5/29/2014	125	2.3	25.1	20.4			10.8
LA Minerals 19 30 HC-1	6,519	19.6	3.0	6/1/2014	122	2.0	21.5	17.7			11.6
Werner 29H-1	3,410	4.7	1.4	8/13/2014	49	0.4	8.6				11.0
Werner 29 32 5 HC-1	6,810	9.7	1.4	8/13/2014	49	0.8	18.4				10.4
Werner 29 32 5 HC-2	8,300	16.5	2.0	8/13/2014	49	1.2	26.1				12.2
Temple 8H-1	2,403	6.3	2.6	8/24/2014	38	0.4	12.7				9.6
Temple 8 17 HC-1	6,210	2.9	0.5	8/29/2014	33	0.3	8.4				11.9
TL McCrary 14 11 HC-2	4,401	NA	NA	9/25/2014	6	0.1					7.7
TL McCrary 14 11 HC-4	4,810	NA	NA	9/25/2014	6	0.0					9.0
Lower Red											
TL McCrary 14H-1	4,544	12.7	2.8	5/1/2012	883	4.5	14.4	11.7	8.3	5.4	7.7
Nobles 13H-2	4,060	5.6	1.4	11/17/2012	683	3.3	16.0	11.9	8.2	5.2	7.8
LA Methodist Orphanage 14H-1	3,637	9.5	2.6	2/15/2013	593	4.0	13.9	13.0	9.7	6.3	9.1
Dowling 21 16H-1	4,590	8.4	1.8	3/18/2013	562	3.0	13.0	10.1	6.5	4.5	6.6
Drewett 17 8H-2	3,700	4.2	1.1	11/13/2013	322	1.2	8.7	6.2	3.2		7.0
Wright 13 12 HC-1	5,409	9.4	1.7	12/21/2013	284	2.2	14.7	11.4	7.2		9.3
LA Minerals 15 22H-1	5,926	8.1	1.4	1/21/2014	253	1.9	13.8	10.9	6.4		7.8
Wright 13 24 HC-4	6,518	15.1	2.3	4/14/2014	170	2.6	25.7	19.6			13.4
LA Minerals 19 30 HC-3	5,356	2.5	0.5	5/29/2014	125	0.6	8.8	5.9			12.1
LA Minerals 19 30 HC-4	6,469	3.5	0.5	6/1/2014	122	0.9	13.6	8.5			13.8
TL McCrary 14 11 HC-1	4,010	NA	NA	9/25/2014	6	0.0					8.9
TL McCrary 14 11 HC-3	4,620	NA	NA	9/25/2014	6	0.0					8.3
Lower Deep Pink Zone											
LA Methodist Orphanage 14H-2	3,550	6.1	1.7	2/15/2013	593	3.5	14.2	11.6	7.6	5.7	6.1
Wright 13 12 HC-4	5,010	5.8	1.2	12/21/2013	284	1.6	11.8	8.8	4.8		7.0
Wright 13 12 HC-3	5,706	5.4	0.9	12/21/2013	284	1.6	12.5	9.3	5.0		7.4
Upper Deep Pink Zone											
Werner 29 32 5 HC-3	6,679	3.1	0.5	8/13/2014	49	0.3	7.2				10.1
Averages(4)											
All Wells	**5,071**	**10.7**	**2.1**		**319**	**2.4**	**16.1**	**13.6**	**8.4**	**5.6**	**9.2**
Upper Red	**5,125**	**12.8**	**2.5**		**314**	**2.7**	**17.7**	**15.7**	**9.8**	**5.6**	**9.4**

Lower Red	**4,903**	**7.9**	**1.6**	**334**	**2.0**	**14.3**	**10.9**	**7.1**	**5.4**	**9.3**
Lower Deep Pink	**4,755**	**5.8**	**1.3**	**387**	**2.2**	**12.8**	**9.9**	**5.8**	**5.7**	**6.8**
Upper Deep Pink	**6,679**	**3.1**	**0.5**	**49**	**0.3**	**7.2**				**10.1**

(1) EUR represents the Estimated Ultimate Recovery or sum of total gross remaining proved reserves attributable to each location in our recent reserve report and cumulative sales from such location. EUR is shown on a combined basis for oil/condensates, gas and NGLs after the effects of processing.
(2) Production data is as of September 30, 2014 and shown gross on a combined basis after the effects of processing.
(3) Periodic flow rates start on day 4, with days 1 through 3 used to allow clean up associated with well completion. The 30-day flow rates therefore start on day 4 and continue 30 days to day 33 and the 90-day flow rates go from day 4 to day 93.
(4) We also have five horizontal producing wells outside of the four primary target zones. These averages do not include such wells.

Cotton Valley Terryville Complex Proved Reserves Update

As of September 30, 2014, within the core Terryville Complex, we had proved reserves of 849 Bcfe based on our recent reserve report, and an aggregate drilling inventory of 1,411 gross identified drilling locations, taking into account drilling activity during the first nine months of 2014. The PV-10 of our proved reserves within the Terryville Complex as of September 30, 2014 was $1.6 billion. PV-10 is a non-GAAP financial measure and differs from standardized measure, the most directly comparable GAAP financial measure. Please see Reserves. SEC pricing for natural gas and oil used in calculating the PV-10 of such proved reserves as of September 30, 2014 was $4.23 per Mcf and $95.56 per Bbl, respectively, based on the unweighted average of the first-day-of-the-month prices for each of the twelve months preceding September 2014.

East Texas

We own and operate approximately 54,337 gross (42,894 net) acres as of December 31, 2013 in Texas, where we are currently producing primarily from the Cotton Valley, Travis Peak and Bossier formations and targeting the Cotton Valley formation for future development. From January 1, 2011 through December 31, 2013, we have drilled and completed 28 gross (10.3 net) wells and are operating one rig in East Texas as of December 31, 2013. In 2014, we plan to invest $29 million to drill 4 gross (4 net) wells in East Texas in the Joaquin Field of Panola and Shelby Counties. As of December 31, 2013, we had approximately 108 gross identified horizontal drilling locations in East Texas, including 54 gross (43 net) drilling locations to which we have attributed proved undeveloped reserves as of December 31, 2013. For the nine months ended September 30, 2014, our average net daily production from our East Texas properties was 27 MMcfe/d, of which 75% was natural gas. Within our East Texas properties, on a proved reserves basis, we operate approximately 94% of our existing properties.

Rockies

We own approximately 162,375 gross (66,191 net) acres as of December 31, 2013 in our Rockies region and for the nine months ended September 30, 2014 our average net daily production from this region was 6 MMcfe/d. In 2014, we plan to invest $18 million to complete 2 gross (2 net) vertical wells in the Tepee Field of the Piceance Basin targeting the Mancos and Williams Fork formations. As of December 31, 2013, we had approximately 174 gross identified vertical drilling locations in the Tepee Field in our Rockies properties.

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Reserves

Our estimates of proved reserves are prepared by NSAI, and our estimates of probable and possible reserves are prepared by our management and audited by NSAI. As of December 31, 2013, we had 1,126 Bcfe, 800 Bcfe and 1,711 Bcfe of estimated proved, probable and possible reserves, respectively. As of this date, our proved reserves were 71% gas and 29% NGLs and oil. Additionally, the PV-10 of our proved reserves was $1,469 million, the PV-10 for our probable reserves was $1,052 million and the PV-10 for our possible reserves was $2,386 million. The following table provides summary information regarding our estimated proved, probable and possible reserves data by area based on our reserve report as of December 31, 2013 and our average net daily production by area for the nine months ended September 30, 2014:

	Proved Total (Bcfe)	% Gas	% Developed	Proved PV-10 (in millions)(1)	Probable Total (Bcfe)(2)	Probable PV-10 (in millions)(1)	Possible Total (Bcfe)(2)	Possible PV-10 (in millions)(1)	Average Net Daily Production (MMcfe/d)
Terryville Complex	945	71%	33%	$ 1,341	688	$ 1,032	1,643	$ 2,383	175
East Texas	175	75%	29%	110	109	18	66	3	27
Rockies	6	49%	100%	18	2	2	2	1	6
Total	1,126	71%	33%	$ 1,469	800	$ 1,052	1,711	$ 2,386	208

(1) In this prospectus, we have disclosed our PV-10 based on our reserve report. PV-10 is a non-GAAP financial measure and represents the period-end present value of estimated future cash inflows from our natural gas and crude oil reserves, less future development and production costs, discounted at 10% per annum to reflect timing of future cash flows and using SEC pricing assumptions in effect at the end of the period. SEC pricing for natural gas and oil of $3.67 per Mcf and $93.42 per Bbl was based on the unweighted average of the first-day-of-the-month prices for each of the twelve months preceding December 2013. PV-10 differs from standardized measure, the most directly comparable GAAP financial measure, because it does not include the effects of income taxes. Moreover, GAAP does not provide a measure of estimated future net cash flows for reserves other than proved reserves. Because PV-10 estimates of probable and possible reserves are more uncertain than PV-10 and standardized estimates of proved reserves, but have not been adjusted for risk due to that uncertainty, they may not be comparable with each other. Nonetheless, we believe that PV-10 estimates for reserve categories other than proved present useful information for investors about the future net cash flows of our reserves in the absence of a comparable GAAP measure such as standardized measure. Because of this, PV-10 can be used within the industry and by creditors and securities analysts to evaluate estimated net cash flows from proved reserves on a more comparable basis. In addition, investors should be cautioned that estimates of PV-10 for probable and possible reserves, as well as the underlying volumetric estimates, are inherently more uncertain of being recovered and realized than comparable measures for proved reserves, and that the uncertainty for possible reserves is even more significant. Our PV-10 estimates of proved reserves and our standardized measure are equivalent as of December 31, 2013 because, prior to the completion of our initial public offering, we were not subject to entity level taxation. Accordingly, no provision for federal income taxes has been provided because taxable income for 2013 was passed through to our equity holders. However, had we not been a tax exempt entity as of December 31, 2013, our estimated discounted future income tax in respect of our proved, probable and possible reserves would have been approximately $401 million, $368 million and $835 million, respectively. Since the closing of our initial public offering, we are treated as a taxable entity for federal income tax purposes and our future income taxes will be dependent upon our future taxable income. Neither PV-10 nor standardized measure represents an estimate of fair market value of our natural gas and oil properties. We and others in the industry use PV-10 as a measure to compare the relative size and value of estimated reserves held by companies without regard to the specific tax characteristics of such entities.

(2) Substantially all of our estimated probable and possible reserves are classified as undeveloped.

Drilling Inventory and Capital Budget

We intend to develop our multi-year drilling inventory by utilizing our significant expertise in horizontal drilling and fracture stimulation to grow our production, reserves and cash flow. For 2014, we have budgeted a total of $351 million to drill 39 gross (34 net) operated horizontal wells. We expect to fund our 2014 development primarily from cash flows from operations. The majority of our drilling locations and our 2014 development program are focused on the Terryville Complex, where we plan to invest $304 million on drilling 33 gross (29 net) horizontal wells and 3 gross (2.7 net) vertical wells. In East Texas, we plan to invest $29 million on drilling and completing 4 gross (4 net) horizontal wells. In the Rockies, we plan to invest $18 million on completing 2 gross (2 net) vertical wells in the Tepee Field.

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The following table provides information regarding our acreage and drilling locations by area as of December 31, 2013:

	Net Acreage	WI%	Gross Horizontal Drilling Locations(1)(2)(3) Proved	Probable	Possible	Management	Total Gross	Net	Gross Horizontal Drilling Inventory (years)
Terryville Complex	96,733	74%	91	147	450	743	1,431	994	43
East Texas	42,894	79%	54	39	15		108	92	27
Rockies	66,191	41%		23	20		43	4	
Total	205,818	59%	145	209	485	743	1,582	1,091	42

(1) The above table excludes 192 proved vertical drilling locations in our reserve report in the Terryville Complex and 174 identified vertical locations based on management estimates in the Rockies.
(2) Please see Business Our Operations Drilling Locations for more information regarding the process and criteria through which these drilling locations were identified. The drilling locations on which we actually drill will depend on the availability of capital, regulatory approval, commodity prices, costs, actual drilling results and other factors. Please see Risk Factors Risks Related to Our Business Our identified drilling locations, which are scheduled out over many years, are susceptible to uncertainties that could materially alter the occurrence or timing of their drilling. Proved, probable and possible locations are based on our reserve report. Management locations are based on management estimates of additional identified drilling locations.
(3) As of September 30, 2014, we had an aggregate drilling inventory of 1,411 identified gross horizontal inventory locations in the Terryville Complex, taking into account drilling activity during the first nine months of 2014. Please see Our Properties Cotton Valley Terryville Complex Proved Reserves Update.

Our extensive inventory and horizontal drilling program in the Terryville Complex is currently focused on four zones within the Cotton Valley formation the Upper Red, Lower Red, Lower Deep Pink and Upper Deep Pink. The table below sets forth our drilling locations by zone as of December 31, 2013 along with the average results for the wells we have drilled within each zone. Please see Business Our Properties Cotton Valley Terryville Complex Horizontal Redevelopment for more detail on our properties in the Terryville Complex and the table on page 99 for the 30 day initial production rate and EUR condensate volumes.

Lower Cotton Valley Zone	Gross Horizontal Drilling Locations(1)(4) Proved	Probable	Possible	Management	Total	Average Historical Results(2) Producing Wells Drilled(1)	EUR (Bcfe)(3)	Drilling and Completion Costs ($MM)
Upper Red	47	42	40	313	442	25	12.8	$ 9.4
Lower Red	40	40	36	276	392	12	7.9	9.3
Lower Deep Pink	4	28	47	79	158	3	5.8	6.8
Upper Deep Pink		37	42	75	154	1	3.1	10.1
Other Zones			285		285			
Total Terryville Complex	91	147	450	743	1,431	41	10.7	$ 9.2

(1) Please see Business Our Operations Drilling Locations for more information regarding the process and criteria through which these drilling locations were identified. The drilling locations on which we actually drill will depend on the availability of capital, regulatory approval, commodity prices, costs, actual drilling results and other factors. Please see Risk Factors Risks Related to Our Business Our identified drilling locations, which are scheduled out over many years, are susceptible to uncertainties that could materially alter the occurrence or timing of their drilling. Proved, probable and possible locations are based on our reserve report. Management locations are based on management estimates of additional identified drilling locations.
(2) Relates to the 41 horizontal wells drilled by us in the four primary target zones in the Terryville Complex and included in our recent reserve report as proved developed reserves as of September 30, 2014.
(3) EUR represents the Estimated Ultimate Recovery or the sum of total gross remaining proved reserves attributable to each location in our recent reserve report and cumulative sales from such location. EUR is shown at the wellhead on a combined basis for oil/condensates and wet gas.
(4)

As of September 30, 2014, we had an aggregate drilling inventory of 1,411 identified gross horizontal inventory locations in the Terryville Complex, taking into account drilling activity during the first nine months of 2014. Please see Our Properties Cotton Valley Terryville Complex Proved Reserves Update.

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Our Terryville horizontal development program in 2014 has an average working interest of 86% and our total horizontal development inventory has an average working interest of 69%.

For the Terryville Complex, our 2014 budget assumes an average drilling and completion cost of $9.5 million for gross horizontal wells ($8.3 million per net well) and is based on an average lateral length of 5,824 feet. As part of our long-term development plan, the lateral length of our planned wells is expected to increase and we expect wells within the Terryville Complex to increase to a 7,500 foot lateral length.

Business Strategies

Our primary objective is to build shareholder value through growth in reserves, production and cash flows by developing and expanding our significant portfolio of drilling locations. To achieve our objective, we intend to execute the following business strategies:

Grow production, reserves and cash flow through the development of our extensive drilling inventory. We believe our extensive inventory of low-risk drilling locations, combined with our operating expertise, will enable us to continue to deliver production, reserve and cash flow growth and create shareholder value. As of December 31, 2013, we had assembled an aggregate drilling inventory of 1,582 gross identified horizontal drilling locations, 90% of which are in the Terryville Complex, representing a drilling inventory of over 43 years based on our expected 2014 drilling program. We believe that the risk and uncertainty associated with our core acreage positions in the Terryville Complex has been largely reduced through our development activity, and because those positions are in areas with extensive drilling and production history. Since initiating our horizontal drilling program with one rig in 2011, we have invested over $521 million in the Terryville Complex through September 30, 2014. With six rigs running in the Terryville Complex as of September 30, 2014, we are one of the most active drillers in the Cotton Valley formation. We intend to dedicate approximately $304 million of our $351 million drilling and completion budget in 2014 to develop the overpressured liquids-rich Terryville Complex through multi-well pad drilling. We believe multiple vertically stacked producing horizons in the Terryville Complex can be developed using horizontal drilling techniques, thus enhancing the economics of this field.

Enhance returns through prudent capital allocation and continued improvements in operational and capital efficiencies. We continually monitor and adjust our drilling program with the objective of achieving the highest total returns on our portfolio of drilling opportunities. We believe we will achieve this objective by (i) minimizing the capital costs of drilling and completing horizontal wells through knowledge of the target formations, (ii) maximizing well production and recoveries by optimizing lateral length, the number of frac stages, perforation intervals and the type of fracture stimulation employed, (iii) targeting specific zones within our leasehold position to maximize our hydrocarbon mix based on the existing commodity price environment and (iv) minimizing operating costs through efficient well management.

Exploit additional development opportunities on current acreage. Our existing asset base provides numerous opportunities for our highly experienced technical team to create shareholder value by increasing our inventory beyond our currently identified drilling locations and ultimately by growing our estimated proved reserves. In the Terryville Complex, we are currently targeting multiple stacked horizons. We also believe our East Texas region has a significant inventory of low-risk, liquids-rich horizontal drilling locations. Finally, we continue to evaluate our leasehold positions in the Rockies and have preliminarily identified over 170 potential vertical locations.

Maintain a disciplined, growth oriented financial strategy. We intend to fund our growth primarily with internally generated cash flows while maintaining ample liquidity and access to the capital markets. Furthermore, we plan to hedge a significant portion of our expected production to reduce our exposure to downside commodity price fluctuations and enable us to protect our cash flows and maintain liquidity to fund our drilling program.

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Since approximately 76% of our acreage in the Terryville Complex was held by production as of December 31, 2013 and no significant drilling commitments are needed to hold our remaining acreage in the near term, we are able to allocate capital among projects in a manner that optimizes both costs and returns, resulting in a highly efficient drilling program.

Make opportunistic acquisitions that meet our strategic and financial objectives. We will seek to acquire oil and gas properties that we believe complement our existing properties in our core areas of operation. In addition to our focus on the Terryville Complex, we are pursuing other properties that provide opportunities for the addition of reserves and production through a combination of exploitation, development, high-potential exploration and control of operations. We follow a technology driven strategy to establish large, contiguous leasehold positions in the core of prolific basins and opportunistically add to those positions through bolt-on acquisitions over time. We entered into the Terryville Complex through strategic acquisitions and grassroots leasing efforts, amassing a land position as of December 31, 2013 of 96,733 net acres, 51,522 net acres of which we believe to be in the core of the play. We will continue to identify and opportunistically acquire additional acreage and producing assets to complement our multi-year drilling inventory.

Competitive Strengths

We believe that the following strengths will allow us to successfully execute our business strategies.

Large, concentrated position in one of North America s leading plays. As of December 31, 2013, we owned approximately 60,041 gross (51,522 net) acres in what we believe to be the core of the Terryville Complex in Lincoln Parish, which we believe to be one of North America s most prolific liquids-rich natural gas fields, characterized by consistent and predictable geology and multiple stacked pay formations confirmed by extensive vertical well control. Through September 30, 2014, our drilling program in the Terryville Complex has produced some of the top performing gas wells in the United States in the previous two years, with single horizontal well results having achieved EURs averaging 10.7 Bcfe per well. Through September 30, 2014, we have brought 41 wells online within our four primary target zones with average 30-day initial production rates of 16.1 MMcfe/d and average drilling and completion costs of $9.2 million per well. Approximately 76% of our acreage in the Terryville Complex was held by production at December 31, 2013 and there are no significant lease expirations until 2017. Additionally, all of our acreage in this play can be held by running a one-rig program over the next 18 months.

De-risked acreage position with multi-year inventory of liquids-rich drilling opportunities. As of December 31, 2013, we had a drilling inventory consisting of 1,582 gross identified horizontal drilling locations, of which approximately 145 are gross proved undeveloped locations. Based on our expected 2014 drilling program and gross identified drilling locations, we have over 42 years of liquids-rich drilling inventory. The majority of our drilling activity has been and will continue to be focused in the Terryville Complex, where we produce liquids-rich natural gas from the overpressured Cotton Valley formation. We have used subsurface data from our vertical wells coupled with 3-D seismic data to identify and prioritize our inventory based on returns. This liquids-rich gas formation allows for NGL processing that, when coupled with the condensate produced, results in strong well economics. For the nine months ended September 30, 2014, 56% of our MRD Segment revenues were attributable to natural gas, 22% to NGLs and 22% to oil.

Significant operational control with low cost operations. On a proved reserves basis, we operate 99% of our properties and have operational control of all of our drilling inventory in the Terryville Complex. We believe maintaining operational control will enable us to enhance returns by implementing more efficient and cost-effective operating practices, through the selection of economic drilling locations, opportunistic timing of development, continuous improvement of drilling, completion and stimulation techniques and development on multi-well pads. As a result of the contiguous nature of our leasehold in the Terryville Complex, its geologic continuity and cross unit lateral pooling, we are able to drill consistently long laterals, averaging over 5,071

lateral feet, which helps us to reduce costs on a per-lateral foot basis and increase our returns. We expect the average lateral length of the 33 gross wells that we expect to drill in the Terryville Complex in 2014 to be 5,824 feet per well. Operating in mature basins in North Louisiana and East Texas allows us to take advantage of the available and extensive midstream infrastructure and accelerate our development plan without encountering significant constraints in either takeaway or processing capacity. Our operational control allows us to focus on operating efficiency, which has resulted in our MRD Segment lease operating costs declining 35% from $0.50 per Mcfe for the nine months ended September 30, 2013 to $0.33 per Mcfe for the nine months ended September 30, 2014.

Proven and incentivized executive and technical team. We believe our management and technical teams are one of our principal competitive strengths due to our team s significant industry experience and long history of working together in the identification, execution and integration of acquisitions, cost efficient management of profitable, large scale drilling programs and a focus on rates of return. Additionally, our technical team has substantial expertise in advanced drilling and completion technologies and decades of expertise in operating in the North Louisiana and East Texas regions. The members of our management team collectively have an average of 22 years of experience in the oil and natural gas industry. John A. Weinzierl, our Chief Executive Officer, has 24 years of oil and natural gas industry experience as a petroleum engineer, a strong commercial and technical background and extensive experience acquiring and managing oil and natural gas properties. Our management team has a significant economic interest in us directly and through its equity interests in our controlling stockholder, MRD Holdco. We believe our management team is motivated to deliver high returns, create shareholder value and maintain safe and reliable operations.

Our relationship with MEMP. We own a 0.1% general partner interest in MEMP through our ownership of its general partner as well as 50% of MEMP s incentive distribution rights. MEMP s objective as a master limited partnership is to generate stable cash flows, allowing it to make quarterly distributions to its limited partners and, over time, to increase those quarterly distributions. As a result of its familiarity with our management team and our asset base and our track record of prior drop-down transactions, we believe that MEMP is a natural purchaser of properties from us that meet its acquisition criteria. We believe this mutually beneficial relationship enhances MEMP s ability to generate consistent returns on its oil and natural gas properties, provides us with a growing source of cash flow from our partnership interests in MEMP and allows us to monetize producing non-core properties. Since MEMP s initial public offering, we have consummated drop-down transactions with MEMP totaling approximately $391 million. In addition, we may have the opportunity to work jointly with MEMP to pursue certain acquisitions of oil and natural gas properties that may not otherwise be attractive acquisition candidates for either of us individually. While we believe that MEMP would be a preferred acquirer of our mature, non-core assets, we are under no obligation to offer to sell, and it is under no obligation to offer to buy, any of our properties.

Financial strength and flexibility. During 2013, we generated $159 million of pro forma MRD Segment Adjusted EBITDA and made pro forma total capital expenditures of $203 million. During the nine months ended September 30, 2014, we generated pro forma MRD Segment Adjusted EBITDA of $259 million and made pro forma capital expenditures of $268 million. We intend to continue to fund our organic growth predominantly with internally generated cash flows while maintaining ample liquidity for opportunistic acquisitions. We will continue to maintain a disciplined approach to spending whereby we allocate capital in order to optimize returns and create shareholder value. We seek to protect these future cash flows and liquidity levels by maintaining a three-to-five year rolling hedge program. As of September 30, 2014, our total liquidity, consisting of cash on hand and available borrowing capacity under our revolving credit facility, was approximately $650.2 million.

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Initial Public Offering and Recent Developments

On June 18, 2014, we completed our initial public offering of 49,220,000 shares of common stock at a price to the public of $19.00 per share. Of the 49,220,000 shares offered, 21,500,000 were offered by us and 27,720,000 were offered by the selling stockholder, MRD Holdco. We did not receive any proceeds from the sale of shares by MRD Holdco. We used the net proceeds of approximately $380.2 million from our sale of shares in our initial public offering (i) to redeem the 10.00%/10.75% Senior PIK toggle notes due 2018 (the PIK notes) issued by MRD LLC in their entirety and to pay the applicable premium in connection with such redemption and accrued and unpaid interest to the date of redemption, (ii) together with borrowings of approximately $614.5 million under our $2.0 billion revolving credit facility entered into in connection with the closing of our initial public offering, to make a cash payment to certain former management members of WildHorse Resources in connection with their contribution to us of their membership interests and incentive units in WildHorse Resources, (iii) to repay borrowings outstanding under WildHorse Resources revolving credit facility and second lien term loan, which we refer to collectively as WildHorse Resources credit agreements, (iv) to reimburse MRD LLC for interest paid on the PIK notes and (v) to pay costs associated with our revolving credit facility.

On July 10, 2014, we completed a private placement of $600.0 million aggregate principal amount of 5.875% senior unsecured notes (the MRD Senior Notes) at par. The MRD Senior Notes will mature on July 1, 2022. Interest on the MRD Senior Notes accrues from July 10, 2014 and will be payable semiannually on January 1 and July 1 of each year, commencing on January 1, 2015. The net proceeds of approximately $586.0 million, after deducting the initial purchasers discounts and commissions and offering expenses, were used to repay a portion of the borrowings outstanding under our revolving credit facility. The amounts to be repaid under our revolving credit facility were incurred to repay the amounts outstanding under WildHorse Resources credit facilities in connection with the closing of our initial public offering. In conjunction with the closing of the offer and sale of the MRD Senior Notes, the borrowing base under our revolving credit facility was automatically decreased by $56.5 million.

On November 4, 2014, our wholly-owned subsidiary, Terryville Mineral & Royalty Partners LP (TRVL), filed a registration statement on Form S-1 with the SEC in connection with its proposed initial public offering of common units representing limited partner interests. In connection with the closing of the proposed offering, we will contribute to TRVL certain overriding royalty interests in approximately 27,000 gross acres in the Terryville Complex in exchange for limited partner interests in TRVL. The royalty interests will entitle TRVL to receive 7% of gross revenues from production within such acreage on all of our existing horizontal producing wells and future wells completed by us. TRVL intends to distribute the net proceeds from the proposed offering to us. A registration statement relating to these securities has been filed with the SEC but has not yet become effective. These securities may not be sold nor may any offers to buy be accepted prior to the time the registration statement becomes effective, and this prospectus does not constitute an offer to sell or a solicitation of any offers to buy these securities.

Acquisition History

We built out our leasehold positions in North Louisiana, East Texas and the Rocky Mountains primarily through the following acquisition activities:

In November 2007, we acquired interests in the Joaquin Field, which is the core of our East Texas acreage;

In December 2007, we acquired interests in the Tepee Field in the Piceance Basin in Colorado;

In April and May 2010, we acquired interests in the Terryville Complex and other North Louisiana fields, which are the core of our North Louisiana acreage;

In November 2010, we acquired interests in the Spider and E. Logansport Fields in North Louisiana;

In May 2012, we acquired interests in the Terryville Complex and Double A Field in North Louisiana and East Texas;

In April 2013, we acquired interests in the West Simsboro and Simsboro Fields of the Terryville Complex in North Louisiana;

In November 2013, we acquired the remaining equity interests in Classic Hydrocarbons Holdings, L.P., Classic Hydrocarbons GP Co., L.L.C. and Black Diamond Minerals, LLC, which hold oil and natural gas properties in East Texas, North Louisiana and the Rocky Mountains; and

In February 2014, we repurchased net profits interests in the Terryville Complex from an affiliate of NGP for $63.4 million after customary adjustments. These net profits interests were originally sold to the NGP affiliate upon the completion of certain acquisitions in 2010 by WildHorse Resources.

Our Principal Stockholder

Our principal stockholder is MRD Holdco, which is controlled by the Funds, which are three of the private equity funds managed by NGP. Upon completion of this offering, MRD Holdco, one of the selling stockholders in this offering, will own approximately 40% of our common stock (or approximately 38% if the underwriters option to purchase additional shares from the selling stockholders is exercised in full). Pursuant to a voting agreement, MRD Holdco also has the right to direct the vote of an additional approximately 18% of our common stock (or approximately 18% if the underwriters option to purchase additional shares from the selling stockholders is exercised in full) owned by certain former management members of WildHorse Resources (including the other selling stockholders). The Funds also collectively indirectly own 50% of MEMP s incentive distribution rights, and MRD Holdco owns 5,360,912 subordinated units of MEMP, representing an approximate 6.2% limited partner interest in MEMP. We are also a party to certain other agreements with MRD Holdco, the Funds and certain of their affiliates. For a description of the voting agreement and these other agreements, please read Certain Relationships and Related Party Transactions.

Founded in 1988, NGP is a family of private equity investment funds, with cumulative committed capital of over $14.5 billion since inception, organized to make investments in the natural resources sector. NGP is part of the investment platform of NGP Energy Capital Management, a premier investment franchise in the natural resources industry, which together with its affiliates has managed over $17 billion in cumulative committed capital since inception.

Our Interest in Memorial Production Partners LP

Through our ownership of its general partner, we control MEMP. We also own 50% of its incentive distribution rights. MEMP is a publicly traded limited partnership engaged in the acquisition, exploitation, development and production of oil and natural gas properties in the United States, with assets consisting primarily of producing oil and natural gas properties that are located in East Texas/North Louisiana, the Rockies, South Texas, the Permian and offshore southern California. Most of MEMP s properties are located in large, mature oil and natural gas reservoirs with well-known geologic characteristics and long-lived, predictable production profiles and modest capital requirements. Because we control MEMP, we are required to consolidate MEMP for accounting and financial reporting purposes, even though we and MEMP have independent capital structures.

During the year ended December 31, 2013 and nine months ended September 30, 2014, less than $0.1 million and $0.1 million of distributions, respectively, were made in respect of the MEMP incentive distribution rights. Please see Business Relationship with Memorial Production Partners LP for further information on our interest in MEMP.

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Risk Factors

Investing in our common stock involves risks that include the speculative nature of oil and natural gas exploration, competition, volatile commodity prices and other material factors. For a discussion of these risks and other considerations that could negatively affect us, including risks related to this offering and our common stock, please read Risk Factors beginning on page 23 of this prospectus and Cautionary Note Regarding Forward-Looking Statements.

Corporate History and Structure

We are a Delaware corporation formed by MRD LLC in January 2014 engaged in the acquisition, exploitation, and development of natural gas, NGL and oil properties primarily in North Louisiana and East Texas. MRD LLC was a Delaware limited liability company formed on April 27, 2011 by the Funds to own, acquire, exploit and develop oil and natural gas properties.

We completed our initial public offering on June 18, 2014. In connection with the closing of our initial public offering, MRD LLC contributed to us substantially all of its assets, comprised of the following, in exchange for shares of our common stock (which were distributed to MRD LLC s sole member, MRD Holdco): (1) 100% of its ownership interests in Classic Hydrocarbons Holdings, L.P. (Classic), Classic Hydrocarbons GP Co., L.L.C. (Classic GP), Black Diamond Minerals, LLC (Black Diamond), Beta Operating Company, LLC (Beta Operating), MRD Operating LLC (MRD Operating) and MEMP GP, which owns a 0.1% general partner interest and 50% of the incentive distribution rights in MEMP, and (2) its 99.9% membership interest in WildHorse Resources. In addition, certain former management members of WildHorse Resources contributed to us the remaining 0.1% membership interest in WildHorse Resources, and also exchanged their incentive units in WildHorse Resources, for shares of our common stock and cash consideration. As a result, we are majority-owned by the group consisting of MRD Holdco and certain former management members of WildHorse Resources.

Following the completion of our initial public offering, MRD LLC distributed to MRD Holdco (i) its interests in BlueStone, MRD Royalty LLC, MRD Midstream, Golden Energy Partners LLC (Golden Energy) and Classic Pipeline; (ii) the MEMP subordinated units; (iii) the remaining cash released from its debt service reserve account in connection with the redemption of the PIK notes; and (iv) approximately $6.7 million of cash received by MRD LLC in connection with the sale of Golden Energy s assets in May 2014. We also reimbursed MRD LLC for the approximately $17.2 million interest payment that it made on the PIK notes on June 15, 2014, which was distributed to MRD Holdco.

As part of the restructuring transactions, we merged Black Diamond into MRD Operating, and MRD LLC was merged into MRD Operating upon the termination of the PIK notes indenture on June 27, 2014.

For more information regarding BlueStone, see Management s Discussion and Analysis of Financial Condition and Results of Operations Results of Operations MRD Segment. For more information about the services agreement with WildHorse Resources, see Certain Relationships and Related Party Transactions Services Agreement.

The following diagram shows our ownership structure after giving effect to this offering, assuming no exercise of the underwriters option to purchase additional shares from the selling stockholders, and does not give effect to 19,250,000 shares of common stock reserved for future issuance under the Memorial Resource Development Corp. 2014 Long Term Incentive Plan (described in Management 2014 Long Term Incentive Plan). See Principal and Selling Stockholders for the number of shares being offered by MRD Holdco and the other selling stockholders, respectively.

(1) If the underwriters exercise in full their option to purchase additional shares of common stock from the selling stockholders, the ownership interest of the public stockholders will increase to 84,779,211 shares of common stock, representing an aggregate 44% ownership interest in us, MRD Holdco will own 74,269,433 shares of common stock, representing an aggregate 38% ownership interest in us and certain former management members of WildHorse Resources will own 34,510,567 shares of common stock, representing an aggregate 18% ownership interest in us.
(2) As of October 31, 2014.
(3) The Funds refer collectively to Natural Gas Partners VIII, L.P., Natural Gas Partners IX, L.P. and NGP IX Offshore Holdings, L.P., which collectively control MRD Holdco. Please read Principal and Selling Stockholders for information regarding beneficial ownership. The Funds collectively indirectly own 50% of the Partnership s incentive distribution rights.
(4) Subsidiaries of MRD Holdco include BlueStone, MRD Royalty, MRD Midstream, Golden Energy and Classic Pipeline. Also, please see the Principal and Selling Stockholders table on page 148 for the beneficial ownership of our shares by our executive officers and directors.
(5) Includes Classic, Classic GP and Beta Operating.

Corporate Information

Our principal executive offices are located at 500 Dallas St., Suite 1800, Houston, Texas 77002, and our phone number is (713) 588-8300. Our website address is www.memorialrd.com. We make our periodic reports and other information filed with or furnished to the Securities and Exchange Commission, which we refer to as

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the SEC, available free of charge through our website as soon as reasonably practicable after those reports and other information are electronically filed with or furnished to the SEC. Information on our website or any other website is not incorporated by reference into, and does not constitute a part of, this prospectus.

Emerging Growth Company Status

We are an emerging growth company as defined in the Jumpstart Our Business Startups Act (the JOBS Act). For as long as we are an emerging growth company, unlike other public companies that are not emerging growth companies, we are not required to:

- provide an auditor s attestation report on management s assessment of the effectiveness of our system of internal control over financial reporting pursuant to Section 404 of the Sarbanes-Oxley Act of 2002;
- provide more than two years of audited financial statements and related management s discussion and analysis of financial condition and results of operations;
- comply with any new requirements adopted by the Public Company Accounting Oversight Board, or the PCAOB, requiring mandatory audit firm rotation or a supplement to the auditor s report in which the auditor would be required to provide additional information about the audit and the financial statements of the issuer;
- provide certain disclosure regarding executive compensation required of larger public companies or hold shareholder advisory votes on executive compensation required by the Dodd-Frank Wall Street Reform and Consumer Protection Act (the Dodd-Frank Act); or
- obtain shareholder approval of any golden parachute payments not previously approved.

We will cease to be an emerging growth company upon the earliest of: