

Gastar Exploration Inc.
Form 424B5
September 19, 2014
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Filed Pursuant to Rule 424(b)(5)
Registration No 333-193832

PROSPECTUS SUPPLEMENT

(To Prospectus dated February 24, 2014)

17,000,000 Shares

Gastar Exploration Inc.
Common Stock

This is an offering of 17,000,000 shares of the common stock of Gastar Exploration Inc.

Our common stock trades on the NYSE MKT LLC (NYSE MKT) under the symbol GST. The last reported trading price of our common stock on September 18, 2014 was \$6.52 per share.

Investing in our common stock involves risks. See Risk Factors beginning on page S-17 of this prospectus supplement and page 7 of the accompanying base prospectus.

	Per Share	Total
Price to the public	\$ 6.250000	\$ 106,250,000.00
Underwriting discount	\$ 0.265625	\$ 4,515,625.00
Proceeds to Gastar Exploration Inc. (before expenses)	\$ 5.984375	\$ 101,734,375.00

We have granted the underwriters a 30-day option to purchase up to 2,550,000 additional shares of common stock on the same terms and conditions as set forth above.

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 September 24, 2014.

Barclays

Johnson Rice & Company L.L.C.

Wells Fargo Securities

Tudor, Pickering, Holt & Co.

Imperial Capital

Euro Pacific Capital, Inc.

IBERIA Capital Partners L.L.C.

MLV & Co.

Wunderlich Securities

Heikkinen Energy Advisors

Topeka Capital Markets

Prospectus Supplement dated September 18, 2014

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ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is the prospectus supplement and the documents incorporated by reference herein, which describes the specific terms of this offering of our common stock. The second part is the accompanying base prospectus, which gives more general information, some of which may not apply to our common stock or this offering. If the information relating to the offering varies between the prospectus supplement and the accompanying base prospectus, you should rely on the information in this prospectus supplement.

You should rely only on the information contained in or incorporated by reference into this prospectus supplement, the accompanying base prospectus and any related free writing prospectus. We have not, and the underwriters have not, authorized any dealer, salesman or other person to provide you with additional or different information. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus supplement and the accompanying base prospectus are not an offer to sell or the solicitation of an offer to buy any securities other than the securities to which they relate and are not an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make an offer or solicitation in that jurisdiction. You should not assume that the information contained in this prospectus supplement is accurate as of any date other than the date on the front cover of this prospectus supplement, or that the information contained in any document incorporated by reference is accurate as of any date other than the date of the document incorporated by reference, regardless of the time of delivery of this prospectus supplement or any sale of a security.

CERTAIN TERMS USED IN THIS PROSPECTUS SUPPLEMENT

Unless indicated otherwise in this prospectus supplement or the context requires otherwise:

All references to the **Chesapeake Parties** refer to Chesapeake Exploration, L.L.C. and Larchmont Resources, L.L.C.

All references to the **Lime Rock Parties** refer to Lime Rock Resources II-A, L.P. and Lime Rock Resources II-C, L.P.

All references to the **Chesapeake Acquisition** refer to our June 7, 2013 acquisition of approximately 157,000 net acres of Oklahoma oil and gas leasehold interests, including production from interests in 206 producing wells located in Oklahoma.

All references to the **AMI Election Disposition** refer to our sale of approximately 12,800 net acres and 50% of the interest in 62 producing wells acquired in the Chesapeake Acquisition (effective October 1, 2012) to our partner in an area of mutual interest in Oklahoma (the **AMI**) on July 1, 2013, pursuant to the exercise of its rights within the AMI in connection with the properties acquired in the Chesapeake Acquisition.

All references to the **Newfield Disposition** refer collectively to the sale to Newfield Exploration Mid-Continent Inc. (**Newfield**) of approximately 76,000 net acres in Kingfisher and Canadian Counties, Oklahoma and our acquisition from Newfield of approximately 1,850 net acres of Oklahoma oil and gas leasehold interests, each completed on August 6, 2013.

All references to the **East Texas Disposition** refer to the sale to Cubic Energy, Inc. of approximately 16,300 net acres of leasehold interests in the Hilltop area of East Texas in Leon and Robertson Counties, Texas, including production from interests in producing wells completed on October 2, 2013.

All references to the **WEHLU Acquisition** refer to our November 15, 2013 acquisition of a 98.3% working interest (80.5% net revenue interest) in 24,000 net acres of the West Edmond Hunton Lime Unit (**WEHLU**) located in Kingfisher, Logan, and Oklahoma counties, Oklahoma, all of which is held by production.

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WHERE YOU CAN FIND MORE INFORMATION

We have filed a registration statement with the Securities and Exchange Commission (the "SEC") under the Securities Act of 1933, as amended (the "Securities Act"), that registers the offer and sale of the common stock covered by this prospectus supplement and the accompanying base prospectus. The registration statement, including the exhibits attached to the registration statement, contains additional relevant information about us.

We incorporate by reference information into this prospectus supplement. This means that we are disclosing important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is considered to be part of this prospectus supplement, except for any information superseded by information contained expressly in this prospectus supplement, and the information that we file later with the SEC will automatically supersede this information. We incorporate by reference the documents and financial statements (including related auditor's reports) listed below, which were filed with the SEC by us, other than any portions of the respective filings that were furnished (pursuant to Item 2.02 or Item 7.01 of Current Reports on Form 8-K or other applicable SEC rules) rather than filed:

Our Annual Report on Form 10-K for the fiscal year ended December 31, 2013, filed with the SEC on March 13, 2014;

Our Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2014 and June 30, 2014, filed with the SEC on May 7, 2014 and August 7, 2014, respectively;

Our Current Reports on Form 8-K filed with the SEC on January 22, 2014, January 31, 2014, February 6, 2014, March 13, 2014, March 25, 2014, April 11, 2014, April 16, 2014, April 17, 2014, June 12, 2014, June 23, 2014, July 23, 2014, August 7, 2014, August 8, 2014, August 15, 2014 and September 15, 2014;

The description of our common stock contained in Exhibit 99.1 to our Current Report on Form 8-K, filed with the SEC on January 31, 2014, including any amendment that we may file in the future for the purpose of updating the description of our common stock;

The statements of revenues and direct operating expenses for the Chesapeake Acquisition Properties for the year ended December 31, 2012 and the three months ended March 31, 2013 filed as Exhibits 99.1 to our Current Reports on Form 8-K/A filed with the SEC on June 27, 2013 and October 28, 2013;

The statements of revenues and direct operating expenses for the WEHLU Acquisition Properties for the years ended December 31, 2012 and 2011 filed as Exhibit 99.2 to our Current Report on Form 8-K filed with the SEC on October 28, 2013;

The unaudited pro forma combined financial statements for the Chesapeake Acquisition Properties and the WEHLU Acquisition Properties for the nine month periods ended September 30, 2013 and the year ended December 31, 2012 filed as Exhibit 99.1 to our Quarterly Report on Form 10-Q filed with the SEC on November 5, 2013; and

The unaudited pro forma combined statement of operations for Gastar Exploration, Inc. for the year ended December 31, 2013 filed as Exhibit 99.1 to our Current Report on Form 8-K filed with the SEC on March 25, 2014.

Any future filing we make with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") (excluding any information furnished pursuant to Item 2.02 or Item 7.01 on any Current Report on Form 8-K), including all such documents or amendments we may file with the SEC before the termination of the offering of securities under this prospectus supplement will be deemed to be incorporated by reference into this prospectus supplement and will be a part of this prospectus supplement from the date of the filing of the document. Any statement contained in a document incorporated or deemed to be incorporated by reference into this prospectus

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supplement will be deemed to be modified or superseded for purposes of this prospectus supplement to the extent that a statement contained in this prospectus supplement or in any other subsequently filed document that also is

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or is deemed to be incorporated by reference into this prospectus supplement modifies or supersedes that statement. Any statement that is modified or superseded will not constitute a part of this prospectus supplement, except as modified or superseded.

You may request a copy of these filings, other than an exhibit to these filings unless we have specifically incorporated that exhibit by reference into the filing, at no cost, by writing or calling:

Gastar Exploration Inc.

1331 Lamar Street, Suite 650

Houston, TX 77010

Attention: Investor Relations

(713) 739-1800

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CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement includes forward-looking information that is intended to be covered by the forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act and Section 21E of the Exchange Act. All statements other than statements of historical fact included or incorporated by reference in this prospectus supplement are forward-looking statements, including without limitation all statements regarding future plans, business objectives, strategies, expected future financial position or performance, expected future operational position or performance, budgets and projected costs, future competitive position or goals and/or projections of management for future operations. In some cases, you can identify a forward-looking statement by terminology such as may, will, could, should, expect, plan, project, intend, anticipate, believe, estimate, predict, potential, pursue, target or continue or variations thereon, or other comparable terminology.

The forward-looking statements contained in this prospectus supplement are largely based on our expectations and beliefs concerning future developments and their potential effect on us, which reflect certain estimates and assumptions made by our management. These estimates and assumptions reflect our best judgment based on currently known market conditions, operating trends, and other factors. Forward-looking statements may include statements that relate to, among other things, our:

financial position;

business strategy and budgets;

anticipated capital expenditures;

drilling of wells, including the anticipated scheduling and results of such operations;

oil, natural gas and natural gas liquids (NGLs) reserves;

timing and amount of future production of oil, condensate, natural gas and NGLs;

operating costs and other expenses;

cash flow and anticipated liquidity;

prospect development; and

property acquisitions and sales.

Although we believe such estimates and assumptions to be reasonable, they are inherently uncertain and involve a number of risks and uncertainties that are beyond our control. As such, management's assumptions about future events may prove to be inaccurate. These cautionary statements qualify all forward-looking statements attributable to us or persons acting on our behalf. Management cautions all readers that the forward-looking statements contained in this prospectus supplement are not guarantees of future performance, and we cannot assure any reader that such statements will be realized or that the events and circumstances they describe will occur. Factors that could cause actual results to differ materially from those anticipated or implied in the forward-looking statements herein include, but are not limited to:

the extent to which we are able to realize the anticipated benefits from acquired assets;

the supply and demand for oil, condensate, natural gas and NGLs;

low and/or declining prices for oil, condensate, natural gas and NGLs;

price volatility of oil, condensate, natural gas and NGLs;

worldwide political and economic conditions and conditions in the energy market;

our ability to raise capital to fund capital expenditures or repay or refinance debt upon maturity;

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the ability and willingness of our current or potential counterparties, third-party operators or vendors to enter into transactions with us and/or fulfill their obligation to us;

failure of our joint interest partners to fund any or all of their portion of any capital program;

the ability to find, acquire, market, develop and produce new oil and natural gas properties;

uncertainties about the estimated quantities of oil and natural gas reserves and in the projection of future rates of production and timing of development expenditures of proved reserves;

strength and financial resources of competitors;

availability and cost of material and equipment, such as drilling rigs and transportation pipelines;

availability and cost of processing and transportation;

changes or advances in technology;

the risks associated with exploration, including cost overruns and the drilling of non-economic wells or dry wells, operating hazards inherent to the natural gas and oil business and down hole drilling and completion risks that are generally not recoverable from third parties or insurance;

potential mechanical failure or under-performance of significant wells or pipeline mishaps;

environmental risks;

possible new legislative initiatives and regulatory changes potentially adversely impacting our business and industry, including, but not limited to, national healthcare, hydraulic fracturing, state and federal corporate income taxes, retroactive royalty or production tax regimes, changes in environmental regulations, environmental risks and liability under federal, state and local environmental laws and regulations;

effects of the application of applicable laws and regulations, including changes in such regulations or the interpretation thereof;

potential losses from pending or possible future claims, litigation or enforcement actions;

potential defects in title to our properties or lease termination due to lack of activity or other disputes with mineral lease and royalty owners, whether regarding calculation and payment of royalties or otherwise;

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the weather, including the occurrence of any adverse weather conditions and/or natural disasters affecting our business;

our ability to find and retain skilled personnel; and

any other factors that impact or could impact the exploration of natural gas or oil resources, including, but not limited to, the geology of a resource, the total amount and costs to develop recoverable reserves, legal title, regulatory, natural gas administration, marketing and operational factors relating to the extraction of natural gas and oil.

You should not unduly rely on these forward-looking statements in this prospectus supplement, as they speak only as of the date of this prospectus supplement. Except as required by law, we undertake no obligation to publicly update, revise or release any revisions to these forward-looking statements after the date they are made, whether as a result of new information, future events or otherwise, to reflect events or circumstances occurring after the date of this prospectus supplement or to reflect the occurrence of unanticipated events.

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SUMMARY

*This summary highlights basic information about our business and this offering. It does not contain all of the information that may be important to you and your investment decision. The following summary is qualified in its entirety by the more detailed information and financial statements and notes thereto included or incorporated by reference in this prospectus supplement and the accompanying base prospectus. We urge you to read carefully the entire prospectus supplement, the accompanying base prospectus and the documents we have incorporated by reference, including our financial statements and the notes to those statements, before making an investment decision. We also encourage you to read *Risk Factors* and our discussion of other risks and uncertainties in our reports filed with the SEC under the Exchange Act, particularly our Annual Report on Form 10-K for the year ended December 31, 2013 and our Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2014 and June 30, 2014, which are incorporated by reference into this prospectus supplement and the accompanying base prospectus.*

*Unless otherwise indicated or required by the context, (i) for any date or period prior to January 31, 2014, *Gastar*, the *Company*, *we*, *us*, *our* and similar terms refer collectively to *Gastar Exploration, Inc.* (formerly known as *Gastar Exploration Ltd.*) and its subsidiaries, including *Gastar Exploration Inc.* (formerly known as *Gastar Exploration USA, Inc.*), and for any date or period after January 31, 2014, such terms refer collectively to *Gastar Exploration Inc.* and its subsidiaries, (ii) *Gastar USA* refers to *Gastar Exploration USA, Inc.*, which until January 31, 2014 was a first-tier subsidiary of *Gastar Exploration, Inc.* and primary operating company as of December 31, 2013, (iii) *Parent* refers to *Gastar Exploration, Inc.*, (iv) all dollar amounts appearing in this prospectus supplement and the accompanying base prospectus are stated in United States dollars (*U.S. dollars*) unless otherwise noted and (v) all financial data included in this prospectus supplement and the accompanying base prospectus have been prepared in accordance with generally accepted accounting principles in the United States of America (*U.S. GAAP*). On January 31, 2014, *Gastar Exploration, Inc.* merged with and into *Gastar USA* as part of a reorganization to eliminate the holding company corporate structure of *Parent*. Pursuant to the merger agreement, shares of *Parent*'s common stock were converted into an equal number of shares of common stock of *Gastar USA* and *Gastar USA* changed its name to *Gastar Exploration Inc.* *Gastar Exploration Inc.*, together with its subsidiary, owns and will continue to conduct *Gastar*'s business in substantially the same manner as was being conducted by *Parent* and its subsidiaries prior to the merger.*

*We have provided definitions for some of the natural gas and oil industry terms used or incorporated by reference in this prospectus supplement and the accompanying base prospectus in the *Glossary of Terms* on page A-1. We have provided definitions for certain other terms used in this prospectus supplement and the accompanying base prospectus on page S-ii under the heading *Certain Terms Used in this Prospectus Supplement*. Unless otherwise noted, all references to a well refer to a horizontal well. Unless another date is specified, all operational data presented in this prospectus supplement is as of August 31, 2014.*

Company Overview

We are an independent energy company engaged in the exploration, development and production of oil, condensate, natural gas and NGLs in the United States. Our principal business activities include the identification, acquisition, and subsequent exploration and development of oil and natural gas properties with an emphasis on unconventional reserves, such as shale resource plays. In Oklahoma, we are currently pursuing development within the primarily oil-bearing reservoirs of the Hunton Limestone horizontal play and will test other prospective formations on the same acreage, including the Woodford Shale and the Meramec Shale (middle Mississippi Lime), which we refer to as the Mid-Continent Stack Play. In West Virginia, we are continuing the development of liquids-rich natural gas in the Marcellus Shale and are beginning to drill the dry gas Utica Shale play on our acreage. We believe that the quality and diversity of our properties reduces our development risk and allows us to take advantage of underlying economic and commodity pricing trends.

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As of June 30, 2014, our total proved reserves based on SEC pricing, as estimated by Wright & Company, Inc. (Wright), were 78.0 MMBoe (467.9 Bcfe), consisting of 20.4 MMBbl of oil, 253.7 Bcf of natural gas and 15.3 MMBbl of NGLs. The PV-10 value of these proved reserves as of June 30, 2014 was approximately \$826.3 million based on SEC pricing. See Summary Historical Reserves and Historical and Pro Forma Production Data for additional information regarding our reserves and a reconciliation of PV-10, a non-GAAP financial measure, to standardized measure of discounted future net cash flows relating to proved oil and natural gas reserves.

Since 2010, we have successfully utilized pad drilling techniques along with horizontal drilling technologies and multi-stage hydraulic fracture stimulation to increase our production and reserves. As of August 31, 2014, we have successfully drilled and completed a total of 25 gross (14.0 net) wells in the Hunton Limestone play, 57 gross (27.0 net) wells in the Marcellus Shale play and one gross (0.5 net) well in the Utica Shale play.

For the six months ended June 30, 2014, we placed on production 10 gross (5.6 net) wells in the Hunton Limestone play. During this same period, average daily production on our properties increased approximately 17% to 9.6 MBoe/d compared to the six months ended June 30, 2013 and increased approximately 8% compared to our annual average daily production for 2013. We have also increased our percentage of oil and NGLs production from 28% in the six months ended June 30, 2013 to 45% in the six months ended June 30, 2014. Since June 30, 2014, we have placed on production seven gross (4.1 net) wells in the Hunton Limestone play and one gross (0.5 net) well in the Utica Shale play. We are scheduled to bring on production an additional 11 gross (6.8 net) wells in the Hunton Limestone play and 10 gross (5.0 net) wells in the Marcellus Shale play by year-end.

Through recent expansions of our acreage position and drilling activity, we believe that we have created a multi-year inventory of drilling opportunities throughout our properties. We have identified 520.0 net potential drilling locations in the Hunton Limestone play, 512.0 net potential drilling locations in the Mid-Continent Stack Play, 106.0 net potential drilling locations in the Marcellus Shale play and 58.5 net potential drilling locations in the Utica Shale play.

As of June 30, 2014, our cash balance was \$24.8 million and we had \$20.0 million of debt outstanding under our revolving credit facility (the Revolving Credit Facility). The borrowing base for the Revolving Credit Facility was increased from \$120 million to \$145 million on August 13, 2014. We intend to use part of the net proceeds from this offering to repay all the outstanding borrowings under our Revolving Credit Facility as described under Use of Proceeds.

Our Properties

Unless otherwise indicated, the following table presents summary data for each of our primary areas of development as of June 30, 2014.

	Net Acreage	Identified Net Potential Drilling Locations as of August 31, 2014 (1)(2)	Estimated Net Proved Reserves (3)		Average Daily Production for the Six Months Ended	
			MMBoe	% Developed	June 30, 2014 MBoe/d	% Liquids
Mid-Continent:						
Hunton Limestone	126,000	520.0	22.5	44%	3.7	68%
Mid-Continent Stack Play (4)		512.0				
Total	126,000	1,032.0	22.5	44%	3.7	68%
Appalachian Basin:						
Marcellus West	13,700	106.0	55.4	36%	5.8	30%
Marcellus East	45,200		0.1	100%	0.1	0%
Utica Shale (5)		58.5				
Total	58,900	164.5	55.5	36%	5.9	30%
Total	184,900	1,196.5	78.0	38%	9.6	45%

- (1) Net potential drilling locations in the Mid-Continent area have been identified along the geological trend believed to be most prospective for middle and lower Hunton Limestone development, which is supported by information from

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thousands of vertical wells that intersect the Hunton Limestone formation and by recent horizontal drilling along the trend by us, our operating partner and other operators. In identifying net potential drilling locations in the Mid-Continent area, the number of Lower Hunton and Mid-Continent Stack Play locations are each based upon 320-acre well spacing and drainage. Under Oklahoma forced pooling rules, we believe that all available net acres identified along the geological trend can be utilized. We have not committed to drill any specific number of our potential drilling locations. For our acreage in the WEHLU, we assume the Upper Hunton (Bois d Arc) Limestone will be developed on 115-acre well spacing and the Lower Hunton (Chimney Hill) Limestone based on 140-acre well spacing.

Our identified net potential drilling locations in the Marcellus Shale and Utica Shale are actual surface locations that have been specifically identified by management for future drilling units based on an evaluation of applicable geological, seismic, engineering, production and reserve data on nearby acreage and geological formations, including successful drilling efforts by other operators in the area. In identifying net potential drilling locations in the Marcellus Shale, we have assumed 400-foot well spacing, which we have recently successfully tested. In identifying net potential drilling locations in the Utica Shale area, we have assumed 1,000-foot well spacing.

- (2) Of the 1,196.5 identified net potential drilling locations, 73.1 and 34.6 net locations were associated with proved undeveloped reserves in the Hunton Limestone and Marcellus Shale, respectively.
- (3) Our estimated proved reserves and related future net revenues and PV-10, as estimated by Wright at June 30, 2014, were determined using benchmark prices that are the 12-month un-weighted arithmetic average of the first-day-of-the-month prices for oil and natural gas. The benchmark base prices used were \$100.11 per barrel for West Texas Intermediate oil at Cushing, Oklahoma, and \$4.104 per MMBtu for natural gas at Henry Hub, Louisiana. The NGLs product price was estimated to range from 26 to 48 percent of the base oil price depending on area. The overall resulting weighted average adjusted price is \$30.14 per barrel of NGLs. These prices are held constant in accordance with SEC definitions and guidelines for the life of the wells included in the reserve reports but are adjusted by lease in accordance with sales contracts and for energy content, quality, transportation, compression and gathering fees and regional price differentials. Estimated quantities of proved reserves and future net revenues are affected by natural gas and oil prices, which have fluctuated significantly in recent years. All of our proved reserves are located onshore within the United States.
- (4) 84,200 net acres prospective for the Mid-Continent Stack Play are included in total Hunton Limestone net acres.
- (5) 9,600 net acres prospective for the Utica Shale are included in total Marcellus West net acres.

For more information about our proved reserves and production data, see Summary Historical Reserves and Historical and Pro Forma Production Data.

Mid-Continent

We have recently focused on a new horizontally drilled oil play in Oklahoma primarily targeting the Hunton Limestone formation, which we refer to as our Mid-Continent area. The Hunton Limestone is a limestone formation stretching over approximately 2.7 million acres mainly in Oklahoma, but also in the neighboring states of Texas, New Mexico and Arkansas. Hunton Limestone economics are attractive due to the high quality oil production, the associated production of high Btu content natural gas in the area and low water volumes produced with the oil. We began building an acreage position in the Mid-Continent area in 2012 through a joint venture with a privately held third-party operator, which we refer to as our AMI Partner. Initial operations with our AMI Partner were focused in an AMI in Garfield and Kingfisher Counties, Oklahoma, but subsequently expanded to include additional AMIs covering portions of Garfield, Major and Blaine Counties in Oklahoma. On certain mutually-owned interests, our AMI Partner handles all drilling, completion and production activities, while we handle all leasing and permitting activities.

In 2013, we significantly expanded our Mid-Continent position through the acquisition of approximately 157,000 net acres of Oklahoma oil and gas leasehold interests, including production from 206 producing wells located in Oklahoma, from the Chesapeake Parties and the acquisition of a 98.3% working interest (80.5% net revenue interest) in 24,000 net acres in the WEHLU from the Lime Rock Parties. As of June 30, 2014, our consolidated position in the Mid-Continent area consisted of approximately 222,800 gross (126,000 net) acres and 520.0 net potential drilling locations in areas prospective for the Hunton Limestone horizontal oil play and 512.0 net potential drilling locations in the Mid-Continent Stack Play. We operate approximately 70% of our Mid-Continent net acreage.

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We and our AMI Partner have drilled, completed and placed on production 20 gross (9.4 net) wells in the AMI portion of our Mid-Continent area. We are in the process of completing or commencing flow back operations on six gross (2.5 net) wells and drilling five gross (2.3 net) wells. We have drilled, completed and placed on production five gross (4.7 net) wells on our operated acreage. We are in the process of completing two gross (2.0 net) operated wells and drilling one gross (1.0 net) operated well.

For the six months ended June 30, 2014, our average daily net production in the Mid-Continent area was 3.7 MBoe/d, approximately 68% of which was oil, condensate and NGLs.

Marcellus and Utica Shales

We own, develop and operate properties in West Virginia, and to a lesser extent Pennsylvania, where we target liquids-rich natural gas from the Marcellus Shale formation. The Marcellus Shale is a Devonian aged shale that underlies much of the Appalachian region of Pennsylvania, New York, Ohio, West Virginia and adjacent states. The depth of the Marcellus Shale and its low permeability make the Marcellus Shale an unconventional exploration target in the Appalachian Basin. Advancements in horizontal drilling and stimulation have enhanced results in the Marcellus Shale. These developments as well as the high liquids content of our Marcellus West acreage have resulted in increased leasing and drilling activity in the area. As of June 30, 2014, our acreage position in the play was approximately 81,600 gross (58,900 net) acres. We have approximately 31,400 gross (13,700 net) acres in West Virginia and Pennsylvania subject to the Atinum Joint Venture (described below), which we refer to as our Marcellus West acreage. We have approximately 50,200 gross (45,200 net) acres in Preston, Tucker, Pocahontas, Randolph and Pendleton Counties, West Virginia, which we refer to as our Marcellus East acreage. Our Marcellus West acreage is rich in NGLs and condensate with yields for the six months ended June 30, 2014 averaging approximately 48 barrels of NGLs and 24 barrels of condensate per MMcf of natural gas sold. Our Marcellus East acreage is expected to produce dry natural gas. The entirety of our West Virginia acreage is believed to be in the core, over-pressured area of the Marcellus Shale play. We continue to opportunistically swap acreage with adjacent operators in order to optimize our acreage and maximize horizontal lateral lengths. We estimate that we have 106.0 net remaining potential drilling locations in areas that are prospective for the Marcellus Shale.

The Utica Shale is an Ordovician aged shale that underlies much of the Appalachian region of Pennsylvania, Ohio and West Virginia. The depth of the Utica Shale and its low permeability make it an unconventional exploration target in the Appalachian Basin. Based on log analysis of offsetting wells, our well and other operators' recent Utica Shale well completions, we believe that approximately 22,500 gross (9,600 net) acres of our Marcellus West acreage should be prospective for high-pressure, high-deliverability dry natural gas development in the Utica Shale. We recently completed our first Utica Shale well, the Simms U-5H, to a total vertical depth of 11,500 feet and drilled a 4,400-foot lateral and completed it with a 25-stage fracture stimulation. The Simms U-5H well initial 48-hour gross sales rate was 29.4 MMcf/d with flowing casing pressure on a 30/64ths choke of approximately 6,700 psi. We estimate that we have 58.5 net remaining potential drilling locations in areas that are prospective for the Utica Shale.

In September 2010, we entered into a joint venture (the Atinum Joint Venture), pursuant to which certain of our Marcellus Shale assets are owned on a 50/50 basis with Atinum Partners Co. Ltd. (Atinum), and Atinum has the right to participate in any future leasehold acquisition made by us within Ohio, New York, Pennsylvania and West Virginia, excluding certain counties.

The Atinum Joint Venture drilled and completed 57 gross wells by June 30, 2014. All of our current and future Marcellus Shale and Utica Shale well operations in the Marcellus West area will be under the Atinum Joint Venture.

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For the six months ended June 30, 2014, our average daily net production in the Marcellus Shale was 5.9 MBoe/d, approximately 30% of which was oil, condensate and NGLs.

Our Strengths

We possess a number of strengths that we believe will help us successfully execute our business strategy, including:

High Quality and Balanced Reserve Base. At June 30, 2014, our major assets consisted of approximately 222,800 gross (126,000 net) acres in Oklahoma and approximately 81,600 gross (58,900 net) acres in the Marcellus Shale in West Virginia and southwestern Pennsylvania, of which 22,500 gross (9,600 net) acres have Utica Shale potential. Our Mid-Continent wells are characterized by high oil content, and our Marcellus Shale wells are liquids-rich and provide an attractive rate of return even in a low natural gas price environment. Our Marcellus Shale assets are in close proximity to several other fields operated by leading companies in the industry, including Antero Resources Corporation, Rice Energy, Inc. and Chesapeake Energy Corporation, which, when combined with our production history, we believe further confirms the quality of the location of our properties, reduces our development risk and attracts oilfield service and midstream providers. Our Mid-Continent assets are in close proximity to the current Mid-Continent Stack Play focused drilling activity of Newfield Exploration Company, Devon Energy Corporation, Longfellow Energy, LP and other companies.

As of June 30, 2014, the combined PV-10 value of our proved reserves was approximately \$826.3 million based on SEC pricing. See Summary Historical Reserves and Historical and Pro Forma Production Data for additional information regarding our reserves and a reconciliation of PV-10, a non-GAAP financial measure, to standardized measure. Of our proved reserve volumes, 54% were natural gas and 46% were oil, condensate and NGLs.

Strong Historical Growth Profile with Extensive Drilling Inventory. We have increased our average daily production from 3.5 MBoe/d for the year ended December 31, 2010 to 9.6 MBoe/d for the six months ended June 30, 2014, resulting in a compounded annual growth rate of 33%. We believe that the expansion of our acreage position and our drilling activity in the Mid-Continent area and Appalachian Basin has provided us with a multi-year inventory of drilling opportunities, which will allow us to continue to grow production in the future. We have identified approximately 520.0 net potential undrilled proved and unproved Hunton Limestone drilling locations, 512.0 net potential unproved locations in the Mid-Continent Stack Play in Oklahoma, 106.0 net potential undrilled proved and unproved Marcellus Shale horizontal drilling locations in the liquids-rich areas of Marshall and Wetzel Counties, West Virginia and 58.5 net remaining potential undrilled proved and unproved Utica Shale horizontal drilling locations in Marshall and Wetzel Counties, West Virginia.

Ability to Allocate Capital to Either Oil or Natural Gas Opportunities. Our recent acquisitions in the primarily oil-bearing Hunton Limestone play in Oklahoma complement our mostly natural gas reserves in the Marcellus and Utica Shale plays. Recent drilling results and our large portfolio of development opportunities in both oil-rich and natural gas plays provide us with increased flexibility to allocate capital to effectively capture varying economic and technical factors, including well costs, service availability, production take-away capacity and commodity prices. We believe this flexibility afforded by our asset diversity will enable us to generate cash flow growth and maximize returns from our future capital expenditure programs.

High Degree of Horizontal Drilling Experience Combined with Operational Control. We believe that we have assembled an experienced team of operating professionals with the specialized skills needed to plan and execute our drilling program. We have drilled and completed 25 gross (14.0 net) wells in the

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Hunton Limestone play, 57 gross (27.0 net) wells in the Marcellus Shale play and one gross (0.5 net) well in the Utica Shale play, each with a 100% drilling and completion success rate. We utilize the latest technologies, including pad drilling techniques, which have allowed us to reduce average drilling time to approximately 18 days per well in the Marcellus Shale play and realize additional savings on drilling and completion costs. In 2015, we are projected to operate 100% of our wells to be drilled in the Marcellus and Utica Shales and approximately 34% of the wells to be drilled in the Hunton Limestone. We are projected to operate approximately 76% and 74% of our budgeted drilling and completion capital expenditures for the remainder of 2014 and the full-year 2015, respectively, which will allow us to allocate capital efficiently and control our operating costs.

Significant Liquidity and Financial Flexibility. After giving effect to this offering, we expect that our currently planned 2014 drilling activity will be fully funded through operating cash flows, cash on hand and available borrowing capacity under our Revolving Credit Facility.

Experienced Management Team. Our senior management team has an average of more than 30 years of experience in the oil and natural gas industry and an average of eight years with the Company. Our senior management team brings a broad range of industry and financial experience from a variety of industry participants and recognized natural resource plays, and has a proven track record of successfully increasing production and reserves through the development of conventional and unconventional oil and gas assets.

Our Strategies

Our objective is to create shareholder value by assembling a portfolio of assets with attractive economic profiles and cost effectively growing our reserves, production and cash flows. We seek to achieve this objective by executing the following strategies:

Continue Growth Through Exploitation, Development and Exploration of Unconventional Resource Plays. Over the past several years, we have strategically identified and acquired net acreage in some of the most active resource plays in the United States, including approximately 222,800 gross (126,000 net) acres in the Hunton Limestone play in Oklahoma, of which we believe approximately 192,000 gross (84,200 net) acres have Mid-Continent Stack Play potential, and approximately 81,600 gross (58,900 net) acres in the Marcellus Shale play in West Virginia and southwestern Pennsylvania, of which 22,500 gross (9,600 net) acres have Utica Shale potential. We believe our current drilling inventory will allow us to grow organically through development drilling opportunities. We expect to continue to utilize horizontal drilling and refined fracture stimulation techniques to pursue growth in reserves and production through the exploitation and development of our existing prospects and exploration of new potential prospects in our focus areas. Our capital budget for the second half of 2014 is approximately \$121.9 million for drilling, completion and infrastructure costs, which is expected to provide for 22 gross (12.3 net) wells in the Hunton Limestone play, 12 gross (6.0 net) wells in the Marcellus Shale and one gross (0.5 net) well in the Utica Shale. Our 2015 capital budget is approximately \$222.7 million for drilling, completion and infrastructure costs, which is expected to provide for 44 gross (27.1 net) wells in the Hunton Limestone play, six gross (3.0 net) wells in the Marcellus Shale play, two gross (1.5 net) wells total in the Utica Shale play, including one gross (0.5 net) horizontal well and one gross (1.0 net) vertical well, and two gross (1.5 net) wells in the Mid-Continent Stack Play.

Diversify into Higher-Margin Liquids and Oil Production. We seek to continue to increase profitability, operating cash flows and production unit cash margins by focusing on allocating capital to

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increase our production and reserves of oil and NGLs. Over the past several years, we have successfully increased the production mix of these liquids from nearly 0% of total production volume in 2010 to approximately 48% of total production volume for the second quarter of 2014. We primarily focus on drilling our liquids-rich Marcellus West acreage in West Virginia and our primarily oil-bearing acreage in the Hunton Limestone play in Oklahoma. Our drilling program in the Hunton Limestone play focuses on using modern horizontal drilling and multi-stage fracture stimulation technologies to exploit a predominantly oil-bearing reservoir, which has been produced historically using vertical wells with conventional completion techniques. We will continue to focus on development opportunities in our liquids-rich Marcellus Shale acreage while also drilling the dry gas Utica Shale formation to prove up the play and the associated net asset value of the Utica formation under our existing Marcellus Shale acreage. Until natural gas prices support resumed activity in areas where dry natural gas is expected to be produced, the majority of our drilling capital will be dedicated to liquids-rich activities in both the Hunton Limestone and Marcellus Shale. For the remainder of 2014 and full-year 2015, approximately 92% and 92%, respectively, of our drilling, completion and infrastructure budget will be focused primarily in the Hunton Limestone play and the liquids-rich area of the Marcellus Shale.

Manage and Utilize Technological Expertise. We believe our use of micro-seismic data acquisition and interpretation, enhanced natural gas recovery processes, horizontal drilling and other advanced drilling, formation evaluation, completion and production techniques are valuable tools that improve drilling results and ultimately enhance production and returns. Our utilization of these technologies and production techniques in exploring for, developing and exploiting oil and natural gas properties has helped us reduce drilling risks, lower finding costs and provide for more efficient production of oil and natural gas from our properties.

Manage Risk Exposure Through an Active Hedging Program. We actively manage our exposure to commodity price fluctuations by hedging the commodity price risk for our expected oil, natural gas and NGLs production. The level of our hedging activity and duration of the instruments employed depend upon our cash flows at risk, available hedge prices and our proved developed reserves. As of June 30, 2014, we have hedges providing downside price protection on approximately 102% of our remaining 2014 proved oil production at an average swap price of \$91.05 per barrel and 92% of our 2015 proved oil production at an average floor price of \$86.91 per barrel. In addition, as of June 30, 2014, we have downside hedge protection on approximately 98% of our 2014 future proved natural gas production comprised mostly of swaps averaging \$4.04 per MMBtu. For 2015, we have approximately 56% downside protection comprised of swaps averaging \$4.24 per MMBtu and three-way protection with weighted-average per MMBtu strikes of \$4.08, \$3.28 and \$4.92, respectively. Further, as of June 30, 2014, we have hedged approximately 59% of our proved NGLs production with propane swaps at a weighted-average swap price of \$47.10 per barrel for the remainder of 2014. We have various hedges covering later years oil, natural gas and NGLs production based on current proved developed production projections. In addition, we have utilized oil put and put spread options, with deferred put premiums, to minimize the future oil price risk for proved reserves associated with our Mid-Continent acreage. For remaining 2014 production, we have an average floor price of \$96.00 per barrel protecting an average of 200 Bbl/d. For the period January 1, 2015 to August 31, 2018, we have utilized put spreads, with deferred put premiums, with floors ranging from \$90.00 to \$80.00 and short puts ranging from \$70.00 to \$60.00. We secured downside oil price protection for 2014, 2015 and 2016 of 102%, 92%, and 94%, respectively. We believe that these hedges significantly reduce near-term price risk associated with possible declining oil prices while not limiting our oil price upside. As of June 30, 2014, the remaining deferred put premium liability was \$7.3 million to be amortized over the production months September 2014 to August 2018.

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Continue to Seek Cost-Efficient Ways of Drilling in Prospective Acreage. As of June 30, 2014, we had 126,000 net acres and 58,900 net acres in the Mid-Continent and Appalachian Basin, respectively. As of such date, we believe that 84,200 net acres and 9,600 net acres are prospective for the Mid-Continent Stack Play and the Utica Shale play, respectively. We are continuing to seek to identify additional prospective formations on our acreage and believe that these prospective formations provide cost-efficient growth opportunities on our current acreage.

Recent Developments

Capital Budget

Total capital expenditures for the second half of 2014 are currently projected to be approximately \$146.5 million. During the second half of 2014, in the Appalachia Basin and Mid-Continent area, we expect to spend approximately \$58.5 million and \$63.4 million, respectively, for drilling, completion and infrastructure costs. In addition, we have allocated approximately \$21.3 million for land and seismic expenditures and \$3.3 million for capitalized interest and other costs. Full-year 2014 total capital expenditures are currently projected to be approximately \$224.4 million, comprised of \$85.0 million in the Appalachian Basin, \$133.4 million in the Mid-Continent area and \$6.0 million of capitalized interest and other costs.

Our 2015 capital budget includes approximately \$222.7 million of drilling, completion and infrastructure costs, which is expected to provide for 44 gross (27.1 net) wells in the Hunton Limestone play, six gross (3.0 net) wells in the Marcellus Shale play, two gross (1.5 net) wells total in the Utica Shale play, including one gross (0.5 net) horizontal well and one gross (1.0 net) vertical well, and two gross (1.5 net) wells in the Mid-Continent Stack Play. Our 2015 capital budget also includes approximately \$28.0 million of land and seismic expenditures and other capitalized costs of approximately \$6.6 million, resulting in a total 2015 capital budget of approximately \$257.3 million.

We believe that our future lower Hunton Limestone wells will be completed at an average gross cost of approximately \$5.5 million with an average 4,200-foot lateral, Marcellus Shale wells will be completed at an average gross cost of approximately \$7.8 million with an average 5,000-foot lateral, Utica Shale horizontal wells will be completed at an average gross cost of approximately \$16.0 million with an average 6,700-foot lateral, Mid-Continent Stack Play wells will be completed at an average gross cost of approximately \$12.0 million with an average 10,500-foot lateral and the Utica Shale vertical well will be completed for approximately \$3.0 million. Adjustments to the capital budget may be required based on drilling results or changes in actual or forecasted costs or commodities prices. We are projected to operate approximately 76% and 74% of our budgeted drilling and completion capital expenditures for the remainder of 2014 and the full-year 2015, respectively. As such, we could reduce a significant portion of capital expenditures if necessary to better match available capital resources.

Production Guidance

Based on our approved capital budget and anticipated drilling activity, we estimate average net daily production for the full-year 2015 will range from 15.5 MBoe/d to 18.0 MBoe/d and the percentage of liquids will range from 44% to 48%.

Our estimates are based upon a number of assumptions. Although we believe such estimates and assumptions to be reasonable, they are inherently uncertain and involve a number of risks and uncertainties that are beyond our control, including uncertainties about the estimated quantities of oil and natural gas reserves and in the projection of future rates of production and timing of development expenditures of proved reserves. Additional information regarding the risks and uncertainties that affect our business is contained in the Risk

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Factors set out on page S-17 of this prospectus supplement and in Item 1A. Risk Factors in our Annual Report on Form 10-K for the year ended December 31, 2013, and the guidance provided above should be read in conjunction with the section entitled Cautionary Statement Regarding Forward-Looking Statements on page S-v of this prospectus supplement.

Corporate Information

Gastar is a Delaware corporation. Our executive offices are located at 1331 Lamar Street, Suite 650, Houston, Texas 77010. Our telephone number is (713) 739-1800. We maintain a website at <http://www.gastar.com>. The information on our website is not part of this prospectus supplement or the accompanying base prospectus, and you should rely only on the information contained in this prospectus supplement and the accompanying base prospectus and the documents we incorporate by reference herein when making an investment decision.

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THE OFFERING

Common stock offered by us	17,000,000 shares (or 19,550,000 shares, if the underwriters exercise in full their option to purchase additional shares).
Option to purchase additional shares	We have granted the underwriters a 30-day option to purchase up to an aggregate 2,550,000 additional shares of our common stock.
Shares of common stock outstanding after completion of this offering	78,855,448 shares (or 81,405,448 shares, if the underwriters exercise in full their option to purchase additional shares).
Use of proceeds	We intend to use the net proceeds from this offering to repay the outstanding borrowings under our Revolving Credit Facility, fund our drilling and development program and for general corporate purposes. Please read Use of Proceeds.
Dividend policy	We do not anticipate paying any cash dividends on our common stock. In addition, certain of our debt instruments place restrictions on our ability to pay cash dividends. Please read Dividend Policy.
NYSE MKT symbol	Our common stock is listed on the NYSE MKT under the symbol GST.
Risk factors	You should carefully consider all of the information set forth under the heading Risk Factors and all other information included or incorporated by reference in this prospectus supplement and the accompanying base prospectus before deciding to invest in our common stock.
Conflicts of Interest	We will use a portion of the net proceeds of this offering to repay indebtedness owed by us to affiliates of the underwriters that are lenders under our Revolving Credit Facility. See Use of Proceeds. As such repayment may constitute more than 5% of the net proceeds, this offering will be made in compliance with the applicable provisions of Rule 5121 of the Financial Industry Regulatory Authority, Inc. The appointment of a qualified independent underwriter is not required in connection with this offering as a bona fide public market, as defined in Rule 5121, exists for our common stock. See Underwriting (Conflicts of Interest) Conflicts of Interest.

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SUMMARY HISTORICAL AND PRO FORMA FINANCIAL DATA

The following tables set forth summary historical consolidated financial data for the years ended December 31, 2011, 2012 and 2013, the six months ended June 30, 2013 and 2014 and pro forma consolidated financial data for the year ended December 31, 2013. The annual historical financial data are derived from our audited consolidated financial statements and the notes thereto incorporated by reference in this prospectus supplement and the accompanying base prospectus. The data for the six months ended June 30, 2013 and 2014 are derived from our unaudited condensed consolidated financial statements incorporated by reference in this prospectus supplement and the accompanying base prospectus. This data should be read in conjunction with, and is qualified in its entirety by reference to, Management's Discussion and Analysis of Financial Condition and Results of Operations and our financial statements and the notes thereto appearing in our Annual Report on Form 10-K for the year ended December 31, 2013 and our Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2014 and June 30, 2014, each of which has been incorporated by reference in this prospectus supplement and the accompanying base prospectus.

The summary pro forma financial data presented for the year ended December 31, 2013 is derived from our unaudited pro forma condensed consolidated financial statements incorporated by reference in this prospectus supplement and the accompanying base prospectus.

The pro forma statements of operations data for the year ended December 31, 2013 has been prepared assuming the Chesapeake Acquisition, the repurchase of 6,781,768 shares of Parent's common stock from Chesapeake Energy Corporation, the settlement of litigation with Chesapeake Exploration, L.L.C. and Chesapeake Energy Corporation, the AMI Election Disposition, the East Texas Disposition, the offering of our 8 5/8% Senior Secured Notes due 2018 (the Notes) and the application of the proceeds therefrom, the WEHLU Acquisition and the issuance and sale of our 10.75% Series B Cumulative Preferred Stock (the Series B Preferred Stock) and the application of the proceeds therefrom, were consummated on January 1, 2013. The Newfield Disposition was a disposition of undeveloped oil and gas leasehold interests and is accounted for as an adjustment of capitalized costs, with no gain recognized as such adjustment would not significantly alter the relationship between capitalized costs and proved reserves of oil and natural gas attributable to our full cost pool. Therefore, the Newfield Disposition has no impact on the pro forma statement of operations.

The pro forma financial data have been prepared for illustrative purposes only and do not purport to be indicative of the actual results for the period indicated or that may be realized in the future. Although management believes the assumptions used in preparing these pro forma financial results are reasonable, these assumptions may not be correct, and do not purport to be indicative of statements of financial position or results of operations as of any future date or for any future period. These pro forma financial statements should be read in conjunction with, and are qualified in their entirety by reference to, Management's Discussion and Analysis of Financial Condition and Results of Operations and our financial statements and the notes thereto appearing in our Annual Report on Form 10-K for the year ended December 31, 2013, our Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2014 and June 30, 2014 and the unaudited pro forma combined statement of operations for Gastar Exploration, Inc. for the year ended December 31, 2013 filed as Exhibit 99.1 to our Current Report on Form 8-K filed with the SEC on March 25, 2014, each of which has been incorporated by reference in this prospectus supplement and the accompanying base prospectus.

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	Year Ended December 31,			Pro Forma(1) Year Ended December 31,	Six Months Ended June 30,	
	2011	2012	2013	2013 (unaudited)	2013 (unaudited)	2014 (unaudited)
	(in thousands)					
Statements of Operations Data:						
Revenues						
Oil and condensate	\$ 3,416	\$ 11,570	\$ 36,480	\$ 70,633	\$ 13,350	\$ 39,120
Natural gas	23,523	23,318	40,416	37,588	20,014	32,978
NGLs	1,092	7,630	15,611	20,578	5,792	11,550
Gain (loss) on commodity derivatives contracts	12,204	7,422	(4,752)	(4,752)	3,034	(15,424)
Total revenues	40,235	49,940	87,755	124,047	42,190	68,224
Expenses						
Production taxes	620	2,269	4,651	6,912	1,793	3,931
Lease operating expenses	8,630	6,174	9,456	14,930	4,006	8,921
Transportation, treating and gathering	4,501	4,965	4,006	1,244	2,288	2,771
Depreciation, depletion and amortization	15,216	25,424	32,449	45,160	12,961	22,662
Impairment of natural gas and oil properties		150,787				
Accretion of asset retirement obligation	534	388	468	444	216	247
General and administrative expense	11,365	12,211	16,961	16,961	7,966	8,656
Litigation settlement expense		1,250	1,000	1,000	1,000	
Total expense	40,866	203,468	68,991	86,651	30,230	47,188
(Loss) income from operations	(631)	(153,528)	18,764	37,396	11,960	21,036
Other income (expense)						
Gain on acquisition of assets at fair value			27,670		43,712	
Interest expense	(113)	(270)	(13,168)	(27,110)	(4,154)	(13,803)
Investment and other income	10	9	48	48	8	11
Foreign transaction loss	(6)	(2)	(14)	(14)	(12)	(6)
(Loss) income before provision for income taxes	(740)	(153,791)	33,300	10,320	51,514	7,238
Provision for income tax (benefit)			(16,042)			
Net (loss) income	(740)	(153,791)	49,342	10,320	51,514	7,238
Dividends on preferred stock	(1,024)	(7,077)	(9,378)	(14,410)	(4,264)	(7,187)
Net (loss) income attributable to common stockholders	\$ (1,764)	\$ (160,868)	\$ 39,964	\$ (4,090)	\$ 47,250	\$ 51
(Unaudited):						
Adjusted EBITDA(2)	\$ 15,561	\$ 34,016	\$ 70,287	\$ 101,606	\$ 31,942	\$ 55,298
Drilling capital expenditures	65,835	121,919	89,951		51,811	57,588
Land acquisition and other expenditures	19,552	25,676	71,472		45,145	15,194
Proved property acquisition expenditures			189,594		35,660	

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	As of June 30, 2014 (unaudited) (in thousands)
Balance Sheet Data:	
Cash and cash equivalents	\$ 24,763
Total property, plant and equipment, net	567,772
Total assets	626,520
Total long-term debt	334,120
Total stockholders' equity	211,022

- (1) Pro forma adjustments for the statements of operations and Adjusted EBITDA give effect to the Chesapeake Acquisition, the AMI Election Disposition, the East Texas Disposition, the offering of our Notes and the application of the proceeds therefrom, the WEHLU Acquisition and the issuance and sale of our Series B Preferred Stock and the application of the proceeds therefrom, as if they were consummated on January 1, 2013.
- (2) EBITDA and Adjusted EBITDA are not alternative measures of operating results of cash flows from operations, as determined in accordance with GAAP. We have included EBITDA and Adjusted EBITDA because we believe they are indicative measures of operating performance and our ability to meet our debt service requirements and are used by investors and analysts to evaluate companies with our capital structure. As presented by us, EBITDA and Adjusted EBITDA may not be comparable to similarly titled measures reported by other companies. EBITDA and Adjusted EBITDA should be considered in addition to, not as a substitute for, operating income, net income (loss), cash flow and other measures of financial performance and liquidity reported in accordance with GAAP.

Reconciliation of Non-GAAP Financial Measures

The following table reconciles net loss in accordance with GAAP to EBITDA and Adjusted EBITDA:

	Year Ended December 31,			Pro Forma(1) Year Ended December 31, 2013 (unaudited)	Six Months Ended June 30, 2013 2014 (unaudited)	
	2011	2012	2013	(in thousands)		
Net (loss) income attributable to common stockholders	\$ (1,764)	\$ (160,868)	\$ 39,964	\$ (4,090)	\$ 47,250	\$ 51
Plus:						
Dividends on preferred stock	1,024	7,077	9,378	14,410	4,264	7,187
Depreciation, depletion and amortization	15,216	25,424	32,449	45,160	12,961	22,662
Impairment of natural gas and oil properties		150,787				
Interest expense	113	270	13,168	27,110	4,154	13,803
Income tax benefit			(16,042)			
EBITDA	14,589	22,690	78,917	82,590	68,629	43,703
Other adjustments:						
Accretion of asset retirement obligation	534	388	468	444	216	247
Stock option expense	2,612	3,295	3,435	3,435	1,966	2,532
Litigation settlement expense(2)		1,250	1,000	1,000	1,000	
Gain on acquisition of assets at fair value			(27,670)		(43,712)	

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	Year Ended December 31,			Pro Forma(1) Year Ended December 31, 2013 (unaudited)	Six Months Ended June 30, 2013 (unaudited)	
	2011	2012	2013		2013	2014
				(in thousands)		
Non-recurring general and administrative costs related to acquisition of assets			2,349	2,349	1,418	30
Non-recurring severance costs related to property divestment			659	659		
Non-recurring general and administrative costs related to Parent migration	166	834	1,196	1,196	269	218
Foreign transaction loss	6	2	14	14	12	6
Investment income and other	(10)	(9)	(48)	(48)	(8)	(11)
Losses (gains) related to change in mark to market of outstanding commodity derivatives contracts	(2,336)	5,566	9,967	9,967	2,152	8,573
Adjusted EBITDA	\$ 15,561	\$ 34,016	\$ 70,287	\$ 101,606	\$ 31,942	\$ 55,298

- (1) Pro forma adjustments give effect to the Chesapeake Acquisition, the AMI Election Disposition, the East Texas Disposition, the offering of our Notes and the application of the proceeds therefrom, the WEHLU Acquisition and the issuance and sale of our Series B Preferred Stock and the application of the proceeds therefrom, as if they were consummated on January 1, 2013.
- (2) Litigation settlement expense for fiscal year 2012 primarily resulted from our settlement with Navasota Resources LP in April 2012. Litigation settlement expense for the year ended December 31, 2013 and for the six months ended June 30, 2013 resulted from our settlement with Chesapeake Exploration, L.L.C. and Chesapeake Energy Corporation in June 2013.

Table of Contents**SUMMARY HISTORICAL RESERVES AND HISTORICAL AND PRO FORMA PRODUCTION DATA**

The following tables summarize our historical oil and natural gas proved reserves and production data as of the dates indicated. Our historical reserve information has been derived from reserve reports prepared by Wright. Wright has made the proved reserve estimates for our Marcellus and Utica Shales and our Mid-Continent area as of December 31, 2013 and June 30, 2014.

SEC Case Reserves

Definitions and guidelines established by the SEC regarding the present value of future net cash flows were utilized to prepare the estimates in the table below. Estimates of reserves and their value are inherently imprecise and are subject to constant revision and change, and they should not be construed as representing the actual quantities of future production or cash flows to be realized from oil and natural gas properties or the fair market value of such properties.

	As of December 31, 2013	As of June 30, 2014
Proved Reserves SEC Case(1)		
Oil and condensate (MBbls)	14,718	20,393
Natural gas (MMcf)	180,710	253,694
NGLs (MBbls)	9,798	15,301
Total proved reserves (MBoe)	54,634	77,977
Proved developed reserves (MBoe)	30,892	29,698
PV-10 (in thousands)(2)	\$ 592,530	\$ 826,267
Standardized Measure (in thousands)	\$ 515,829	*

(1) Our estimated proved reserves and related future net revenues and PV-10, as estimated by Wright at December 31, 2013 and June 30, 2014, were determined using benchmark prices that are the 12-month unweighted arithmetic average of the first-day-of-the-month prices for oil and natural gas. At December 31, 2013, the benchmark base prices used were \$96.78 per barrel for West Texas Intermediate oil at Cushing, Oklahoma, and \$3.67 per MMBtu for natural gas at Henry Hub, Louisiana. The NGLs product price was estimated to be approximately 24.7 percent of the base oil price, resulting in an average adjusted price of \$23.91 per barrel of NGLs. At June 30, 2014, the benchmark base prices used were \$100.11 per barrel for West Texas Intermediate oil at Cushing, Oklahoma, and \$4.104 per MMBtu for natural gas at Henry Hub, Louisiana. The NGLs product price was estimated to range from 26 to 48 percent of the base oil price depending on the area. The overall resulting weighted average adjusted price is \$30.14 per barrel of NGLs. These prices are held constant in accordance with SEC definitions and guidelines for the life of the wells included in the reserve reports but are adjusted by lease in accordance with sales contracts and for energy content, quality, transportation, compression and gathering fees and regional price differentials. Estimated quantities of proved reserves and future net revenues are affected by natural gas and oil prices, which have fluctuated significantly in recent years. All of our proved reserves are located onshore within the United States.

(2) PV-10 represents the present value, discounted at 10% per annum, of estimated future net revenue to be generated from the production of proved reserves before income tax. PV-10 is a non-GAAP financial measure because it excludes the effect of income taxes, which effect is included in standardized measure of discounted future net cash flows as defined under GAAP, which we refer to as standardized measure. We believe that PV-10 is a useful measure for evaluating the relative monetary significance of oil and natural gas properties. Further, investors may use the measure as a basis for comparison of the relative size and value of our reserves to other companies. PV-10 should not be considered as an alternative to standardized measure. At December 31, 2013, we had approximately \$333.9 million of net operating loss carryforwards, \$50.7 million of foreign tax credit carryforwards and \$300.3 million of remaining property tax basis for Federal income tax purposes. Based on these carryforwards and current and future property tax basis, future income taxes discounted at 10% total \$76.7 million, resulting in a standardized measure of discounted future net cash flows of \$515.8 million as of December 31, 2013.

* With respect to PV-10 calculated as of an interim date, it is not practicable to calculate the taxes for the related interim period because GAAP does not provide for disclosure of standardized measure on an interim basis.

Table of Contents**Summary Historical and Pro Forma Production Data**

	Year Ended December 31, 2013		Six Months Ended June 30, 2014
	Actual	Pro Forma(1)	Actual
Production:			
Oil and condensate (MBbl)	515	872	410
Natural gas (MMcf)	13,366	12,045	5,752
NGLs (MBbl)	494	645	363
Total production (MBoe)	3,236	3,524	1,732
Daily production:			
Oil and condensate (MBbl/d)	1.4	2.4	2.3
Natural gas (MMcf/d)	36.6	33.0	31.8
NGLs (MBbl/d)	1.4	1.8	2.0
Total daily production (MBoe/d)	8.9	9.7	9.6
Revenues (in thousands):			
Oil and condensate	\$ 36,480	\$ 70,633	\$ 39,120
Natural gas	40,416	37,588	32,978
NGLs	15,611	20,578	11,550
Loss on commodity derivatives contracts	(4,752)	(4,752)	(15,424)
Total revenues	\$ 87,755	\$ 124,047	\$ 68,224
Average sales prices (excluding the impact of hedging)(2):			
Oil and condensate (\$/Bbl)	\$ 70.91	\$ 81.04	\$ 95.45
Natural gas (\$/Mcf)	3.02	3.12	5.73
NGLs (\$/Bbl)	31.59	31.91	31.82
Average sales price (\$/Boe)	28.58	36.55	48.31

(1) Pro forma information has been prepared assuming the Chesapeake Acquisition, the AMI Election Disposition, the East Texas Disposition and the WEHLU Acquisition were consummated on January 1, 2013. The Newfield Disposition was a disposition of undeveloped interests and had no impact on production.

(2) The six months ended June 30, 2014 include the benefit of a one-time adjustment related to an arbitration settlement. Excluding the arbitration settlement adjustment impact, average sales prices (excluding the impact of hedging) would have been as follows:

Oil and condensate (\$/Bbl)	\$ 87.77
Natural gas (\$/Mcf)	4.32
NGLs (\$/Bbl)	33.69
Average sales price (\$/Boe)	42.19

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RISK FACTORS

An investment in our common stock involves a high degree of risk. You should carefully consider the risk factors and all of the other information included in this prospectus supplement, the accompanying base prospectus and the documents we have incorporated by reference into this prospectus supplement, including Item 1A. Risk Factors in our Annual Report on Form 10-K for the year ended December 31, 2013, in evaluating an investment in our common stock. If any of these risks were to occur, our business, financial condition or results of operations could be adversely affected. In that case, the trading price of our common stock could decline and you could lose all or part of your investment.

Our expected well results in the Utica Shale and Mid-Continent Stack Play are subject to more uncertainties than those in more established plays.

Our expected drilling results in the Utica Shale and Mid-Continent Stack Play are more uncertain than drilling results in areas that are more developed and have a greater number of producing wells. Since we have limited experience drilling in these plays, we are unable to use past drilling results in those areas to help predict our future drilling results. As a result, our cost of drilling, completing and operating wells in these areas may be higher than initially expected, and the value of our undeveloped acreage will decline if drilling results are unsuccessful. Additionally, we cannot assure you that we will achieve similar results to other wells drilled in these plays, that all prospects will be economically viable or that we will not abandon our investments. We cannot assure you that unproved property acquired by us or undeveloped acreage leased by us will be profitably developed, that wells drilled by us in prospects that we pursue will be productive or that we will recover all or any portion of our investment in such unproved property or wells.

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USE OF PROCEEDS

We expect the net proceeds from this offering to be approximately \$101.2 million (or approximately \$116.4 million if the underwriters exercise their option to purchase additional shares in full), after deducting estimated fees and expenses (including underwriting discounts and commissions). We intend to use the net proceeds from this offering to repay the outstanding borrowings under our Revolving Credit Facility, to fund our drilling and development program and for general corporate purposes.

As of August 31, 2014, we had \$35.0 million of outstanding borrowings under our Revolving Credit Facility, which matures in November 14, 2017 and bears interest at a variable rate, which was approximately 2.16% as of August 31, 2014. The borrowings to be repaid were incurred primarily for our drilling and development program, acquisitions and for general corporate purposes. We may at any time re-borrow amounts repaid under our Revolving Credit Facility.

We will use a portion of the net proceeds of this offering to repay indebtedness owed by us to affiliates of the underwriters that are lenders under our Revolving Credit Facility. As such repayment may constitute more than 5% of the net proceeds, this offering will be made in compliance with the applicable provisions of Rule 5121 of the Financial Industry Regulatory Authority, Inc. The appointment of a qualified independent underwriter is not required in connection with this offering as a bona fide public market, as defined in Rule 5121, exists for our common stock. See Underwriting (Conflicts of Interest) Conflicts of Interest.

Table of Contents**CAPITALIZATION**

The following table sets forth our consolidated cash and cash equivalents and our consolidated capitalization as of June 30, 2014 on: (i) an actual basis; and (ii) an as adjusted basis to give effect to this offering and the application of the estimated net proceeds of this offering in the manner described under Use of Proceeds.

This table should be read together with, and is qualified in its entirety by reference to, our historical consolidated financial statements incorporated by reference in this prospectus supplement and the accompanying base prospectus and Use of Proceeds.

	As of June 30, 2014	
	Actual	As Adjusted
	(in thousands)	
Cash and cash equivalents (1)	\$ 24,763	\$ 105,947
Debt:		
Revolving Credit Facility (2)	\$ 20,000	\$
8 5/8% Senior Secured Notes due 2018 (3)	314,120	314,120
Total debt	\$ 334,120	\$ 314,120
Stockholders equity:		
Cumulative Preferred Stock, par value \$0.01 per share; 40,000,000 shares authorized		
Series A Cumulative Preferred Stock: 4,045,000 shares issued and outstanding	\$ 41	\$ 41
Series B Cumulative Preferred Stock: 2,140,000 shares issued and outstanding	21	21
Common stock, par value \$0.001 per share, offered hereby: 275,000,000 shares authorized (on an actual basis: 61,796,023 shares issued and outstanding; as adjusted for this offering: 78,796,023 shares issued and outstanding)	61	78
Additional paid-in capital	465,671	566,838
Accumulated deficit	(254,772)	(254,772)
Total stockholders equity	211,022	312,206
Total capitalization	\$ 545,142	\$ 626,326

- (1) Actual cash balance on the closing date will differ from these amounts.
- (2) As of August 31, 2014, we had \$35.0 million of borrowings outstanding and \$110.0 million of available borrowing capacity under our Revolving Credit Facility.
- (3) Net of unamortized discounts of \$10.9 million.

Table of Contents**PRICE RANGE OF COMMON STOCK**

Our common stock is listed on the NYSE MKT under the symbol GST. The following table shows, for the periods indicated, the high and low reported sale prices for our common stock, as reported on the NYSE MKT.

	Sales Price	
	High	Low
2012:		
First quarter	\$ 3.31	\$ 2.67
Second quarter	\$ 2.95	\$ 1.55
Third quarter	\$ 2.05	\$ 1.55
Fourth quarter	\$ 1.73	\$ 0.72
2013:		
First quarter	\$ 1.79	\$ 1.05
Second quarter	\$ 3.07	\$ 1.95
Third quarter	\$ 4.52	\$ 2.64
Fourth quarter	\$ 6.92	\$ 3.94
2014:		
First quarter	\$ 7.13	\$ 5.05
Second quarter	\$ 9.10	\$ 5.72
Third quarter (through September 18, 2014)	\$ 8.75	\$ 5.90

On September 18, 2014, the last sales price of our common stock as reported on the NYSE MKT was \$6.52 per share.

As of September 5, 2014, there were 279 holders of record of our common stock.

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DIVIDEND POLICY

We have not paid, and do not intend to pay in the foreseeable future, cash dividends on our common stock. Covenants contained in our Revolving Credit Facility and the indentures governing our Notes restrict the payment of dividends on our common stock. We currently intend to retain all future earnings to fund the development and growth of our business. Any payment of future dividends will be at the discretion of our board of directors and will depend on, among other things, our earnings, financial condition, capital requirements, level of indebtedness, statutory and contractual restrictions applying to the payment of dividends and other considerations that our board of directors deems relevant.

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MATERIAL U.S. FEDERAL AND ESTATE TAX CONSIDERATIONS FOR NON-U.S. HOLDERS

The following is a summary of the material U.S. federal income tax and, to a limited extent, estate tax, considerations 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 Internal Revenue Service (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 or estate 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 tax on certain investment income, U.S. federal 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 ADVISOR WITH RESPECT TO THE APPLICATION OF THE U.S. FEDERAL INCOME AND ESTATE 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 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 is not for U.S. federal income tax purposes a partnership or 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

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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

Distributions of cash or property on our common stock, if any, 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**. Any distribution 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 (and may be subject to FATCA withholding as described below). To receive the benefit of a reduced treaty rate, a non-U.S. holder must provide the applicable withholding agent with an IRS Form W-8BEN or IRS Form W-8BEN-E (or other applicable or successor form) certifying qualification for the reduced rate.

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 applicable withholding agent 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

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.

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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. We believe that we currently are, and expect to remain for the foreseeable future, a USRPHC for U.S. federal income tax purposes. However, as long as our common stock continues to be regularly traded on an established securities market, 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 ceased to be regularly traded on an established securities market prior to the beginning of the calendar year in which the relevant disposition occurred, 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 10% 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.

U.S. Federal Estate Tax

Our common stock beneficially owned or treated as owned by an individual who is not a citizen or resident of the United States (as defined for U.S. federal estate tax purposes) at the time of death generally will be includable in the decedent's gross estate for U.S. federal estate tax purposes and thus may be subject to U.S. federal estate tax, unless an applicable estate tax treaty provides otherwise.

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, IRS Form 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, IRS Form 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 not a United States person 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.

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Additional Withholding Requirements under FATCA

Sections 1471 through 1474 of the Code, and the Treasury regulations and administrative guidance issued thereunder (FATCA), impose a 30% withholding tax on (i) any dividends paid on our common stock, and (ii) the gross proceeds from a disposition of our common stock occurring after December 31, 2016, 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 non-financial foreign 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 identifying information regarding each direct and indirect substantial United States owner of the entity (generally by providing IRS Form W-8BEN-E), or (iii) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules and provides appropriate documentation (such as IRS Form W-8BEN-E). 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.

The rules under FATCA are new and complex. You are encouraged to consult with your own tax advisor regarding the implications of FATCA on an investment in our common stock.

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 AND ESTATE TAX LAWS TO THEIR PARTICULAR SITUATIONS AND THE APPLICABILITY AND EFFECT OF U.S. FEDERAL GIFT TAX LAWS AND ANY STATE, LOCAL OR FOREIGN TAX LAWS AND TAX TREATIES.

Table of Contents**UNDERWRITING (CONFLICTS OF INTEREST)**

Barclays Capital Inc., Johnson Rice & Company L.L.C. and Wells Fargo Securities, LLC are acting as representatives of the underwriters and as joint book-running managers of this offering. Subject to the terms and conditions contained in the underwriting agreement dated the date of this prospectus supplement, each of the underwriters named below has severally agreed to purchase from us, and we have agreed to sell to such underwriters, the respective number of shares of common stock shown opposite its name below:

Underwriters	Number of Shares
Barclays Capital Inc.	6,800,000
Johnson Rice & Company L.L.C.	2,550,000
Wells Fargo Securities, LLC	2,550,000
Tudor, Pickering, Holt & Co. Securities, Inc.	1,360,000
Imperial Capital, LLC	1,360,000
Euro Pacific Capital, Inc.	425,000
IBERIA Capital Partners L.L.C.	425,000
MLV & Co. LLC	425,000
Wunderlich Securities, Inc.	425,000
CDH Securities LLC	340,000
Topeka Capital Markets, Inc.	340,000
Total	17,000,000

The underwriting agreement provides that the underwriters' obligation to purchase shares of common stock is subject to the satisfaction of the conditions contained in the underwriting agreement, including but not limited to:

the obligation to purchase all of the shares of common stock offered hereby (other than those shares of common stock covered by their option to purchase additional shares as described below), if any of the shares are purchased;

the representations and warranties made by us to the underwriters are true;

there is no material change in our business or the financial markets; and

we, our auditor and our reserve engineer deliver customary closing documents to the underwriters.

The following table summarizes the underwriting discounts and commissions we will pay to the underwriters. These amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares. The underwriting fee is the difference between the initial price to the public and the amount the underwriters pay to us for the shares.

	No Exercise	Full Exercise
Per Share	\$ 0.265625	\$ 0.265625
Total	\$ 4,515,625.00	\$ 5,192,968.75

The representatives have advised us that the underwriters propose to offer the shares of common stock directly to the public at the public offering price on the cover of this prospectus supplement and to selected dealers, which may include the underwriters, at such offering price less a selling concession not in excess of \$0.159375 per share. After the offering, the representatives may change the offering price and other selling terms.

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The expenses of the offering that are payable by us are estimated to be approximately \$550,000 (excluding underwriting discounts and commissions).

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We have granted the underwriters an option exercisable for 30 days after the date of this prospectus supplement to purchase, from time to time, in whole or in part, up to an aggregate of 2,550,000 shares from us at the public offering price less underwriting discounts and commissions. To the extent that this option is exercised, each underwriter will be obligated, subject to certain conditions, to purchase its pro rata portion of these additional shares based on the underwriter's percentage underwriting commitment in the offering as indicated in the table at the beginning of this Underwriting (Conflicts of Interest) section.

We, all of our directors and executive officers have agreed that, for a period of 90 days after the date of this prospectus supplement, we and they will not directly or indirectly, without the prior written consent of Barclays Capital Inc., (1) offer for sale, sell, pledge, or otherwise dispose of (or enter into any transaction or device that is designed to, or could be expected to, result in the disposition by any person at any time in the future of) any shares of common stock (including, without limitation, shares of common stock that may be deemed to be beneficially owned by us or them in accordance with the rules and regulations of the SEC and shares of common stock that may be issued upon exercise of any options or warrants) or securities convertible into or exercisable or exchangeable for common stock (other than the stock and shares (i) issued pursuant to employee benefit plans, qualified stock option plans, or other employee compensation plans existing on the date of this prospectus supplement or (ii) sold or forfeited to the Company in connection with the payment of any exercise price or tax withholding due in connection with the settlement or exercise price of any stock option or other equity or equity-based compensation award existing on the date of this prospectus supplement), or sell or grant options, rights or warrants with respect to any shares of common stock or securities convertible into or exchangeable for common stock (other than the grant of options pursuant to employee benefit plans, option plans, qualified stock option plans or other employee compensation plans existing on the date of this prospectus supplement), (2) enter into any swap or other derivatives transaction that transfers to another, in whole or in part, any of the economic benefits or risks of ownership of shares of common stock, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of common stock or other securities, in cash or otherwise, (3) make any demand for or exercise any right or file or cause to be filed a registration statement, including any amendments thereto, with respect to the registration of any shares of common stock or securities convertible, exercisable or exchangeable into common stock or any of our other securities, or (4) publicly disclose the intention to do any of the foregoing.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act, and to contribute to payments that the underwriters may be required to make for these liabilities.

The representatives may engage in stabilizing transactions, short sales and purchases to cover positions created by short sales, and penalty bids or purchases for the purpose of pegging, fixing or maintaining the price of the common stock, in accordance with Regulation M under the Exchange Act:

Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum.

A short position involves a sale by the underwriters of shares in excess of the number of shares the underwriters are obligated to purchase in the offering, which creates the syndicate short position. This short position may be either a covered short position or a naked short position. In a covered short position, the number of shares involved in the sales made by the underwriters in excess of the number of shares they are obligated to purchase is not greater than the number of shares that they may purchase by exercising their option to purchase additional shares. In a naked short position, the number of shares involved is greater than the number of shares in their option to purchase additional shares. The underwriters may close out any short position by either exercising their option to purchase additional shares and/or purchasing shares in the open market. In determining the source of shares to close out the short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through their option to purchase additional shares. A naked short position is more likely to be created if the underwriters are concerned that there could be downward pressure on the price of the shares in the open market after pricing that could adversely affect investors who purchase in the offering.

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Syndicate covering transactions involve purchases of the common stock in the open market after the distribution has been completed in order to cover syndicate short positions.

Penalty bids permit the representatives to reclaim a selling concession from a syndicate member when the common stock originally sold by the syndicate member is purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions. These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of the common stock. As a result, the price of the common stock may be higher than the price that might otherwise exist in the open market. These transactions may be effected on the NYSE MKT or otherwise and, if commenced, may be discontinued at any time.

Neither we nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of the common stock. In addition, neither we nor any of the underwriters make any representation that the representatives will engage in these stabilizing transactions or that any transaction, once commenced, will not be discontinued without notice.

Our common stock is listed on the NYSE MKT under the symbol GST.

Conflicts of Interest

Affiliates of Wells Fargo Securities, LLC and IBERIA Capital Partners L.L.C. are lenders under our Revolving Credit Facility and will therefore receive a portion of the proceeds from this offering. Because the affiliate of Wells Fargo Securities, LLC will receive more than 5% of the net proceeds of this offering due to such repayment, Wells Fargo Securities, LLC is deemed to have a conflict of interest within the meaning of Rule 5121 of the Financial Industry Regulatory Authority Inc. (FINRA). Accordingly, this offering will be conducted in accordance with the applicable provisions of FINRA Rule 5121. The appointment of a qualified independent underwriter is not required in connection with this offering as a bona fide public market, as defined in Rule 5121, exists for our common stock. Pursuant to Rule 5121, Wells Fargo Securities, LLC will not confirm sales to any account over which it exercises discretionary authority without the specific written approval of the account holder. See Use of Proceeds for additional information.

Other Relationships

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 us and our affiliates, for which they received or may in the future receive customary fees and expenses. In particular, an affiliate of Wells Fargo Securities, LLC serves as trustee under the indenture governing our Notes and also serves as administrative agent under our Revolving Credit Facility. In addition, Mr. Selser, chairman of our board of directors, has been employed by IBERIA Capital Partners L.L.C. and Johnson Rice & Company L.L.C. in the past.

In the ordinary course of their various business activities, the underwriters and their respective 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 us or our affiliates. The underwriters and their respective 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.

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Selling Restrictions

This prospectus supplement does not constitute an offer to sell to, or a solicitation of an offer to buy from, anyone in any country or jurisdiction (i) in which such an offer or solicitation is not authorized, (ii) in which any person making such offer or solicitation is not qualified to do so or (iii) in which any such offer or solicitation would otherwise be unlawful. No action has been taken that would, or is intended to, permit a public offer of the shares of common stock or possession or distribution of this prospectus supplement or any other offering or publicity material relating to the shares of common stock in any country or jurisdiction (other than the United States) where any such action for that purpose is required. Accordingly, each underwriter has undertaken that it will not, directly or indirectly, offer or sell any shares of common stock or have in its possession, distribute or publish any prospectus, form of application, advertisement or other document or information in any country or jurisdiction except under circumstances that will, to the best of its knowledge and belief, result in compliance with any applicable laws and regulations and all offers and sales of shares of common stock by it will be made on the same terms.

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 common stock which are the subject of the offering contemplated herein may not be made in that Relevant Member State, except that an offer to the public in that Relevant Member State of any 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:

to legal entities which are qualified investors as defined under the Prospectus Directive;

by the underwriters to fewer than 100, or, if the Relevant Member State has implemented the relevant provisions 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 of the underwriters for any such offer; or

in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of common stock shall result in a requirement for us or any underwriter to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

Each person in a Relevant Member State who receives any communication in respect of, or who acquires any common stock under, the offers contemplated here in this prospectus supplement will be deemed to have represented, warranted and agreed to and with each underwriter and us that:

it is a qualified investor as defined under the Prospectus Directive; and

in the case of any common stock acquired by it as a financial intermediary, as that term is used in Article 3(2) of the Prospectus Directive, (i) the common stock acquired by it in the offering have not been acquired on behalf of, nor have they been acquired with a view to their offer or resale to, persons in any Relevant Member State other than qualified investors, as that term is defined in the Prospectus Directive, or in the circumstances in which the prior consent of the representatives of the underwriters has been given to the offer or resale or (ii) where common stock have been acquired by it on behalf of persons in any Relevant Member State other than qualified investors, the offer of such common stock to it is not treated under the Prospectus Directive as having been made to such persons.

For the purposes of this representation and the provision above, the expression an offer of common stock to the public in relation to any 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 common stock to be offered so

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as to enable an investor to decide to purchase or subscribe for the common stock, as the same may be varied in that Relevant Member State by any measure implementing the Prospectus Directive in that Relevant 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 each Relevant Member State and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

United Kingdom

This prospectus supplement has only been communicated or caused to have been communicated and will only be communicated or caused to be communicated as an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act of 2000 (the "FSMA")) as received in connection with the issue or sale of the common stock in circumstances in which Section 21(1) of the FSMA does not apply to us. All applicable provisions of the FSMA will be complied with in respect to anything done in relation to the common stock in, from or otherwise involving the United Kingdom.

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LEGAL MATTERS

Certain legal matters in connection with the common stock will be passed upon by Vinson & Elkins L.L.P., Houston, Texas, as our counsel. Certain legal matters will be passed upon for the underwriters by Baker Botts L.L.P., Houston, Texas.

EXPERTS

The consolidated financial statements of each of Gastar Exploration, Inc. and Gastar Exploration Inc. (formerly known as Gastar Exploration USA, Inc.) as of December 31, 2013 and 2012, and for each of the years in the three-year period ended December 31, 2013, and Gastar Exploration, Inc.'s management's assessment of the effectiveness of internal control over financial reporting as of December 31, 2013, incorporated by reference in this prospectus supplement, have been so incorporated in reliance on the reports of BDO USA, LLP, independent registered public accounting firm, incorporated herein by reference, given upon the authority of said firm as experts in accounting and auditing.

The statement of revenues and direct operating expenses of the Chesapeake Acquisition Properties for the year ended December 31, 2012 has been incorporated by reference herein in reliance upon the report of BDO USA, LLP, independent registered public accounting firm, given upon the authority of said firm as experts in accounting and auditing.

The statement of revenues and direct operating expenses of the WEHLU Acquisition Properties for the years ended December 31, 2012 and 2011 have been incorporated by reference herein in reliance upon the report of BDO USA, LLP, independent registered public accounting firm, given upon the authority of said firm as experts in accounting and auditing.

The information included in or incorporated by reference into this prospectus supplement regarding our estimated quantities of proved reserves, the future net revenues from those reserves and their present value is based, in part, on the estimated reserve evaluations and related calculations of Wright & Company, Inc., independent petroleum engineering consultants. These estimates are aggregated and the sums are included in or incorporated by reference into this prospectus supplement in reliance upon the authority of said firm as experts in petroleum engineering.

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Glossary of Terms

AMI. Area of Mutual Interest, an agreed designated geographic area where joint venturers or other industry partners have a right of participation in acquisitions and operations

Bbl. Barrel of oil, condensate or NGLs

Bbl/d. Barrels of oil, condensate or NGLs per day

Bcf. One billion cubic feet of natural gas

Bcfe. One billion cubic feet of natural gas equivalent, determined using the ratio of six cubic feet of natural gas to one barrel of oil, condensate or NGLs

Boe. One barrel of oil equivalent determined using the ratio of six thousand cubic feet of natural gas to one barrel of oil, condensate or NGLs

BOE/d. Barrels of oil equivalent per day

Btu. British thermal unit, typically used in measuring natural gas energy content

CRP. Central receipt point

FASB. Financial Accounting Standards Board

GAAP. Accounting principles generally accepted in the United States of America

MBbl. One thousand barrels of oil, condensate or NGLs

MBbl/d. One thousand barrels of oil, condensate or NGLs per day

MBoe. One thousand barrels of oil equivalent

MBoe/d. One thousand barrels of oil equivalent per day

Mcf. One thousand cubic feet of natural gas

Mcf/d. One thousand cubic feet of natural gas per day

Mcfe. One thousand cubic feet of natural gas equivalent

MMBbl. One million barrels of oil, condensate or NGLs

MMBtu/d. One million British thermal units per day

MMcf. One million cubic feet of natural gas

MMcf/d. One million cubic feet of natural gas per day

NGLs. Natural gas liquids

NYMEX. New York Mercantile Exchange

PBU. Performance based unit

psi. Pounds per square inch

U.S. United States

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PROSPECTUS

\$300,000,000

GASTAR EXPLORATION INC.

Common Stock

Preferred Stock

Debt Securities

Rights

Guarantees of Debt Securities

We may offer and sell the securities listed above from time to time in one or more classes or series and in amounts, at prices and on terms that we will determine at the time of the offering. Any debt securities we issue under this prospectus may be guaranteed by certain of Gastar Exploration Inc.'s subsidiaries. The aggregate initial offering price of the securities that we will offer will not exceed \$300,000,000.

This prospectus provides you with a general description of the securities that may be offered. Each time securities are offered, we will provide a prospectus supplement and attach it to this prospectus. The prospectus supplement will contain more specific information about the offering and the terms of the securities being offered, including any guarantees by our subsidiaries. The prospectus supplements may also add, update or change information contained in this prospectus. This prospectus may not be used to offer or sell securities without a prospectus supplement describing the method and terms of the offering.

The securities may be offered and sold on a delayed or continuous basis directly by us, through agents, underwriters or dealers as designated from time to time, through a combination of these methods or any other method as provided in the applicable prospectus supplement. See Plan of Distribution. The prospectus supplement will list any agents, underwriters or dealers that may be involved and the compensation they will receive. The prospectus supplement will also show you the total amount of money that we will receive from selling the securities being offered, after the expenses of the offering.

You should carefully read this prospectus and any accompanying prospectus supplement, together with the documents we incorporate by reference, before you invest in any of our securities.

Investing in our securities involves risk. Please see Risk Factors beginning on page 7 for a discussion of certain risks that you should consider in connection with an investment in the securities.

Our common stock, 8.625% Series A Cumulative Preferred Stock and 10.75% Series B Cumulative Preferred Stock are listed on the NYSE MKT LLC under the symbols GST, GST.PR.A and GST.PR.B, respectively.

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.

This prospectus is dated February 24, 2014 .

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You should rely only on the information contained or incorporated by reference in this prospectus and any prospectus supplement. We have not authorized anyone to provide you with additional or different information. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus and any prospectus supplement are not an offer to sell or the solicitation of an offer to buy any securities other than the securities to which they relate and are not an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make an offer or solicitation in that jurisdiction. You should not assume that the information in this prospectus or any prospectus supplement or in any document incorporated by reference in this prospectus or any prospectus supplement is accurate as of any date other than the date of the document containing the information.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, which we refer to as the SEC, utilizing a shelf registration process. Under this shelf registration process, we may, from time to time, offer and sell any combination up to \$300,000,000 of the securities described in this prospectus in one or more offerings. This prospectus provides you with a general description of Gastar Exploration Inc. and the securities we may offer. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of the offering and the offered securities. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. We may also add or update in the prospectus supplement (and in any related free writing prospectus that we may authorize to be provided to you) any of the information contained in this prospectus or in the documents that we have incorporated by reference into this prospectus. You should read this prospectus, any applicable prospectus supplement and any related free writing prospectus together with the additional information described under the heading **Where You Can Find More Information** before buying any securities being offered.

You should rely only on the information that we have provided or incorporated by reference in this prospectus, any applicable prospectus supplement and any related free writing prospectus that we may authorize to be provided to you. We have not authorized anyone to provide you with different information. No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus, any applicable prospectus supplement or any related free writing prospectus that we may authorize to be provided to you. You must not rely on any unauthorized information or representation. This prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. You should assume that the information in this prospectus, any applicable prospectus supplement or any related free writing prospectus is accurate only as of the date on the front of the document and that any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus, any applicable prospectus supplement or any related free writing prospectus, or any sale of a security.

This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under the heading **Where You Can Find More Information**.

Unless the context otherwise requires, references in this prospectus to **Gastar**, **we**, **us**, **our** and the **Company** refer to Gastar Exploration Inc. and its subsidiaries and predecessors.

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THE COMPANY

We are an independent energy company engaged in the exploration, development and production of oil, natural gas, condensate and natural gas liquids in the United States. Our principal business activities include the identification, acquisition, and subsequent exploration and development of oil and natural gas properties with an emphasis on unconventional reserves such as shale resource plays. We are currently pursuing the development of liquids-rich natural gas in the Marcellus Shale and Utica Shale in West Virginia and are also in the early stages of exploring and developing the Hunton Limestone horizontal oil play in Oklahoma.

Our principal executive offices are located at 1331 Lamar Street, Suite 650, Houston, Texas 77010. Our telephone number at that address is (713) 739-1800. Our website address is <http://www.gastar.com>. We make our periodic reports and other information filed with or furnished to the SEC available, free of charge, through our website, as soon as reasonably practicable. Information contained on our website is not incorporated by reference into this prospectus and you should not consider information contained on our website as part of this prospectus.

For additional information as to our business and financial condition, please refer to the documents cited in [Where You Can Find More Information](#).

ABOUT THE SUBSIDIARY GUARANTORS

If specified in the accompanying prospectus supplement respecting a series of debt securities, any of our current or future subsidiaries specified in the prospectus supplement, which we refer to as [Subsidiary Guarantors](#), may jointly and severally, fully, irrevocably and unconditionally guarantee our payment obligations under any series of debt securities offered by this prospectus. Financial information concerning our [Subsidiary Guarantors](#) and non-guarantor subsidiaries, if any, will be included in our consolidated financial statements filed as a part of our periodic reports filed pursuant to the Securities Exchange Act of 1934, as amended (the [Exchange Act](#)) to the extent required by the rules and regulations of the SEC.

For additional information as to our and our subsidiaries' business, properties, and financial condition, please refer to the documents cited in [Where You Can Find More Information](#).

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WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports and other information with the SEC (File No. 001-35211) pursuant to the Exchange Act. You may read and copy any documents that are filed at the SEC's Public Reference Room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You may also obtain copies of these documents at prescribed rates from the Public Reference Section of the SEC at its Washington address. Please call the SEC at 1-800-SEC-0330 for further information. Our filings are also available to the public through the SEC's website at www.sec.gov.

The SEC allows us to incorporate by reference information that we file with them, which means that we can disclose important information to you by referring you to documents previously filed with the SEC. The information incorporated by reference is an important part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. The following documents we filed with the SEC pursuant to the Exchange Act are incorporated herein by reference:

our Annual Report on Form 10-K for the fiscal year ended December 31, 2012, filed on March 11, 2013, as amended by the Form 10-K/A filed with the SEC on April 29, 2013 and the Form 10-K/A filed with the SEC on October 24, 2013;

our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2013, filed on May 2, 2013, June 30, 2013, filed on August 5, 2013 and September 30, 2013, filed on November 5, 2013;

our Current Reports on Form 8-K filed on January 8, 2013, February 21, 2013, March 11, 2013, April 1, 2013 (as amended by the Form 8-K/A filed with the SEC on June 27, 2013 and the Form 8-K/A filed with the SEC on October 28, 2013), April 3, 2013, April 23, 2013, May 2, 2013, May 7, 2013, May 10, 2013, May 15, 2013, June 12, 2013, June 12, 2013, July 3, 2013, July 9, 2013, July 17, 2013, August 6, 2013, August 12, 2013, September 3, 2013, September 6, 2013, September 23, 2013, October 4, 2013, October 8, 2013, October 22, 2013, October 28, 2013, November 1, 2013, November 6, 2013, November 7, 2013, November 15, 2013, November 20, 2013, November 24, 2013, December 24, 2013, January 22, 2014, January 31, 2014 and February 6, 2014 (in each case excluding any information furnished pursuant to Item 2.02 or Item 7.01);

the description of our common stock contained in Exhibit 99.1 to our Current Report on Form 8-K filed on January 31, 2014, including any amendment that we may file in the future for the purpose of updating the description of our common stock.

the description of our 8.625% Series A Cumulative Preferred Stock contained in our registration statement on Form 8-A filed on June 20, 2011, including any amendment to that Form that we may have filed in the past, or may file in the future, for the purpose of updating the description of our 8.625% Series A Cumulative Preferred Stock.

the description of our 10.75% Series B Cumulative Preferred Stock contained in our registration statement on Form 8-A filed on November 1, 2013, including any amendment to that Form that we may have filed in the past, or may file in the future, for the purpose of updating the description of our 10.75% Series B Cumulative Preferred Stock.

In addition, we incorporate by reference in this prospectus any future filings made by Gastar Exploration Inc. with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act (excluding any information furnished and not filed with the SEC) after the date on which the registration statement that includes this prospectus was initially filed with the SEC (including all such documents we may file with the SEC after the date of the initial registration statement and prior to the effectiveness of the registration statement) and until all offerings under this shelf registration statement are terminated.

Any statement contained in a document incorporated by reference herein shall be deemed to be modified or superseded for all purposes to the extent that a statement contained in this prospectus or in any other subsequently filed document which is also incorporated or deemed to be incorporated by reference, modifies or

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supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

You may request a copy of these filings (other than an exhibit to a filing unless that exhibit is specifically incorporated by reference into that filing) at no cost by writing or telephoning us at the following address and telephone number:

Gastar Exploration Inc.

1331 Lamar Street, Suite 650

Houston, Texas 77010

Attention: Michael A. Gerlich

Telephone: (713) 739-1800

We also make available free of charge on our website at <http://www.gastar.com> all of the documents that we file with the SEC as soon as reasonably practicable after we electronically file such material with the SEC. However, the information on our website is not part of this prospectus.

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CAUTIONARY STATEMENTS REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated herein contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933, as amended (the Securities Act), and Section 21E of the Exchange Act. All statements other than statements of historical fact included or incorporated by reference in this prospectus are forward-looking statements, including, without limitation, all statements regarding future plans, business objectives, strategies, expected future financial position or performance, expected future operational position or performance, budgets and projected costs, future competitive position or goals and/or projections of management for future operations. In some cases, you can identify a forward-looking statement by terminology such as may, will, could, should, expect, plan, project, intend, anticipate, believe, estimate, predict, potential, pursue, target or continue or variations thereon, or other comparable terminology.

The forward-looking statements contained in this prospectus are largely based on our expectations and beliefs concerning future developments and their potential effect on us, which reflect certain estimates and assumptions made by our management. These estimates and assumptions reflect our best judgment based on currently known market conditions, operating trends and other factors. Forward-looking statements may include statements that relate to, among other things, our:

financial position;

business strategy and budgets;

anticipated capital expenditures;

drilling of wells, including the anticipated scheduling and results of such operations;

natural gas, oil and natural gas liquids (NGLs) reserves;

timing and amount of future production of natural gas, condensate, oil and NGLs;

operating costs and other expenses;

cash flow and anticipated liquidity;

prospect development; and

property acquisitions and sales.

Although we believe such estimates and assumptions to be reasonable, they are inherently uncertain and involve a number of risks and uncertainties that are beyond our control. As such, management's assumptions about future events may prove to be inaccurate. For a more detailed description of the known material factors that could cause actual results to differ from those in the forward-looking statements, see Risk Factors beginning on page 7 of this prospectus and other risks set forth in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2012. We do not intend to publicly update or revise any forward-looking statements as a result of new information, future events, changes in circumstances or otherwise. These cautionary statements qualify all forward-looking statements attributable to us, or persons acting on our behalf. Management cautions all readers that the forward-looking statements contained in this prospectus are not guarantees of future

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performance, and we cannot assure any reader that such statements will be realized or that the events and circumstances they describe will occur. Factors that could cause actual results to differ materially from those anticipated or implied in the forward-looking statements herein include, but are not limited to:

our ability to integrate acquired assets with ours and to realize the anticipated benefits from such acquisitions;

the supply and demand for natural gas, condensate, oil and NGLs;

low and/or declining prices for natural gas, condensate, oil and NGLs;

natural gas, condensate, oil and NGLs price volatility;

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worldwide political and economic conditions and conditions in the energy market;

our ability to raise capital to fund planned capital expenditures or repay or refinance debt upon maturity;

the ability and willingness of our current or potential counterparties, third-party operators or vendors to enter into transactions with us and/or to fulfill their obligations to us;

failure of our joint interest partners to fund any or all of their portion of any capital program;

the ability to find, acquire, market, develop and produce new natural gas and oil properties;

uncertainties about the estimated quantities of natural gas and oil reserves and in the projection of future rates of production and timing of development expenditures of proved reserves;

strength and financial resources of competitors;

availability and cost of material and equipment, such as drilling rigs and transportation pipelines;

availability and cost of natural gas and NGLs processing and transportation;

changes or advances in technology;

the risks associated with exploration, including cost overruns and the drilling of non-economic wells or dry wells, operating hazards inherent to the natural gas and oil business and down hole drilling and completion risks that are generally not recoverable from third parties or insurance;

potential mechanical failure or under-performance of significant wells or pipeline mishaps;

environmental risks;

possible new legislative initiatives and regulatory changes potentially adversely impacting our business and industry, including, but not limited to, national healthcare, hydraulic fracturing, state and federal corporate income taxes, retroactive royalty or production tax regimes, changes in environmental regulations, environmental risks and liability under federal, state and local environmental laws and regulations;

effects of the application of applicable laws and regulations, including changes in such regulations or the interpretation thereof;

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potential losses from pending or possible future claims, litigation or enforcement actions;

potential defects in title to our properties or lease termination due to lack of activity or other disputes with mineral lease and royalty owners, whether regarding calculation and payment of royalties or otherwise;

the weather, including the occurrence of any adverse weather conditions and/or natural disasters affecting our business;

our ability to find and retain skilled personnel; and

any other factors that impact or could impact the exploration of natural gas or oil resources, including, but not limited to, the geology of a resource, the total amount and costs to develop recoverable reserves, legal title, regulatory, natural gas administration, marketing and operational factors relating to the extraction of natural gas and oil.

You should not unduly rely on these forward-looking statements in this prospectus, as they speak only as of the date of this prospectus. Except as required by law, we undertake no obligation to publicly update, revise or release any revisions to these forward-looking statements after the date on which they are made to reflect new information, events or circumstances occurring after the date of this prospectus or to reflect the occurrence of unanticipated events.

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RISK FACTORS

An investment in our securities involves a high degree of risk. You should carefully consider the risk factors and all of the other information included in, or incorporated by reference into, this prospectus, including those included in our most recent Annual Report on Form 10-K and, if applicable, in our Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, in evaluating an investment in our securities. If any of these risks were to occur, our business, financial condition or results of operations could be adversely affected. In that case, the trading price of our securities could decline and you could lose all or part of your investment. When we offer and sell any securities pursuant to a prospectus supplement, we may include additional risk factors relevant to such securities in the prospectus supplement.

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USE OF PROCEEDS

Except as may be stated in the applicable prospectus supplement or free writing prospectus, we intend to use the net proceeds we receive from any sales of securities by us under this prospectus and any accompanying prospectus supplement for general corporate purposes, which may include, among other things:

capital expenditures;

the repayment of indebtedness;

working capital; and

to make strategic acquisitions.

Any specific allocation of the net proceeds of an offering of securities to a specific purpose will be determined at the time of the offering and will be described in an accompanying prospectus supplement or free writing prospectus. The precise amount and timing of the application of these proceeds will depend upon our funding requirements and the availability and cost of other funds.

Table of Contents**RATIO OF EARNINGS TO FIXED CHARGES AND RATIO OF EARNINGS TO COMBINED FIXED CHARGES AND PREFERRED STOCK DIVIDENDS**

The following table contains our consolidated ratios of earnings to fixed charges and ratios of earnings to combined fixed charges plus preferred stock dividends for the periods indicated:

	Year Ended December 31,					Nine Months
	2008	2009	2010	2011	2012	Ended September 30, 2013
Ratio of earnings to fixed charges(1)		10.8x				5.8x
Ratio of earnings to combined fixed charges and preference securities dividends(2)		10.8x				3.0x

- (1) The ratio of earnings to fixed charges was less than one-to-one for the years ended December 31, 2008, 2010, 2011 and 2012. Additional earnings of \$12.5 million, \$12.8 million, \$0.1 million and \$147.1 million, respectively, would have been needed to have a one-to-one ratio of earnings to fixed charges.
- (2) The ratio of earnings to fixed charges and preferred stock dividends was less than one-to-one for the years ended December 31, 2008, 2010, 2011 and 2012. Additional earnings of \$12.5 million, \$12.8 million, \$1.6 million and \$157.9 million, respectively, would have been needed to have a one-to-one ratio of earnings to fixed charges and preferred stock dividends for those periods.

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DESCRIPTION OF CAPITAL STOCK

General

The following descriptions are summaries of material terms of our common stock, preferred stock, certificate of incorporation and bylaws. These summaries are qualified by reference to our certificate of incorporation, bylaws and the designations of our preferred stock, which are filed as exhibits to the registration statement of which this prospectus forms a part, and by the provisions of applicable law.

As of the date of this prospectus, our authorized capital stock consisted of (a) 40,000,000 shares of preferred stock, \$0.01 par value per share, 6,098,160 of which were issued and outstanding, and (b) 275,000,000 shares of common stock, \$0.001 par value per share, 61,891,767 of which were issued and outstanding. In addition, as of the date of this prospectus, 5,196,221 shares of common stock were subject to outstanding awards pursuant to our equity incentive plans, of which (a) 874,100 shares were subject to options to purchase our common stock at a weighted average exercise price of \$11.68 per, (b) 3,331,463 shares consisted of shares of unvested restricted stock and (c) 990,658 shares were subject to outstanding performance-based stock unit awards (assuming settlement at 100% of the target level of performance).

Common Stock

Shares of our common stock have the following rights, preferences and privileges:

Voting Rights. Holders of our common stock are entitled to receive notice of any meeting of stockholders and to one vote for each share held of record on all matters at all meetings of stockholders, except at a meeting where holders of a particular class or series of shares are entitled to vote separately. Our common stockholders have no cumulative voting rights and all members of our board of directors are to be elected annually by plurality of the votes of the shares present in person or represented by proxy at the meeting and entitled to vote on the election of directors. Under our bylaws, subject to the rights of the holders of any series of preferred stock to elect directors under specified circumstances set forth in any Preferred Stock Designation, each stockholder having the right to vote is entitled at every meeting of stockholders to vote one vote for every share standing in his name on the record date fixed by the board of directors pursuant to the bylaws. Except as otherwise provided by law, the certificate of incorporation, any Preferred Stock Designation, the bylaws or any resolution adopted by a majority of the whole board of directors, all matters submitted to the stockholders at any meeting (other than the election of directors) shall be decided by the affirmative vote of the majority of shares present in person or represented by proxy at the meeting and entitled to vote on the subject matter.

Dividends. Holders of common stock are entitled to receive dividends if, as and when declared by the board of directors out of funds legally available therefor, subject to the limitations contained in the Delaware General Corporation Law (the "DGCL") and any dividend preferences of any outstanding shares of preferred stock.

Liquidation. If we liquidate, dissolve or wind up, voluntarily or involuntarily, holders of our common stock are entitled to share ratably in all net assets available for distribution to our stockholders, after creditors of the corporation have been paid in full and after the payment in full of any preferential amounts to which holders of our preferred stock may be entitled.

Other Rights and Preferences. No share of common stock affords any preemptive rights or is convertible, redeemable, assessable or entitled to the benefits of any sinking or repurchase fund.

Listing. Our common stock is traded on the NYSE MKT LLC under the symbol GST.

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

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Shares of our common stock are validly issued, fully paid and non-assessable. Any additional shares of common stock offered pursuant to this prospectus and the applicable prospectus supplement will, upon issuance, be fully paid and non-assessable.

Preferred Stock

As of the date of this prospectus, we had 33,901,840 shares of authorized but unissued preferred stock, 20,000,000 of which are undesignated.

At the direction of our board of directors, we may issue shares of preferred stock from time to time. Our board of directors may, without any action by holders of our common stock:

adopt resolutions to issue preferred stock in one or more classes or series;

fix the number of shares constituting any class or series of preferred stock; and

establish the rights of the holders of any class or series of preferred stock.

The rights of any class or series of preferred stock may include, among others:

general or special voting rights;

preferential liquidation or preemptive rights;

preferential cumulative or noncumulative dividend rights;

redemption or put rights; and

conversion or exchange rights.

We may issue shares of, or rights to purchase, preferred stock, the terms of which might:

adversely affect voting or other rights evidenced by, or amounts otherwise payable with respect to, the common stock;

discourage an unsolicited proposal to acquire us; or

facilitate a particular business combination involving us.

Any of these actions could discourage a transaction that some or a majority of our stockholders might believe to be in their best interests or in which our stockholders might receive a premium for their stock over its then market price.

Any shares of preferred stock offered pursuant to this prospectus and the applicable prospectus supplement will, upon issuance, be fully paid and non-assessable.

8.625% Series A Cumulative Preferred Stock

As of the date of this prospectus, we had designated 10,000,000 shares to constitute our 8.625% Series A Preferred Stock (the Series A Preferred Stock) and have 3,958,160 shares issued and outstanding. The terms of the Series A Preferred Stock are contained in a Certificate of Designation (the Series A Certificate), which is incorporated by reference to an exhibit to the registration statement of which this prospectus forms a part. The following description is a summary of the material provisions of the Series A Preferred Stock as set forth in the Series A Certificate:

Ranking. The Series A Preferred Stock will rank: (i) senior to the common stock and any other equity securities that we may issue in the future, the terms of which specifically provide that such equity securities rank junior to such Series A Preferred Stock, in each case with respect to payment of dividends and amounts upon liquidation, dissolution or winding up, referred to as Junior Shares,

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(ii) equal to any shares of equity securities that we may issue in the future, the terms of which specifically provide that such equity securities rank on par with such Series A Preferred Stock, in each case with respect to payment of dividends and amounts upon liquidation, dissolution or winding up, referred to as Parity Shares, (iii) junior to all other equity securities issued by us, the terms of which specifically provide that such equity securities rank senior to such Series A Preferred Stock, in each case with respect to payment of dividends and amounts upon liquidation, dissolution or winding up (any such issuance would require the affirmative vote of the holders of at least two-thirds of the outstanding shares of Series A Preferred Stock), referred to as Senior Shares, and (iv) junior to all of our existing and future indebtedness.

Voting Rights. Holders of the Series A Preferred Stock will generally only be entitled to vote on certain acquisitions and share exchange transactions and changes that would be materially adverse to the rights of holders of Series A Preferred Stock. However, if cash dividends on any outstanding Series A Preferred Stock have not been paid in full for any monthly dividend period for any four consecutive or non-consecutive quarterly periods, or if we fail to maintain the listing of the Series A Preferred Stock on a National Exchange for at least 180 consecutive days after the Series A Preferred Stock becomes eligible for listing on a National Exchange, the holders of the Series A Preferred Stock, voting separately as a class with holders of all other series of Parity Shares upon which like voting rights have been conferred and are exercisable, will have the right to elect two directors to serve on our board of directors in addition to those directors then serving on such board until such time as the Series A Preferred Stock becomes listed on a National Exchange or the dividend arrearage is eliminated. Additionally, the affirmative consent of holders of at least 66 2/3% of the outstanding Series A Preferred Stock will be required for the issuance of any Senior Shares or for amendments to our certificate of incorporation by merger or otherwise that would affect adversely the rights of holders of the Series A Preferred Stock.

Dividends. Holders of our Series A Preferred Stock are entitled to receive cumulative cash dividends when and as declared by our board of directors out of funds legally available for the payment therefor, at a rate of 8.625% per annum of the \$25.00 liquidation preference per share (equivalent to \$2.15625 per annum per share). Under certain conditions relating to non-payment of dividends on the Series A Preferred Stock or if the Series A Preferred Stock are no longer listed on a National Exchange, the dividend rate on the Series A Preferred Stock may increase to 10.625% per annum. Dividends will generally be payable monthly in arrears on the last day of each calendar month.

Conversion Rights. Our Series A Preferred Stock is not convertible into, or exchangeable for, any of our property or securities.

Redemption Rights. We may not redeem the Series A Preferred Stock prior to June 23, 2014 except pursuant to the special redemption upon a Change of Ownership or Control (as defined in the Series A Certificate). On and after June 23, 2014, we may redeem the Series A Preferred Stock for cash at our option, from time to time, in whole or in part, at a redemption price of \$25.00 per share, plus accrued and unpaid dividends (whether or not earned or declared) to the redemption date.

Liquidation. If we liquidate, dissolve or wind up our operations, the holders of the Series A Preferred Stock will have the right to receive \$25.00 per share, plus all accrued and unpaid dividends (whether or not earned or declared) to and including the date of payment, before any payments are made to the holders of our common stock and any other Junior Shares. The rights of the holders of the Series A Preferred Stock to receive the liquidation preference will be subject to the proportionate rights of holders of each other future series or class of Parity Shares and subordinate to the rights of Senior Shares.

Other Rights and Preferences. No share of our Series A Preferred Stock affords any preemptive rights or is entitled to the benefits of any retirement or sinking fund.

Listing: Our Series A Preferred Stock is traded on the NYSE MKT LLC under the symbol GST.PR.A.

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Transfer Agent, Registrar and Dividend Disbursing Agent. The transfer agent, registrar and dividend disbursement agent for our Series A Preferred Stock is American Stock Transfer and Trust Company, LLC. Our Series A Preferred Stock is validly issued, fully paid and non-assessable.

10.75% Series B Cumulative Preferred Stock

As of the date of this prospectus, we had designated 10,000,000 shares to constitute our 10.75% Series B Preferred Stock (the Series B Preferred Stock) and have 2,140,000 shares issued and outstanding. The terms of the Series B Preferred Stock are contained in a Certificate of Designation (the Series B Certificate), which is incorporated by reference to an exhibit to the registration statement of which this prospectus forms a part. The following description is a summary of the material provisions of the Series B Preferred Stock as set forth in the Series B Certificate:

Ranking. The Series B Preferred Stock will rank: (i) senior to the common stock and any other equity securities that we may issue in the future, the terms of which specifically provide that such equity securities rank junior to such Series B Preferred Stock, in each case with respect to payment of dividends and amounts upon liquidation, dissolution or winding up, referred to as Junior Shares, (ii) equal to the Series A Preferred Stock and any shares of equity securities that we may issue in the future, the terms of which specifically provide that such equity securities rank on par with such Series B Preferred Stock, in each case with respect to payment of dividends and amounts upon liquidation, dissolution or winding up, referred to as Parity Shares, (iii) junior to all other equity securities issued by us, the terms of which specifically provide that such equity securities rank senior to such Series B Preferred Stock, in each case with respect to payment of dividends and amounts upon liquidation, dissolution or winding up (any such issuance would require the affirmative vote of the holders of at least two-thirds of the outstanding shares of Series B Preferred Stock and all other series of Voting Preferred Shares (as defined in the Series B Certificate)), referred to as Senior Shares, and (iv) junior to all of our existing and future indebtedness.

Voting Rights. Holders of the Series B Preferred Stock will generally only be entitled to vote on certain acquisitions and share exchange transactions and changes that would be materially adverse to the rights of holders of Series B Preferred Stock. However, if cash dividends on any outstanding Series B Preferred Stock have not been paid in full for any monthly dividend period for any four consecutive or non-consecutive quarterly periods, or if we fail to maintain the listing of the Series B Preferred Stock on a National Exchange for at least 180 consecutive days after the Series B Preferred Stock becomes eligible for listing on a National Exchange, the holders of the Series B Preferred Stock, voting separately as a class with holders of all other series of Parity Shares upon which like voting rights have been conferred and are exercisable, will have the right to elect two directors to serve on our board of directors in addition to those directors then serving on such board until such time as the Series B Preferred Stock becomes listed on a National Exchange or the dividend arrearage is eliminated. Additionally, the affirmative consent of holders of at least 66 2/3% of the outstanding Series B Preferred Stock will be required for the issuance of any Senior Shares or for amendments to our certificate of incorporation by merger or otherwise that would affect adversely the rights of holders of the Series B Preferred Stock.

Dividends. Holders of our Series B Preferred Stock are entitled to receive cumulative cash dividends when and as declared by our board of directors out of funds legally available for the payment therefor, at a rate of 10.75% per annum of the \$25.00 liquidation preference per share (equivalent to \$2.6875 per annum per share). Under certain conditions relating to non-payment of dividends on the Series B Preferred Stock or if the Series B Preferred Stock is no longer listed on a National Exchange, the dividend rate on the Series B Preferred Stock may increase to 12.75% per annum. Dividends will generally be payable monthly in arrears on the last day of each calendar month.

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Conversion Rights. Except under certain conditions, upon the occurrence of a Change of Ownership or Control (as defined in the Series B Certificate), each holder of Series B Preferred Stock will have the right to convert some or all of such stock held by such holder into a number of shares of our common stock.

Redemption Rights. We may not redeem the Series B Preferred Stock prior to November 15, 2018 except pursuant to the special redemption upon a Change of Ownership or Control (as defined in the Series B Certificate). On and after November 15, 2018, we may redeem the Series B Preferred Stock for cash at our option, from time to time, in whole or in part, at a redemption price of \$25.00 per share, plus accrued and unpaid dividends (whether or not earned or declared) to the redemption date.

Liquidation. If we liquidate, dissolve or wind up our operation, the holders of the Series B Preferred Stock will have the right to receive \$25.00 per share, plus all accrued and unpaid dividends (whether or not earned or declared) to and including the date of payment, before any payments are made to the holders of our common stock and any other Junior Shares. The rights of the holders of the Series B Preferred Stock to receive the liquidation preference will be subject to the proportionate rights of holders of each other future series or class of Parity Shares and subordinate to the rights of Senior Shares.

Other Rights and Preferences. No share of our Series B Preferred Stock affords any preemptive rights or is entitled to the benefits of any retirement or sinking fund.

Listing: Our Series B Preferred Stock is traded on the NYSE MKT LLC under the symbol GST.PR.B.

Transfer Agent, Registrar and Dividend Disbursing Agent. The transfer agent, registrar and dividend disbursement agent for our Series B Preferred Stock is American Stock Transfer and Trust Company, LLC. Our Series B Preferred Stock is validly issued, fully paid and non-assessable.

Anti-Takeover Provisions of our Certificate of Incorporation and Bylaws

The provisions of our certificate of incorporation and bylaws may have an anti-takeover effect and may delay, defer or prevent a tender offer or takeover attempt that a stockholder might consider in his or her best interest, including those attempts that might result in a premium over the market price for the common stock. Among other things, our certificate of incorporation and bylaws:

provide that any action taken by our stockholders must be taken (a) by a vote of stockholders at a meeting of stockholders duly noticed and called in accordance with the DGCL or (b) without a meeting, without prior notice, and without a vote if a consent or consents, in writing or by electronic transmission, setting forth the action so taken shall be signed by all stockholders entitled to vote on the taking of such action;

provide that stockholders seeking to present proposals before a meeting of stockholders or to nominate candidates for election as directors at a meeting of stockholders must provide notice in a timely manner, and also specify requirements as to the form and content of such notice;

provide that the board of directors or any individual director may be removed (i) with cause only by the affirmative vote of the holders of not less than a majority of the shares of our capital stock entitled to vote generally in the election of directors voting together as a single class or (ii) without cause only by the affirmative vote of the holders of not less than two-thirds (66.66%) of the shares of our capital stock entitled to vote generally in the election of directors voting together as a single class;

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authorize the board of directors to determine the number of directors and to fill vacancies on the board;

provide that only the board of directors or chief executive officer may call a special meeting of the stockholders;

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requires supermajority voting for some amendments to the certificate of incorporation; and

provide for the issuance of blank check preferred stock.

Limitation of Liability and Indemnification Matters

Our certificate of incorporation limits, to the fullest extent permitted by Delaware law, the personal liability of directors for monetary damages for breach of their fiduciary duties as a director. The effect of this provision is to eliminate our rights and those of our stockholders, through stockholders' derivative suits on behalf of the Company, to recover monetary damages against a director for breach of fiduciary duty as a director, including breaches resulting from grossly negligent behavior.

Section 145 of the DGCL provides that a corporation may indemnify a director, officer, employee or agent made a party to an action by reason of the fact that he or she was a director, officer, employee or agent of the corporation or was serving at the request of the corporation against expenses, judgments, fines and amounts paid in settlement actually and reasonably incurred by him or her in connection with such action if he or she acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, the best interests of the corporation and, with respect to any criminal action, had no reasonable cause to believe his or her conduct was unlawful.

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DESCRIPTION OF DEBT SECURITIES

The Debt Securities will be either our senior debt securities (Senior Debt Securities) or our subordinated debt securities (Subordinated Debt Securities). The Senior Debt Securities and the Subordinated Debt Securities will be issued under separate indentures among us, the Subsidiary Guarantors of such Debt Securities, if any, and a trustee to be determined (the Trustee). Senior Debt Securities will be issued under a Senior Indenture and Subordinated Debt Securities will be issued under a Subordinated Indenture. Together, the Senior Indenture and the Subordinated Indenture are called Indentures.

The Debt Securities may be issued from time to time in one or more series. The particular terms of each series that are offered by a prospectus supplement will be described in the prospectus supplement.

Unless the Debt Securities are guaranteed by our subsidiaries as described below, our rights and the rights of our creditors, including holders of the Debt Securities, to participate in the assets of any subsidiary upon the latter's liquidation or reorganization, will be subject to the prior claims of the subsidiary's creditors, except to the extent that we may ourselves be a creditor with recognized claims against such subsidiary.

We have summarized selected provisions of the Indentures below. The summary is not complete. The form of each Indenture has been filed with the SEC as an exhibit to the registration statement of which this prospectus is a part, and you should read the Indentures for provisions that may be important to you. Capitalized terms used in the summary have the meanings specified in the Indentures.

General

The Indentures provide that Debt Securities in separate series may be issued thereunder from time to time without limitation as to aggregate principal amount. We may specify a maximum aggregate principal amount for the Debt Securities of any series. We will determine the terms and conditions of the Debt Securities, including the maturity, principal and interest, but those terms must be consistent with the Indenture. The Debt Securities will be our unsecured obligations.

The Subordinated Debt Securities will be subordinated in right of payment to the prior payment in full of all of our Senior Debt (as defined) as described under Subordination of Subordinated Debt Securities and in the prospectus supplement applicable to any Subordinated Debt Securities. If the prospectus supplement so indicates, the Debt Securities will be convertible into our common stock.

If specified in the prospectus supplement respecting a particular series of Debt Securities, any of our current and future subsidiaries specified in the prospectus supplement (each a Subsidiary Guarantor) will fully and unconditionally guarantee (the Subsidiary Guarantee) that series as described under Subsidiary Guarantee and in the prospectus supplement. Each Subsidiary Guarantee will be an unsecured obligation of the Subsidiary Guarantor. A Subsidiary Guarantee of Subordinated Debt Securities will be subordinated to the Senior Debt of the Subsidiary Guarantor on the same basis as the Subordinated Debt Securities are subordinated to our Senior Debt.

The applicable prospectus supplement will set forth the price or prices at which the Debt Securities to be issued will be offered for sale and will describe the following terms of such Debt Securities:

- (1) the title of the Debt Securities;
- (2) whether the Debt Securities are Senior Debt Securities or Subordinated Debt Securities and, if Subordinated Debt Securities, the related subordination terms;
- (3) whether any Subsidiary Guarantor will provide a Subsidiary Guarantee of the Debt Securities;
- (4) any limit on the aggregate principal amount of the Debt Securities;

(5) each date on which the principal of the Debt Securities will be payable;

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- (6) the interest rate that the Debt Securities will bear and the interest payment dates for the Debt Securities;
- (7) each place where payments on the Debt Securities will be payable;
- (8) any terms upon which the Debt Securities may be redeemed, in whole or in part, at our option;
- (9) any sinking fund or other provisions that would obligate us to redeem or otherwise repurchase the Debt Securities;
- (10) the portion of the principal amount, if less than all, of the Debt Securities that will be payable upon declaration of acceleration of the Maturity of the Debt Securities;
- (11) whether the Debt Securities are defeasible;
- (12) any addition to or change in the Events of Default;
- (13) whether the Debt Securities are convertible into our common stock and, if so, the terms and conditions upon which conversion will be effected, including the initial conversion price or conversion rate and any adjustments thereto and the conversion period;
- (14) any addition to or change in the covenants in the Indenture applicable to the Debt Securities; and
- (15) any other terms of the Debt Securities not inconsistent with the provisions of the Indenture.

Debt Securities, including any Debt Securities that provide for an amount less than the principal amount thereof to be due and payable upon a declaration of acceleration of the Maturity thereof (Original Issue Discount Securities), may be sold at a substantial discount below their principal amount. Special United States federal income tax considerations applicable to Debt Securities sold at an original issue discount may be described in the applicable prospectus supplement. In addition, special United States federal income tax or other considerations applicable to any Debt Securities that are denominated in a currency or currency unit other than United States dollars may be described in the applicable prospectus supplement.

Subordination of Subordinated Debt Securities

The indebtedness evidenced by the Subordinated Debt Securities will, to the extent set forth in the Subordinated Indenture with respect to each series of Subordinated Debt Securities, be subordinated in right of payment to the prior payment in full of all of our Senior Debt, including the Senior Debt Securities, and it may also be senior in right of payment to all of our Subordinated Debt. The prospectus supplement relating to any Subordinated Debt Securities will summarize the subordination provisions of the Subordinated Indenture applicable to that series including:

the applicability and effect of such provisions upon any payment or distribution respecting that series following any liquidation, dissolution or other winding-up, or any assignment for the benefit of creditors or other marshalling of assets or any bankruptcy, insolvency or similar proceedings;

the applicability and effect of such provisions in the event of specified defaults with respect to any Senior Debt, including the circumstances under which and the periods during which we will be prohibited from making payments on the Subordinated Debt

Securities; and

the definition of Senior Debt applicable to the Subordinated Debt Securities of that series and, if the series is issued on a senior subordinated basis, the definition of Subordinated Debt applicable to that series.

The prospectus supplement will also describe as of a recent date the approximate amount of Senior Debt to which the Subordinated Debt Securities of that series will be subordinated.

The failure to make any payment on any of the Subordinated Debt Securities by reason of the subordination provisions of the Subordinated Indenture described in the prospectus supplement will not be construed as preventing the occurrence of an Event of Default with respect to the Subordinated Debt Securities arising from any such failure to make payment.

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The subordination provisions described above will not be applicable to payments in respect of the Subordinated Debt Securities from a defeasance trust established in connection with any legal defeasance or covenant defeasance of the Subordinated Debt Securities as described under Legal Defeasance and Covenant Defeasance.

Subsidiary Guarantee

If specified in the prospectus supplement, one or more of the Subsidiary Guarantors will guarantee the Debt Securities of a series. Unless otherwise indicated in the prospectus supplement, the following provisions will apply to the Subsidiary Guarantee of the Subsidiary Guarantor.

Subject to the limitations described below and in the prospectus supplement, one or more of the Subsidiary Guarantors will jointly and severally, fully and unconditionally guarantee the punctual payment when due, whether at Stated Maturity, by acceleration or otherwise, of all our payment obligations under the Indentures and the Debt Securities of a series, whether for principal of, premium, if any, or interest on the Debt Securities or otherwise (all such obligations guaranteed by a Subsidiary Guarantor being herein called the Guaranteed Obligations). The Subsidiary Guarantors will also pay all expenses (including reasonable counsel fees and expenses) incurred by the applicable Trustee in enforcing any rights under a Subsidiary Guarantee with respect to a Subsidiary Guarantor.

In the case of Subordinated Debt Securities, a Subsidiary Guarantor's Subsidiary Guarantee will be subordinated in right of payment to the Senior Debt of such Subsidiary Guarantor on the same basis as the Subordinated Debt Securities are subordinated to our Senior Debt. No payment will be made by any Subsidiary Guarantor under its Subsidiary Guarantee during any period in which payments by us on the Subordinated Debt Securities are suspended by the subordination provisions of the Subordinated Indenture.

Each Subsidiary Guarantee will be limited in amount to an amount not to exceed the maximum amount that can be guaranteed by the relevant Subsidiary Guarantor without rendering such Subsidiary Guarantee voidable under applicable law relating to fraudulent conveyance or fraudulent transfer or similar laws affecting the rights of creditors generally.

Each Subsidiary Guarantee will be a continuing guarantee and will:

- (1) remain in full force and effect until either (a) payment in full of all the applicable Debt Securities (or such Debt Securities are otherwise satisfied and discharged in accordance with the provisions of the applicable Indenture) or (b) released as described in the following paragraph;
- (2) be binding upon each Subsidiary Guarantor; and

(3) inure to the benefit of and be enforceable by the applicable Trustee, the Holders and their successors, transferees and assigns. In the event that (a) a Subsidiary Guarantor ceases to be a Subsidiary, (b) either legal defeasance or covenant defeasance occurs with respect to the series or (c) all or substantially all of the assets or all of the Capital Stock of such Subsidiary Guarantor is sold, including by way of sale, merger, consolidation or otherwise, such Subsidiary Guarantor will be released and discharged of its obligations under its Subsidiary Guarantee without any further action required on the part of the Trustee or any Holder, and no other person acquiring or owning the assets or Capital Stock of such Subsidiary Guarantor will be required to enter into a Subsidiary Guarantee. In addition, the prospectus supplement may specify additional circumstances under which a Subsidiary Guarantor can be released from its Subsidiary Guarantee.

Form, Exchange and Transfer

The Debt Securities of each series will be issuable only in fully registered form, without coupons, and, unless otherwise specified in the applicable prospectus supplement, only in denominations of \$1,000 and integral multiples thereof.

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At the option of the Holder, subject to the terms of the applicable Indenture and the limitations applicable to Global Securities, Debt Securities of each series will be exchangeable for other Debt Securities of the same series of any authorized denomination and of a like tenor and aggregate principal amount.

Subject to the terms of the applicable Indenture and the limitations applicable to Global Securities, Debt Securities may be presented for exchange as provided above or for registration of transfer (duly endorsed or with the form of transfer endorsed thereon duly executed) at the office of the Security Registrar or at the office of any transfer agent designated by us for such purpose. No service charge will be made for any registration of transfer or exchange of Debt Securities, but we may require payment of a sum sufficient to cover any tax or other governmental charge payable in that connection. Such transfer or exchange will be effected upon the Security Registrar or such transfer agent, as the case may be, being satisfied with the documents of title and identity of the person making the request. The Security Registrar and any other transfer agent initially designated by us for any Debt Securities will be named in the applicable prospectus supplement. We may at any time designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, except that we will be required to maintain a transfer agent in each Place of Payment for the Debt Securities of each series.

If the Debt Securities of any series (or of any series and specified tenor) are to be redeemed in part, we will not be required to (1) issue, register the transfer of or exchange any Debt Security of that series (or of that series and specified tenor, as the case may be) during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption of any such Debt Security that may be selected for redemption and ending at the close of business on the day of such mailing or (2) register the transfer of or exchange any Debt Security so selected for redemption, in whole or in part, except the unredeemed portion of any such Debt Security being redeemed in part.

Global Securities

Some or all of the Debt Securities of any series may be represented, in whole or in part, by one or more Global Securities that will have an aggregate principal amount equal to that of the Debt Securities they represent. Each Global Security will be registered in the name of a Depository or its nominee identified in the applicable prospectus supplement, will be deposited with such Depository or nominee or its custodian and will bear a legend regarding the restrictions on exchanges and registration of transfer thereof referred to below and any such other matters as may be provided for pursuant to the applicable Indenture.

Notwithstanding any provision of the Indentures or any Debt Security described in this prospectus, no Global Security may be exchanged in whole or in part for Debt Securities registered, and no transfer of a Global Security in whole or in part may be registered, in the name of any Person other than the Depository for such Global Security or any nominee of such Depository unless:

- (1) the Depository has notified us that it is unwilling or unable to continue as Depository for such Global Security or has ceased to be qualified to act as such as required by the applicable Indenture, and in either case we fail to appoint a successor Depository within 90 days;
- (2) an Event of Default with respect to the Debt Securities represented by such Global Security has occurred and is continuing and the Trustee has received a written request from the Depository to issue certificated Debt Securities;
- (3) subject to the rules of the Depository, we shall have elected to terminate the book-entry system through the Depository; or
- (4) other circumstances exist, in addition to or in lieu of those described above, as may be described in the applicable prospectus supplement.

All certificated Debt Securities issued in exchange for a Global Security or any portion thereof will be registered in such names as the Depository may direct.

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As long as the Depositary, or its nominee, is the registered holder of a Global Security, the Depositary or such nominee, as the case may be, will be considered the sole owner and Holder of such Global Security and the Debt Securities that it represents for all purposes under the Debt Securities and the applicable Indenture. Except in the limited circumstances referred to above, owners of beneficial interests in a Global Security will not be entitled to have such Global Security or any Debt Securities that it represents registered in their names, will not receive or be entitled to receive physical delivery of certificated Debt Securities in exchange for those interests and will not be considered to be the owners or Holders of such Global Security or any Debt Securities that it represents for any purpose under the Debt Securities or the applicable Indenture. All payments on a Global Security will be made to the Depositary or its nominee, as the case may be, as the Holder of the security. The laws of some jurisdictions may require that some purchasers of Debt Securities take physical delivery of such Debt Securities in certificated form. These laws may impair the ability to transfer beneficial interests in a Global Security.

Ownership of beneficial interests in a Global Security will be limited to institutions that have accounts with the Depositary or its nominee (participants) and to persons that may hold beneficial interests through participants. In connection with the issuance of any Global Security, the Depositary will credit, on its book-entry registration and transfer system, the respective principal amounts of Debt Securities represented by the Global Security to the accounts of its participants. Ownership of beneficial interests in a Global Security will be shown only on, and the transfer of those ownership interests will be effected only through, records maintained by the Depositary (with respect to participants' interests) or any such participant (with respect to interests of Persons held by such participants on their behalf). Payments, transfers, exchanges and other matters relating to beneficial interests in a Global Security may be subject to various policies and procedures adopted by the Depositary from time to time. None of us, the Subsidiary Guarantors, the Trustees or the agents of us, the Subsidiary Guarantors or the Trustees will have any responsibility or liability for any aspect of the Depositary's or any participant's records relating to, or for payments made on account of, beneficial interests in a Global Security, or for maintaining, supervising or reviewing any records relating to such beneficial interests.

Payment and Paying Agents

Unless otherwise indicated in the applicable prospectus supplement, payment of interest on a Debt Security on any Interest Payment Date will be made to the Person in whose name such Debt Security (or one or more Predecessor Securities) is registered at the close of business on the Regular Record Date for such interest.

Unless otherwise indicated in the applicable prospectus supplement, principal of and any premium and interest on the Debt Securities of a particular series will be payable at the office of such Paying Agent or Paying Agents as we may designate for such purpose from time to time, except that at our option payment of any interest on Debt Securities in certificated form may be made by check mailed to the address of the Person entitled thereto as such address appears in the Security Register. Unless otherwise indicated in the applicable prospectus supplement, the corporate trust office of the Trustee under the Senior Indenture in The City of New York will be designated as sole Paying Agent for payments with respect to Senior Debt Securities of each series, and the corporate trust office of the Trustee under the Subordinated Indenture in The City of New York will be designated as the sole Paying Agent for payment with respect to Subordinated Debt Securities of each series. Any other Paying Agents initially designated by us for the Debt Securities of a particular series will be named in the applicable prospectus supplement. We may at any time designate additional Paying Agents or rescind the designation of any Paying Agent or approve a change in the office through which any Paying Agent acts, except that we will be required to maintain a Paying Agent in each Place of Payment for the Debt Securities of a particular series.

All money paid by us to a Paying Agent for the payment of the principal of or any premium or interest on any Debt Security which remains unclaimed at the end of two years after such principal, premium or interest has become due and payable will be repaid to us, and the Holder of such Debt Security thereafter may look only to us for payment.

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Consolidation, Merger and Sale of Assets

Unless otherwise specified in the prospectus supplement, we may not consolidate with or merge into, or transfer, lease or otherwise dispose of all or substantially all of our assets to, any Person (a successor Person), and may not permit any Person to consolidate with or merge into us, unless:

- (1) the successor Person (if not us) is a corporation, partnership, trust or other entity organized and validly existing under the laws of any domestic jurisdiction and assumes our obligations on the Debt Securities and under the Indentures;
- (2) immediately before and after giving pro forma effect to the transaction, no Event of Default, and no event which, after notice or lapse of time or both, would become an Event of Default, has occurred and is continuing; and
- (3) several other conditions, including any additional conditions with respect to any particular Debt Securities specified in the applicable prospectus supplement, are met.

The successor Person (if not us) will be substituted for us under the applicable Indenture with the same effect as if it had been an original party to such Indenture, and, except in the case of a lease, we will be relieved from any further obligations under such Indenture and the Debt Securities.

Events of Default

Unless otherwise specified in the prospectus supplement, each of the following will constitute an Event of Default under the applicable Indenture with respect to Debt Securities of any series:

- (1) failure to pay principal of or any premium on any Debt Security of that series when due, whether or not, in the case of Subordinated Debt Securities, such payment is prohibited by the subordination provisions of the Subordinated Indenture;
- (2) failure to pay any interest on any Debt Securities of that series when due, continued for 30 days, whether or not, in the case of Subordinated Debt Securities, such payment is prohibited by the subordination provisions of the Subordinated Indenture;
- (3) failure to deposit any sinking fund payment, when due, in respect of any Debt Security of that series, whether or not, in the case of Subordinated Debt Securities, such deposit is prohibited by the subordination provisions of the Subordinated Indenture;
- (4) failure to perform or comply with the provisions described under Consolidation, Merger and Sale of Assets;
- (5) failure to perform any of our other covenants in such Indenture (other than a covenant included in such Indenture solely for the benefit of a series other than that series), continued for 60 days after written notice has been given by the applicable Trustee, or the Holders of at least 25% in principal amount of the Outstanding Debt Securities of that series, as provided in such Indenture;
- (6) any Debt of ourself, any Significant Subsidiary or, if a Subsidiary Guarantor has guaranteed the series, such Subsidiary Guarantor, is not paid within any applicable grace period after final maturity or is accelerated by its holders because of a default and the total amount of such Debt unpaid or accelerated exceeds \$25.0 million;

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- (7) any judgment or decree for the payment of money in excess of \$25.0 million is entered against us, any Significant Subsidiary or, if a Subsidiary Guarantor has guaranteed the series, such Subsidiary Guarantor, remains outstanding for a period of 60 consecutive days following entry of such judgment and is not discharged, waived or stayed;

- (8) certain events of bankruptcy, insolvency or reorganization affecting us, any Significant Subsidiary or, if a Subsidiary Guarantor has guaranteed the series, such Subsidiary Guarantor; and

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- (9) if any Subsidiary Guarantor has guaranteed such series, the Subsidiary Guarantee of any such Subsidiary Guarantor is held by a final non-appealable order or judgment of a court of competent jurisdiction to be unenforceable or invalid or ceases for any reason to be in full force and effect (other than in accordance with the terms of the applicable Indenture) or any Subsidiary Guarantor or any Person acting on behalf of any Subsidiary Guarantor denies or disaffirms such Subsidiary Guarantor's obligations under its Subsidiary Guarantee (other than by reason of a release of such Subsidiary Guarantor from its Subsidiary Guarantee in accordance with the terms of the applicable Indenture).

If an Event of Default (other than an Event of Default with respect to Gastar described in clause (8) above) with respect to the Debt Securities of any series at the time Outstanding occurs and is continuing, either the applicable Trustee or the Holders of at least 25% in principal amount of the Outstanding Debt Securities of that series by notice as provided in the Indenture may declare the principal amount of the Debt Securities of that series (or, in the case of any Debt Security that is an Original Issue Discount Debt Security, such portion of the principal amount of such Debt Security as may be specified in the terms of such Debt Security) to be due and payable immediately, together with any accrued and unpaid interest thereon. If an Event of Default with respect to Gastar described in clause (8) above with respect to the Debt Securities of any series at the time Outstanding occurs, the principal amount of all the Debt Securities of that series (or, in the case of any such Original Issue Discount Security, such specified amount) will automatically, and without any action by the applicable Trustee or any Holder, become immediately due and payable, together with any accrued and unpaid interest thereon. After any such acceleration and its consequences, but before a judgment or decree based on acceleration, the Holders of a majority in principal amount of the Outstanding Debt Securities of that series may, under certain circumstances, rescind and annul such acceleration if all Events of Default with respect to that series, other than the non-payment of accelerated principal (or other specified amount), have been cured or waived as provided in the applicable Indenture. For information as to waiver of defaults, see Modification and Waiver below.

Subject to the provisions of the Indentures relating to the duties of the Trustees in case an Event of Default has occurred and is continuing, no Trustee will be under any obligation to exercise any of its rights or powers under the applicable Indenture at the request or direction of any of the Holders, unless such Holders have offered to such Trustee reasonable security or indemnity. Subject to such provisions for the indemnification of the Trustees, the Holders of a majority in principal amount of the Outstanding Debt Securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to such Trustee or exercising any trust or power conferred on the Trustee with respect to the Debt Securities of that series.

No Holder of a Debt Security of any series will have any right to institute any proceeding with respect to the applicable Indenture, or for the appointment of a receiver or a trustee, or for any other remedy thereunder, unless:

- (1) such Holder has previously given to the Trustee under the applicable Indenture written notice of a continuing Event of Default with respect to the Debt Securities of that series;
- (2) the Holders of at least 25% in principal amount of the Outstanding Debt Securities of that series have made written request, and such Holder or Holders have offered reasonable security or indemnity, to the Trustee to institute such proceeding as trustee; and
- (3) the Trustee has failed to institute such proceeding, and has not received from the Holders of a majority in principal amount of the Outstanding Debt Securities of that series a direction inconsistent with such request, within 60 days after such notice, request and offer.

However, such limitations do not apply to a suit instituted by a Holder of a Debt Security for the enforcement of payment of the principal of or any premium or interest on such Debt Security on or after the applicable due date specified in such Debt Security or, if applicable, to convert such Debt Security.

We will be required to furnish to each Trustee annually a statement by certain of our officers, to their knowledge, as to whether or not we are in default in the performance or observance of any of the terms, provisions and conditions of the applicable Indenture and, if so, specifying all such known defaults.

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Modification and Waiver

We may modify or amend an Indenture without the consent of any holders of the Debt Securities in certain circumstances, including:

- (1) to evidence the succession under the Indenture of another Person to us or any Subsidiary Guarantor and to provide for its assumption of our or such Subsidiary Guarantor's obligations to holders of Debt Securities;
- (2) to make any changes that would add any additional covenants of us or the Subsidiary Guarantors for the benefit of the holders of Debt Securities or that do not adversely affect the rights under the Indenture of the Holders of Debt Securities in any material respect;
- (3) to add any additional Events of Default;
- (4) to provide for uncertificated notes in addition to or in place of certificated notes;
- (5) to secure the Debt Securities;
- (6) to establish the form or terms of any series of Debt Securities;
- (7) to evidence and provide for the acceptance of appointment under the Indenture of a successor Trustee;
- (8) to cure any ambiguity, defect or inconsistency;
- (9) to add Subsidiary Guarantors; or
- (10) in the case of any Subordinated Debt Security, to make any change in the subordination provisions that limits or terminates the benefits applicable to any Holder of Senior Debt.

Other modifications and amendments of an Indenture may be made by us, the Subsidiary Guarantors, if applicable, and the applicable Trustee with the consent of the Holders of a majority in principal amount of the Outstanding Debt Securities of each series affected by such modification or amendment; provided, however, that no such modification or amendment may, without the consent of the Holder of each Outstanding Debt Security affected thereby:

- (1) change the Stated Maturity of the principal of, or any installment of principal of or interest on, any Debt Security;
- (2) reduce the principal amount of, or any premium or interest on, any Debt Security;
- (3)

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reduce the amount of principal of an Original Issue Discount Security or any other Debt Security payable upon acceleration of the Maturity thereof;

- (4) change the place or currency of payment of principal of, or any premium or interest on, any Debt Security;
- (5) impair the right to institute suit for the enforcement of any payment due on or any conversion right with respect to any Debt Security;
- (6) modify the subordination provisions in the case of Subordinated Debt Securities, or modify any conversion provisions, in either case in a manner adverse to the Holders of the Subordinated Debt Securities;
- (7) except as provided in the applicable Indenture, release the Subsidiary Guarantee of a Subsidiary Guarantor;
- (8) reduce the percentage in principal amount of Outstanding Debt Securities of any series, the consent of whose Holders is required for modification or amendment of the Indenture;
- (9) reduce the percentage in principal amount of Outstanding Debt Securities of any series necessary for waiver of compliance with certain provisions of the Indenture or for waiver of certain defaults;
- (10) modify such provisions with respect to modification, amendment or waiver; or
- (11) following the making of an offer to purchase Debt Securities from any Holder that has been made pursuant to a covenant in such Indenture, modify such covenant in a manner adverse to such Holder.

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The Holders of a majority in principal amount of the Outstanding Debt Securities of any series may waive compliance by us with certain restrictive provisions of the applicable Indenture. The Holders of a majority in principal amount of the Outstanding Debt Securities of any series may waive any past default under the applicable Indenture, except a default in the payment of principal, premium or interest and certain covenants and provisions of the Indenture which cannot be amended without the consent of the Holder of each Outstanding Debt Security of such series.

Each of the Indentures provides that in determining whether the Holders of the requisite principal amount of the Outstanding Debt Securities have given or taken any direction, notice, consent, waiver or other action under such Indenture as of any date:

- (1) the principal amount of an Original Issue Discount Security that will be deemed to be Outstanding will be the amount of the principal that would be due and payable as of such date upon acceleration of maturity to such date;
- (2) if, as of such date, the principal amount payable at the Stated Maturity of a Debt Security is not determinable (for example, because it is based on an index), the principal amount of such Debt Security deemed to be Outstanding as of such date will be an amount determined in the manner prescribed for such Debt Security;
- (3) the principal amount of a Debt Security denominated in one or more foreign currencies or currency units that will be deemed to be Outstanding will be the United States-dollar equivalent, determined as of such date in the manner prescribed for such Debt Security, of the principal amount of such Debt Security (or, in the case of a Debt Security described in clause (1) or (2) above, of the amount described in such clause); and
- (4) certain Debt Securities, including those owned by us, any Subsidiary Guarantor or any of our other Affiliates, will not be deemed to be Outstanding.

Except in certain limited circumstances, we will be entitled to set any day as a record date for the purpose of determining the Holders of Outstanding Debt Securities of any series entitled to give or take any direction, notice, consent, waiver or other action under the applicable Indenture, in the manner and subject to the limitations provided in the Indenture. In certain limited circumstances, the Trustee will be entitled to set a record date for action by Holders. If a record date is set for any action to be taken by Holders of a particular series, only persons who are Holders of Outstanding Debt Securities of that series on the record date may take such action. To be effective, such action must be taken by Holders of the requisite principal amount of such Debt Securities within a specified period following the record date. For any particular record date, this period will be 180 days or such other period as may be specified by us (or the Trustee, if it set the record date), and may be shortened or lengthened (but not beyond 180 days) from time to time.

Satisfaction and Discharge

Each Indenture will be discharged and will cease to be of further effect as to all outstanding Debt Securities of any series issued thereunder, when:

(1) either:

(a) all outstanding Debt Securities of that series that have been authenticated (except lost, stolen or destroyed Debt Securities that have been replaced or paid and Debt Securities for whose payment money has theretofore been deposited in trust and thereafter repaid to us) have been delivered to the Trustee for cancellation; or

(b) all outstanding Debt Securities of that series that have been not delivered to the Trustee for cancellation have become due and payable or will become due and payable at their Stated Maturity within one year or are to be called for redemption within one year under arrangements satisfactory to the Trustee and in any case we have

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irrevocably deposited with the Trustee as trust funds money in an amount sufficient, without consideration of any reinvestment of interest, to pay the entire indebtedness of such Debt Securities not delivered to the Trustee for cancellation, for principal, premium, if any, and accrued interest to the Stated Maturity or redemption date;

(2) we have paid or caused to be paid all other sums payable by us under the Indenture with respect to the Debt Securities of that series; and

(3) we have delivered an Officers Certificate and an Opinion of Counsel to the Trustee stating that all conditions precedent to satisfaction and discharge of the Indenture with respect to the Debt Securities of that series have been satisfied.

Legal Defeasance and Covenant Defeasance

To the extent indicated in the applicable prospectus supplement, we may elect, at our option at any time, to have our obligations discharged under provisions relating to defeasance and discharge of indebtedness, which we call legal defeasance, or relating to defeasance of certain restrictive covenants applied to the Debt Securities of any series, or to any specified part of a series, which we call covenant defeasance .

Legal Defeasance. The Indentures provide that, upon our exercise of our option (if any) to have the legal defeasance provisions applied to any series of Debt Securities, we and, if applicable, each Subsidiary Guarantor will be discharged from all our obligations, and, if such Debt Securities are Subordinated Debt Securities, the provisions of the Subordinated Indenture relating to subordination will cease to be effective, with respect to such Debt Securities (except for certain obligations to convert, exchange or register the transfer of Debt Securities, to replace stolen, lost or mutilated Debt Securities, to maintain paying agencies and to hold moneys for payment in trust) upon the deposit in trust for the benefit of the Holders of such Debt Securities of money or U.S. Government Obligations, or both, which, through the payment of principal and interest in respect thereof in accordance with their terms, will provide money in an amount sufficient (in the opinion of a nationally recognized firm of independent public accountants) to pay the principal of and any premium and interest on such Debt Securities on the respective Stated Maturities in accordance with the terms of the applicable Indenture and such Debt Securities. Such defeasance or discharge may occur only if, among other things:

- (1) we have delivered to the applicable Trustee an Opinion of Counsel to the effect that we have received from, or there has been published by, the United States Internal Revenue Service a ruling, or there has been a change in tax law, in either case to the effect that Holders of such Debt Securities will not recognize gain or loss for federal income tax purposes as a result of such deposit and legal defeasance and will be subject to federal income tax on the same amount, in the same manner and at the same times as would have been the case if such deposit and legal defeasance were not to occur;
- (2) no Event of Default or event that with the passing of time or the giving of notice, or both, shall constitute an Event of Default shall have occurred and be continuing at the time of such deposit or, with respect to any Event of Default described in clause (8) under Events of Default, at any time until 121 days after such deposit;
- (3) such deposit and legal defeasance will not result in a breach or violation of, or constitute a default under, any agreement or instrument (other than the applicable Indenture) to which we are a party or by which we are bound;
- (4) in the case of Subordinated Debt Securities, at the time of such deposit, no default in the payment of all or a portion of principal of (or premium, if any) or interest on any Senior Debt shall have occurred and be continuing, no event of default shall have resulted in the acceleration of any Senior Debt and no other event of default with respect to any Senior Debt shall have occurred and be continuing permitting after notice or the lapse of time, or both, the acceleration thereof; and
- (5) we have delivered to the Trustee an Opinion of Counsel to the effect that such deposit shall not cause the Trustee or the trust so created to be subject to the Investment Company Act of 1940.

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Covenant Defeasance. The Indentures provide that, upon our exercise of our option (if any) to have the covenant defeasance provisions applied to any Debt Securities, we may fail to comply with certain restrictive covenants (but not with respect to conversion, if applicable), including those that may be described in the applicable prospectus supplement, and the occurrence of certain Events of Default, which are described above in clause (5) (with respect to such restrictive covenants) and clauses (6), (7) and (9) under Events of Default and any that may be described in the applicable prospectus supplement, will not be deemed to either be or result in an Event of Default and, if such Debt Securities are Subordinated Debt Securities, the provisions of the Subordinated Indenture relating to subordination will cease to be effective, in each case with respect to such Debt Securities. In order to exercise such option, we must deposit, in trust for the benefit of the Holders of such Debt Securities, money or U.S. Government Obligations, or both, which, through the payment of principal and interest in respect thereof in accordance with their terms, will provide money in an amount sufficient (in the opinion of a nationally recognized firm of independent public accountants) to pay the principal of and any premium and interest on such Debt Securities on the respective Stated Maturities in accordance with the terms of the applicable Indenture and such Debt Securities. Such covenant defeasance may occur only if we have delivered to the applicable Trustee an Opinion of Counsel to the effect that Holders of such Debt Securities will not recognize gain or loss for federal income tax purposes as a result of such deposit and covenant defeasance and will be subject to federal income tax on the same amount, in the same manner and at the same times as would have been the case if such deposit and covenant defeasance were not to occur, and the requirements set forth in clauses (2), (3), (4) and (5) above are satisfied. If we exercise this option with respect to any series of Debt Securities and such Debt Securities were declared due and payable because of the occurrence of any Event of Default, the amount of money and U.S. Government Obligations so deposited in trust would be sufficient to pay amounts due on such Debt Securities at the time of their respective Stated Maturities but may not be sufficient to pay amounts due on such Debt Securities upon any acceleration resulting from such Event of Default. In such case, we would remain liable for such payments.

If we exercise either our legal defeasance or covenant defeasance option, any Subsidiary Guarantee will terminate.

No Personal Liability of Directors, Officers, Employees and Stockholders

No director, officer, employee, incorporator, stockholder, member, partner or trustee of the Company or any Subsidiary Guarantor, as such, shall have any liability for any obligations of the Company or any Subsidiary Guarantor under the Debt Securities, the Indentures or any Subsidiary Guarantees or for any claim based on, in respect of, or by reason of, such obligations or their creation. By accepting a Debt Security, each Holder shall be deemed to have waived and released all such liability. The waiver and release shall be a part of the consideration for the issue of the Debt Securities. The waiver may not be effective to waive liabilities under the federal securities laws, and it is the view of the SEC that such a waiver is against public policy.

Notices

Notices to Holders of Debt Securities will be given by mail to the addresses of such Holders as they may appear in the Security Register.

Title

We, the Subsidiary Guarantors, the Trustees and any agent of us, the Subsidiary Guarantors or a Trustee may treat the Person in whose name a Debt Security is registered as the absolute owner of the Debt Security (whether or not such Debt Security may be overdue) for the purpose of making payment and for all other purposes.

Governing Law

The Indentures and the Debt Securities will be governed by, and construed in accordance with, the law of the State of New York.

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The Trustee

We will enter into the Indentures with a Trustee that is qualified to act under the Trust Indenture Act of 1939, as amended, and with any other Trustees chosen by us and appointed in a supplemental indenture for a particular series of Debt Securities. We may maintain a banking relationship in the ordinary course of business with our Trustee and one or more of its affiliates.

Resignation or Removal of Trustee. If the Trustee has or acquires a conflicting interest within the meaning of the Trust Indenture Act, the Trustee must either eliminate its conflicting interest or resign, to the extent and in the manner provided by, and subject to the provisions of, the Trust Indenture Act and the applicable Indenture. Any resignation will require the appointment of a successor Trustee under the applicable Indenture in accordance with the terms and conditions of such Indenture.

The Trustee may resign or be removed by us with respect to one or more series of Debt Securities and a successor Trustee may be appointed to act with respect to any such series. The holders of a majority in aggregate principal amount of the Debt Securities of any series may remove the Trustee with respect to the Debt Securities of such series.

Limitations on Trustee if It Is Our Creditor. Each Indenture will contain certain limitations on the right of the Trustee, in the event that it becomes our creditor, to obtain payment of claims in certain cases, or to realize on certain property received in respect of any such claim as security or otherwise.

Certificates and Opinions to Be Furnished to Trustee. Each Indenture will provide that, in addition to other certificates or opinions that may be specifically required by other provisions of an Indenture, every application by us for action by the Trustee must be accompanied by an Officers Certificate and an Opinion of Counsel stating that, in the opinion of the signers, all conditions precedent to such action have been complied with by us.

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DESCRIPTION OF RIGHTS

We may issue rights to purchase common stock or other securities. These rights may be issued independently or together with any other security offered hereby and may or may not be transferable by the shareholder receiving the rights in such offering. In connection with any offering of such rights, we may enter into a standby arrangement with one or more underwriters or other purchasers pursuant to which the underwriters or other purchasers may be required to purchase any securities remaining unsubscribed for after such offering.

Each series of rights will be issued under a separate rights agreement which we will enter into with a bank or trust company, as rights agent, all as set forth in the applicable prospectus supplement. The rights agent will act solely as our agent in connection with the certificates relating to the rights and will not assume any obligation or relationship of agency or trust with any holders of rights certificates or beneficial owners of rights. We will file the rights agreement and the rights certificates relating to each series of rights with the SEC and incorporate them by reference as an exhibit to the registration statement of which this prospectus is a part on or before the time we issue a series of rights.

The applicable prospectus supplement will describe the specific terms of any offering of rights for which this prospectus is being delivered, including the following:

the date of determining the shareholders entitled to the rights distribution;

the number of rights issued or to be issued to each shareholder;

the exercise price payable for each share of debt securities, preferred stock, common stock or other securities upon the exercise of the rights;

the number and terms of the shares of common stock or other securities which may be purchased per each right;

the extent to which the rights are transferable;

the date on which the holder's ability to exercise the rights shall commence, and the date on which the rights shall expire;

the extent to which the rights may include an over-subscription privilege with respect to unsubscribed securities;

if applicable, the material terms of any standby underwriting or purchase arrangement entered into by us in connection with the offering of such rights; and

any other terms of the rights, including the terms, procedures, conditions and limitations relating to the exchange and exercise of the rights.

The description in the applicable prospectus supplement of any rights that we may offer will not necessarily be complete and will be qualified in its entirety by reference to the applicable rights certificate, which will be filed with the SEC.

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PLAN OF DISTRIBUTION

General

We may sell the securities offered through this prospectus in any one or more of the following ways:

through underwriters or dealers;

through agents;

directly to one or more purchasers, including existing shareholders;

in at the market offerings to or through a market maker or into an existing trading market, or a securities exchange or otherwise;

transactions not involving market makers or established trading markets, including direct sales or privately negotiated transactions; or

through a combination of any of these methods of sale.

In addition, we may sell some or all of the securities included in this prospectus through:

a block trade in which a broker-dealer will attempt to sell as agent, but may position or resell a portion of the block, as principal, in order to facilitate the transaction;

purchases by a broker-dealer, as principal, and resale by the broker-dealer for its account;

ordinary brokerage transactions and transactions in which a broker solicits purchasers; or

privately negotiated transactions.

In addition, we may enter into option or other types of transactions that require us or them to deliver securities to a broker-dealer, who will then resell or transfer the securities under this prospectus. We may enter into hedging transactions with respect to our securities. For example, we may:

enter into transactions with a broker-dealer or affiliate thereof in connection with which such broker-dealer or affiliate will engage in short sales of the securities pursuant to this prospectus, in which case such broker-dealer or affiliate may use securities received from us to close out its short positions;

sell securities short and redeliver such securities to close out our short positions;

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enter into option or other types of transactions that require us to deliver securities to a broker-dealer or an affiliate thereof, who will then resell or transfer the securities under this prospectus; or

loan or pledge the securities to a broker-dealer or an affiliate thereof, who may sell the loaned securities or, in an event of default in the case of a pledge, sell the pledged securities pursuant to this prospectus.

The securities described in this prospectus may be distributed at a fixed price or prices, which may be changed, market prices prevailing at the time of sale, prices related to the prevailing market prices, or negotiated prices. Any of the prices may represent a discount from the prevailing market prices.

At the time that any particular offering of securities is made, to the extent required by the Securities Act, a prospectus supplement will be distributed setting forth the terms of the offering, including the aggregate number or amount of securities being offered; the purchase price or initial public offering price of the securities; the names of any underwriters, dealers or agents; the net proceeds to us from the sale of the securities; any delayed delivery arrangements; any underwriting discounts, commissions and other items constituting compensation from us; any discounts, commissions or concessions allowed or reallocated or paid to dealers, and any commissions paid to agents.

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Market Making and Stabilization

Unless the applicable prospectus supplement states otherwise, each series of offered securities will be a new issue and will have no established trading market, other than shares of our common stock, Series A Preferred Stock and Series B Preferred Stock, which are listed on the NYSE MKT LLC. We may elect to list any series of offered securities on an exchange and any such listing with respect to these other securities will be described in the applicable prospectus supplement. If the securities are traded after their initial issuance, they may trade at a discount from their initial offering price, depending upon prevailing interest rates, the market for similar securities and other factors. While it is possible that an underwriter could inform us that it intends to make a market in the securities, such underwriter would not be obligated to do so, and any such market making could be discontinued at any time without notice. Therefore, we cannot assure you as to whether an active trading market will develop for these other securities.

If a prospectus supplement so indicates, underwriters, brokers or dealers, in compliance with applicable law, may engage in transactions that stabilize, maintain or otherwise affect the market price of the offered securities, which may be higher than the price that might otherwise prevail in the open market.

Underwriters and Agents

If underwriters are used in the sale, the underwriters will acquire the securities for their own account for resale to the public, either on a firm commitment basis or a best efforts basis. The underwriters may resell the securities from time-to-time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. Underwriters may offer securities to the public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more firms acting as underwriters. Unless we inform you otherwise in the prospectus supplement, the obligations of the underwriters to purchase the securities will be subject to certain conditions. The underwriters may change from time-to-time any initial public offering price and any discounts or concessions allowed or reallocated or paid to dealers.

We may also sell the securities through agents designated from time-to-time. In the prospectus supplement, we will name any agent involved in the offer or sale of the offered securities, and we will describe any commissions payable to the agent. Unless we inform you otherwise in the prospectus supplement, any agent will agree to use its reasonable best efforts to solicit purchases for the period of its appointment.

Dealers

If dealers are used in the sale of securities, we will sell the securities to them as principals. The dealers may then resell those securities to the public at varying prices determined by the dealers at the time of resale. We will include in the prospectus supplement the names of the dealers and the terms of the transaction.

Direct Sales

Securities may also be sold directly by us. In this case, no underwriters or agents would be involved.

Institutional Purchasers

We may sell the securities directly to institutional investors or others who may be deemed to be underwriters within the meaning of the Securities Act with respect to any sale of those securities. We will describe the terms of any such sales in the prospectus supplement.

Subscription Offerings

We may also make direct sales through subscription rights distributed to our existing stockholders on a pro rata basis, which may or may not be transferable. In any distribution of subscription rights to our stockholders, if all of the underlying securities are not subscribed for, we may then sell the unsubscribed securities directly to third parties or may engage the services of one or more underwriters, dealers or agents, including standby underwriters, to sell the unsubscribed securities to third parties.

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Underwriting Compensation

We will bear costs relating to all of the securities being registered under this registration statement of which this prospectus forms a part.

Any broker-dealers or other persons acting on our behalf that participate with us in the distribution of the securities may be deemed to be underwriters and any commissions received or profit realized by them on the resale of the securities may be deemed to be underwriting discounts and commissions under the Securities Act. As of the date of this prospectus, we are not a party to any agreement, arrangement or understanding between any broker or dealer and us with respect to the offer or sale of the securities pursuant to this prospectus.

The maximum commission or discount received by any Financial Industry Regulatory Authority (FINRA) member or independent broker/dealer may not exceed the amount set forth in the FINRA rules at the time of any sale of securities being made pursuant to this prospectus or an applicable prospectus supplement. If more than 5% of the net proceeds of any offering of securities made under this prospectus will be received by a FINRA member participating in the offering or its affiliates or associated persons of such FINRA member, the offering will be conducted in accordance with FINRA Conduct Rule 5110(h).

Indemnification; Other Relationships

We may have agreements with agents, underwriters, dealers and remarketing firms to indemnify them against certain civil liabilities, including liabilities under the Securities Act. Agents, underwriters, dealers and remarketing firms, and their affiliates, may engage in transactions with, or perform services for, us in the ordinary course of business. This includes commercial banking and investment banking transactions.

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LEGAL MATTERS

Vinson & Elkins L.L.P. will pass upon the validity of the securities offered in this registration statement. If certain legal matters in connection with an offering of the securities made by this prospectus and a related prospectus supplement are passed on by counsel for the underwriters of such offering, that counsel will be named in the applicable prospectus supplement related to that offering.

EXPERTS

The consolidated financial statements of each of Gastar Exploration Ltd. and Gastar Exploration USA, Inc. as of December 31, 2012 and 2011, and for each of the years in the three-year period ended December 31, 2012, and Gastar Exploration Ltd.'s management's assessment of the effectiveness of internal control over financial reporting as of December 31, 2012, incorporated by reference in this prospectus, have been so incorporated in reliance on the reports of BDO USA, LLP, independent registered public accounting firm, incorporated herein by reference, given upon the authority of said firm as experts in accounting and auditing.

The statement of revenues and direct operating expenses of the Chesapeake Acquisition properties for the year ended December 31, 2012 has been incorporated by reference herein in reliance upon the report of BDO USA, LLP, independent registered public accounting firm, given upon the authority of said firm as experts in accounting and auditing.

The statement of revenues and direct operating expenses of the WEHLU Acquisition properties for the years ended December 31, 2012 and 2011 have been incorporated by reference herein in reliance upon the report of BDO USA, LLP, independent registered public accounting firm, given upon the authority of said firm as experts in accounting and auditing.

The information included in or incorporated by reference into this prospectus regarding our estimated quantities of proved reserves, the future net revenues from those reserves and their present value is based, in part, on the estimated reserve evaluations and related calculations of Wright & Company, Inc., independent petroleum engineering consultants, and Netherland, Sewell & Associates, Inc., independent petroleum consultants. These estimates are aggregated and the sums are included in or incorporated by reference into this prospectus in reliance upon the authority of each firm as experts in petroleum engineering.

The information included in or incorporated by reference into this prospectus regarding the estimated proved reserves acquired in the WEHLU Acquisition, the future net revenues from those reserves and their present value is based on the estimated reserve evaluations and related calculations of Wright & Company, Inc., independent petroleum engineers, and have been included or incorporated by reference in reliance on the authority of that firm as experts in petroleum engineering.

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17,000,000 Shares

Gastar Exploration Inc.

Common Stock

Prospectus Supplement

September 18, 2014

Barclays

Johnson Rice & Company L.L.C.

Wells Fargo Securities

Tudor, Pickering, Holt & Co.

Imperial Capital

Euro Pacific Capital, Inc.

IBERIA Capital Partners L.L.C.

MLV & Co.

Wunderlich Securities

Heikkinen Energy Advisors

Topeka Capital Markets