

ABRAXAS PETROLEUM CORP  
Form 10-K  
March 16, 2017  
UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the Fiscal Year Ended December 31, 2016

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Commission File Number 001-16071

ABRAXAS PETROLEUM CORPORATION  
(Exact name of Registrant as specified in its charter)

Nevada 74-2584033  
(State or Other Jurisdiction of (I.R.S. Employer Identification Number)  
Incorporation or Organization)

18803 Meisner Drive  
San Antonio, TX 78258  
(Address of principal executive offices)

(210) 490-4788  
Registrant's telephone number, including area code

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:

Title of each class:	Name of each exchange on which registered:
Common Stock, par value \$.01 per share	The NASDAQ Stock Market, LLC

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT:

None

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

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

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes  No

Indicate by check mark if the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes  No

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Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. Yes  No

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

Large accelerated filer  Accelerated filer   
Non-accelerated filer (Do not check if a smaller reporting company)  Smaller reporting company

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

As of June 30, 2016, the last day of the registrant's most recently completed second fiscal quarter, the aggregate market value of the common stock held by non-affiliates of the registrant was \$141,714,282 based on the closing sale price as reported on The NASDAQ Stock Market.

As of March 10, 2017, there were 163,844,255 shares of common stock outstanding.

Documents Incorporated by Reference:

Document	Parts Into Which Incorporated
Portions of the registrant's Proxy Statement relating to the 2017 Annual Meeting of Stockholders to be held on May 9, 2017.	Part III

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We make forward-looking statements throughout this report. Whenever you read a statement that is not simply a statement of historical fact (such as statements including words like “believe,” “expect,” “anticipate,” “intend,” “will,” “plan,” “may,” “estimate,” “could,” “potentially” or similar expressions), you must remember that these are forward-looking statements, and that our expectations may not be correct, even though we believe they are reasonable. The forward-looking information contained in this report is generally located in the material set forth under the headings “Management’s Discussion and Analysis of Financial Condition and Results of Operations” but may be found in other locations as well. These forward-looking statements generally relate to our plans and objectives for future operations and are based upon our management’s reasonable estimates of future results or trends. The factors that may affect our expectations regarding our operations include, among others, the following:

- the prices we receive for our production and the effectiveness of our hedging activities;
- the availability of capital including under our credit facility;
- our success in development, exploitation and exploration activities;
- declines in our production of oil and gas;
- our indebtedness and the significant amount of cash required to service our indebtedness;

• limits on our growth and our ability to finance our operations, fund our capital needs and respond to changing conditions imposed by our bank credit facility and restrictive debt covenants;

- our ability to make planned capital expenditures;
- ceiling test write-downs resulting, and that could result in the future, from lower oil and natural gas prices;
- political and economic conditions in oil producing countries, especially those in the Middle East;
- price and availability of alternative fuels;

- our ability to procure services and equipment for our drilling and completion activities;
- our acquisition and divestiture activities;
- weather conditions and events;
- the proximity, capacity, cost and availability of pipelines and other transportation facilities; and
- other factors discussed elsewhere in this report.

Initial production, or IP, rates, for both our wells and for those wells that are located near our properties, are limited data points in each well’s productive history. These rates are sometimes actual rates and sometimes extrapolated or normalized rates. As such, the rates for a particular well may change as additional data becomes available. Peak production rates are not necessarily indicative or predictive of future production rates, expected ultimate recovery, or EUR, or economic rates of return from such wells and should not be relied upon for such purpose. Equally, the way we calculate and report peak IP rates and the methodologies employed by others may not be consistent, and thus the values reported may not be directly and meaningfully comparable. Lateral lengths described are indicative only. Actual completed lateral lengths depend on various considerations such as lease-line offsets. Abraxas’ standard length laterals, sometimes referred to as 5,000 foot laterals, are laterals with completed length generally between 4,000 feet and 5,500 feet. Mid-length laterals, sometimes referred to as 7,500 foot laterals, are laterals with completed length generally between 6,500 feet and 8,000 feet. Long laterals, sometimes referred to as 10,000 foot laterals, are laterals with completed length generally longer than 8,000 feet.

## GLOSSARY OF TERMS

Unless otherwise indicated in this report, gas volumes are stated at the legal pressure base of the state or area in which the reserves are located at 60 degrees Fahrenheit. Oil and gas equivalents are determined using the ratio of six Mcf of gas to one barrel of oil.



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The following definitions shall apply to the technical terms used in this report.

Terms used to describe quantities of oil and gas:

“Bbl” – barrel or barrels.

“Bcf” – billion cubic feet of gas.

“Bcfe” – billion cubic feet of gas equivalent.

“Boe” – barrels of oil equivalent.

“Boepd” - barrels of oil equivalents per day.

“MBbl” – thousand barrels.

“MBoe” – thousand barrels of oil equivalent.

“Mcf” – thousand cubic feet of gas.

“Mcfe” – thousand cubic feet of gas equivalent.

“MMBbl” – million barrels.

“MMBoe” – million barrels of oil equivalent.

“MMBtu” – million British Thermal Units of gas.

“MMcf” – million cubic feet of gas.

“MMcfe” – million cubic feet of gas equivalent.

“NGL” – natural gas liquids measured in barrels.

Terms used to describe our interests in wells and acreage:

“Developed acreage” means acreage which consists of leased acres spaced or assignable to productive wells.

“Development well” is a well drilled within the proved area of an oil or gas reservoir to the depth or stratigraphic horizon (rock layer or formation) noted to be productive for the purpose of extracting reserves.

“Dry hole” is an exploratory or development well found to be incapable of producing either oil or gas in sufficient quantities to justify completion.

“Exploratory well” is a well drilled to find and produce oil or gas in an unproved area, to find a new reservoir in a field previously found to be producing in another reservoir, or to extend a known reservoir.

“Gross acres” are the number of acres in which we own a working interest.

“Gross well” is a well in which we own an interest.

“Net acres” are the sum of fractional ownership working interests in gross acres (e.g., a 50% working interest in a lease covering 320 gross acres is equivalent to 160 net acres).

“Net well” is the sum of fractional ownership working interests in gross wells.

“Productive well” is an exploratory or a development well that is not a dry hole.



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“Undeveloped acreage” means those leased acres on which wells have not been drilled or completed to a point that would permit the production of economic quantities of oil and gas, regardless of whether or not such acreage contains proved reserves.

Terms used to assign a present value to or to classify our reserves:

“Developed oil and gas reserves\*” Developed oil and gas reserves are reserves of any category that can be expected to be recovered:

(i) Through existing wells with existing equipment and operating methods or in which the cost of the required equipment is relatively minor compared to the cost of a new well; and

(ii) Through installed extraction equipment and infrastructure operational at the time of the reserves estimate if the extraction is by means not involving a well.

“Proved developed non-producing reserves\*” are those quantities of oil and gas reserves that are developed behind pipe in an existing well bore, from a shut-in well bore or that can be recovered through improved recovery only after the necessary equipment has been installed, or when the costs to do so are relatively minor. Shut-in reserves are expected to be recovered from (1) completion intervals which are open at the time of the estimate but which have not started producing, (2) wells that were shut-in for market conditions or pipeline connections, or (3) wells not capable of production for mechanical reasons. Behind-pipe reserves are expected to be recovered from zones in existing wells that will require additional completion work or future recompletion prior to the start of production.

“Proved developed reserves\*” Reserves that can be expected to be recovered through existing wells with existing equipment and operating methods.

“Proved reserves\*” Reserves that geological and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoirs under existing economic and operating conditions.

“Proved undeveloped reserves” or “PUDs\*” Reserves that are expected to be recovered from new wells on undrilled acreage or from existing wells, in each case where a relatively major expenditure is required.

“PV-10” means estimated future net revenue, discounted at a rate of 10% per annum, before income taxes and with no price or cost escalation or de-escalation, calculated in accordance with guidelines promulgated by the Securities and Exchange Commission (“SEC”).

“Standardized Measure” means estimated future net revenue, discounted at a rate of 10% per annum, after income taxes and with no price or cost escalation or de-escalation, calculated in accordance with Accounting Standards Codification (“ASC”) 932, “Disclosures About Oil and Gas Producing Activities.”

“Undeveloped oil and gas reserves\*” Undeveloped oil and gas reserves are reserves of any category that are expected to be recovered from new wells on undrilled acreage, or from existing wells where a relatively major expenditure is required for recompletion.

\* This definition is an abbreviated version of the complete definition set forth in Rule 4-10(a) of Regulation S-X. For the complete definition, see:

<http://www.ecfr.gov/cgi-bin/retrieveECFR?gp=1&SID=7aa25d3cede06103c0ecec861362497d&ty=HTML&h=L&n=pt17.3.2>



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## Part I

Information contained in this report represents the consolidated operations of Abraxas Petroleum Corporation. The terms “Abraxas,” “we,” “us,” “our,” or the “Company,” refer to Abraxas Petroleum Corporation, together with its consolidated subsidiaries including Raven Drilling, LLC which is a wholly owned subsidiary that owns a drilling rig. On October 31, 2014, we sold our interest in Canadian Abraxas Petroleum, ULC (“Canadian Abraxas”), an indirect wholly-owned Canadian subsidiary of Abraxas. As a result of the disposal of Canadian Abraxas, the results of operations of Canadian Abraxas are reflected in our Financial Statements and in this report as “Discontinued Operations” and our remaining operations are referred to in our Financial Statements and in this report as “Continuing Operations” or “Continued Operations.” Unless otherwise noted, all disclosures are for Continuing Operations.

## Item 1. Business

## General

We are an independent energy company primarily engaged in the acquisition, exploration, development and production of oil and gas. At December 31, 2016, our estimated net proved reserves were 44.7 MMBoe, of which 33.6% were classified as proved developed, 74% were oil and NGL and 95% of which (on a PV-10 basis) were operated by us. Our daily net production for the year ended December 31, 2016 was 6,181 Boepd, of which 61% was oil or liquids. Abraxas Petroleum Corporation was incorporated in Nevada in 1990. Our address is 18803 Meisner Drive, San Antonio, Texas 78258 and our phone number is (210) 490-4788.

Our oil and gas assets are located in three operating regions, the Permian/Delaware Basin, the Rocky Mountain, and South Texas. The following table sets forth certain information related to our properties as of and for the year ended December 31, 2016:

				Estimated Net		Net			
				Proved Reserves		Production			
	Gross	Average	Total	(MBoe)	%	(MBoe)	%		
	Producing	Working	Net		Oil/NGL		Oil/NGL		
	Wells	Interest	Acres						
Permian/Delaware Basin	182	84.26 %	26,673	9,911	47.0 %	262.0	52.8 %		
Rocky Mountain (1)	780	10.31 %	28,474	32,509	84.3 %	1,696.2	82.7 %		
South Texas	39	72.31 %	13,238	2,237	35.3 %	304.1	63.8 %		
Total United States	1,001	26.17 %	68,385	44,657	73.6 %	2,262.3	77.0 %		

(1) In January 2017, we sold our Brooks Draw assets in the Powder River Basin consisting of 14,229 net acres and no reserves as of December 31, 2016. The amounts set forth in the table reflect this sale.

Our properties in the Permian/Delaware Basin region are primarily located in two sub-basins, the Delaware Basin and the Eastern Shelf. In the Delaware Basin, our wells are located in Pecos, Reeves, and Ward Counties, Texas and produce oil and gas from multiple stacked formations from the Bell Canyon at 5,000 feet down to the Ellenburger at 16,000 feet. In the Eastern Shelf, our wells are principally located in Coke, Scurry, Mitchell and Nolan Counties, Texas and produce oil and gas from the Strawn Reef formation at 5,000 to 7,500 feet and oil from the shallower Clearfork formation at depths ranging from 2,300 to 3,300 feet.

Our properties in the Rocky Mountain region are located in the Williston Basin of North Dakota and Montana and in Powder River, Green River and Uinta Basins of Wyoming and Utah. In this region, our wells produce oil and gas

from various reservoirs, primarily the Turner, Bakken, Three Forks and Red River formations. Well depths range from 7,000 feet down to 14,000 feet.

Our properties in the South Texas region are located along the Edwards trend in DeWitt and Lavaca Counties, Texas and the Eagle Ford shale and the Austin Chalk in Atascosa and McMullen Counties, Texas. In the Edwards trend, our wells produce gas from the Edwards formation at a depth of 14,000 feet. In the Eagle Ford, our wells produce from the Eagle Ford shale from 8,000 to 11,000 feet and from the Austin Chalk from 7,500 to 8,000 feet.

#### Strategy

Our business strategy is to focus our capital and resources on our core operated basins, maintain financial flexibility and to profitably grow production and reserves. Key elements of our business strategy include:

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Focus our capital and resources on our core operated basins. Our core basins consist of the Permian/Delaware Basin (Bone Spring and Wolfcamp), Williston Basin (Bakken and Three Forks) and South Texas (Eagle Ford shale and Austin Chalk). Given the disparity which has existed during the past several years and which continues currently between oil and gas prices, the economics of drilling oil wells is far superior to drilling gas wells. Thus, substantially all of our 2017 capital expenditures (approximately \$110.0 million) will be used for drilling and completing seven gross (six net) horizontal wells targeting the Bone Spring and Wolfcamp formations in the Delaware Basin, drilling and completing seven gross (five net) wells in the Bakken/Three Forks, drilling an additional four gross (two net) wells in the Bakken/Three Forks that will be completed in 2018, participating in the drilling and completing of five gross (one net) non-operated wells in the Bakken/Three Forks and drilling and completing two gross/net horizontal wells in the Austin Chalk/Eagle Ford in South Texas. As part of our efforts to focus our property portfolio, we are continually marketing assets we have deemed non-core. These include assets with a low working interest that are non-operated and/or that fall outside of our three core basins. Any proceeds from these asset sales have been and will continue to be used to reduce our indebtedness and/or be redeployed into our core operating basins. Since January 1, 2016, we have received approximately \$28.6 million from the sale of non-core properties.

Maintain financial flexibility. Our primary sources of capital are availability under our bank credit facility and cash flow from operations. Availability under our bank credit facility is subject to a borrowing base which is determined semi-annually by our lenders. The next redetermination is scheduled for April 2017. On December 31, 2016, we had approximately \$22.0 million of availability under our credit facility and for the year ended December 31, 2016, we generated approximately \$26.9 million of cash flow from operations. After completion of the offering of 28.8 million shares of our common stock in January 2017, we had approximately \$ 95.0 million of availability under our credit facility.

We seek to reduce the volatility of our cash flow from operations by hedging a portion of our production. As of December 31, 2016, we had NYMEX-based fixed price commodity swap arrangements, on approximately 70% of the oil production from our estimated net proved developed producing reserves (as of December 31, 2016) through December 31, 2017, 77% for 2018 and 64% for 2019. We have also entered into a NYMEX-based collar on approximately 56% of the gas production from our estimated net proved developed producing reserves (as of December 31, 2016) through December 31, 2017 and a 500 Bopd Midland-Cushing oil price differential swap at (\$0.65)/Bbl.

We plan on deploying our available capital in a cost-effective manner. We seek to operate a high percentage of our properties which allows us to better control costs. At December 31, 2016, we operated properties comprising 95% of our proved developed reserves on a PV-10 basis. We intend to maintain our liquidity and the strength of our balance sheet during 2017 by adjusting our capital budget as necessary and seeking to reduce expenses.

Profitably grow production and reserves. We have a substantial low-decline legacy production base as evidenced by our approximate 21-year average reserve life as of year-end 2016. Our capital is currently being deployed largely into unconventional oil assets with relatively predictable production profiles, yet steep initial decline rates. Therefore, the economics of these oil wells are highly dependent on both near term commodity prices and strong operational cost control. Cost savings achieved through efficiencies of using our own rig in the Williston Basin, and heightened focus on cost control in all of our operated positions both contribute to our historical success in adding low cost barrels to our production base.

### 2017 Budget and Drilling Activities

Our capital expenditure budget for 2017 is approximately \$110.0 million. Approximately \$52.5 million of the 2017 budget will be allocated to developing the Company's Permian/Delaware Basin assets, including approximately \$15.0 million dedicated to expanding our acreage position in the Delaware Basin. The budget also allocates approximately \$42.2 million for drilling and completion of wells in our Williston Basin Bakken/Three Forks play in North Dakota, with the remaining amount allocated to the Austin Chalk/Eagle Ford area in South Texas as well as lease acquisition and general corporate purposes. The 2017 capital expenditure budget is subject to change depending upon a number of

factors, including the availability of sufficient capital resources including under our credit facility, the availability and costs of drilling and service equipment and crews, economic and industry conditions at the time of drilling, prevailing and anticipated prices for oil and gas, the results of our exploitation efforts, our financial results and our ability to obtain permits for drilling locations.

#### Markets and Customers

The revenue generated by our operations is highly dependent upon the prices we receive for our oil and gas. Historically, the markets for oil and gas have been volatile and are likely to continue to be volatile in the future. The prices we receive for our oil and gas production are subject to wide fluctuations and depend on numerous factors beyond our control including seasonality, the condition of the United States economy (particularly the manufacturing sector), foreign imports, political conditions in other petroleum

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producing countries, the actions of the Organization of Petroleum Exporting Countries, domestic regulation, legislation and policies. Decreases in the prices we receive for our oil and gas have had, and could have in the future, an adverse effect on the carrying value of our proved reserves, our revenue, profitability and cash flow from operations. Refer to “Risk Factors – Risks Related to Our Industry — Market conditions for oil and gas, and particularly volatility of prices for oil and gas, could adversely affect our revenue, cash flows, profitability and growth” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Critical Accounting Policies” for more information relating to the effects that decreases in oil and gas prices have on us. To help mitigate the impact of commodity price volatility, we hedge a portion of our production through the use of fixed price swaps and three way collars. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations – General – Commodity Prices and Hedging Arrangements” and Note 11 of the notes to our consolidated financial statements for more information regarding our derivative activities.

Substantially all of our oil and gas is sold at current market prices under short-term arrangements, as is customary in the industry. During the year ended December 31, 2016, two purchasers of production accounted for approximately 71% of our oil and gas sales. During the year ended December 31, 2015, one purchaser of production accounted for approximately 54% of our oil and gas sales. We believe that there are numerous other purchasers available to buy our oil and gas and that the loss of any of these purchasers would not materially affect our ability to sell our oil and gas. Furthermore, the largest purchasers of our oil and gas have changed from year to year from 2014 to 2016.

### Regulation of Oil and Gas Activities

The exploration, production and transportation of all types of hydrocarbons are subject to significant governmental regulations. Our properties are affected from time to time in varying degrees by political developments and federal, state and local laws and regulations. In particular, oil and gas production operations and economics are, or in the past have been, affected by industry specific price controls, taxes, conservation, safety, environmental and other laws relating to the petroleum industry, and by changes in such laws and by periodically changing administrative regulations.

Federal, state and local laws and regulations govern oil and gas activities. Operators of oil and gas properties are required to have a number of permits in order to operate such properties, including operator permits and permits to dispose of salt water. We possess all material requisite permits required by the states and other local authorities in which we operate properties. In addition, under federal law, operators of oil and gas properties are required to possess certain certificates and permits in order to operate such properties such as hazardous materials certificates, which we have obtained.

### Development and Production

The operations of our properties are subject to various types of regulation at the federal, state and local levels. These types of regulations include requiring the operator of oil and gas properties to possess permits for the drilling and development of wells, post bonds in connection with various types of activities, and file reports concerning operations. Most states, and some counties and municipalities in which we operate, regulate one or more of the following:

- the location of wells;
- the method of drilling and casing wells;
- the flaring of gas;
- the method of completing and fracture stimulating wells;
- the surface use and restoration of properties upon which wells are drilled;
- the plugging and abandoning of wells; and
- the notice to surface owners and other third parties.

Some states regulate the size and shape of development and spacing units or proration units for oil and gas properties. Some states allow forced pooling or unitization of tracts to facilitate exploration while other states rely on voluntary pooling of lands and leases. In some instances, forced pooling or unitization may be implemented by third parties and may reduce our interest in the unitized properties. In addition, state conservation laws establish maximum allowable rates of production from oil and gas wells, generally prohibit the venting or flaring of gas and impose requirements regarding the ratable production. These laws and regulations may limit the amount of oil and gas we can produce from our wells or limit the number of wells or the locations at which our wells can be drilled. Moreover, each state generally imposes a production or severance tax with respect to the production and sale of oil, gas and NGLs within its jurisdiction.



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Operations on Federal or Indian oil and gas leases must comply with numerous regulatory restrictions, including various non-discrimination statutes, and certain of such operations must be conducted pursuant to certain on-site security regulations and other permits issued by various tribal and federal agencies, including the Bureau of Land Management and the Office of Natural Resources Revenue, which we refer to as ONRR, (formerly Minerals Management Service). ONRR establishes the basis for royalty payments due under federal oil and gas leases through regulations issued under applicable statutory authority. State regulatory authorities establish similar standards for royalty payments due under state oil and gas leases. The basis for royalty payments established by ONRR and the state regulatory authorities is generally applicable to all federal and state oil and gas leases. Accordingly, we believe that the impact of royalty regulation on the operations of our properties should generally be the same as the impact on our competitors. We believe that the operations of our properties are in material compliance with all applicable regulations as they pertain to Federal or Indian oil and gas leases.

The failure to comply with these rules and regulations can result in substantial penalties, including lease suspension or termination in certain cases. The regulatory burden on the oil and gas industry increases our cost of doing business and, consequently, affects our profitability. Our competitors in the oil and gas industry are subject to the same regulatory requirements and restrictions that affect us.

### Regulation of Transportation and Sale of Gas in the United States

Historically, the transportation and sale for resale of gas in interstate commerce have been regulated pursuant to the Natural Gas Act of 1938, as amended, which we refer to as NGA, the Natural Gas Policy Act of 1978, as amended, which we refer to as NGPA, and regulations promulgated thereunder by the Federal Energy Regulatory Commission, which we refer to as FERC, and its predecessors. In the past, the federal government has regulated the prices at which gas could be sold. Deregulation of wellhead gas sales began with the enactment of the NGPA. In 1989, Congress enacted the Natural Gas Wellhead Decontrol Act, as amended, which we refer to as the Decontrol Act. The Decontrol Act removed all NGA and NGPA price and non-price controls affecting wellhead sales of gas effective January 1, 1993. While sales by producers of gas can currently be made at unregulated market prices, Congress could reenact price controls in the future.

Since 1985, FERC has endeavored to make gas transportation more accessible to gas buyers and sellers on an open and non-discriminatory basis. FERC has stated that open access policies are necessary to improve the competitive structure of the interstate gas pipeline industry and to create a regulatory framework that will put gas sellers into more direct contractual relations with gas buyers by, among other things, unbundling the sale of gas from the sale of transportation and storage services. Beginning in 1992, FERC issued Order No. 636 and a series of related orders, which we refer to collectively as Order No. 636, to implement its open access policies. As a result of the Order No. 636 program, the marketing and pricing of gas have been significantly altered. The interstate pipelines' traditional role as wholesalers of gas has been eliminated and replaced by a structure under which pipelines provide transportation and storage service on an open access basis to others who buy and sell gas. FERC continues to regulate the rates that interstate pipelines may charge for such transportation and storage services. Although FERC's orders do not directly regulate gas producers, they are intended to foster increased competition within all phases of the gas industry.

In 2000, FERC issued Order No. 637 and subsequent orders, which we refer to, collectively, as Order No. 637, which imposed a number of additional reforms designed to enhance competition in gas markets. Among other things, Order No. 637 effected changes in FERC regulations relating to scheduling procedures, capacity segmentation, penalties, rights of first refusal and information reporting. Most major aspects of Order No. 637 have been upheld on judicial review, and most pipelines' tariff filings to implement the requirements of Order No. 637 have been accepted by the FERC and placed into effect.

The Energy Policy Act of 2005, which we refer to as EP Act 2005, gave FERC increased oversight and penalty authority regarding market manipulation and enforcement. EP Act 2005 amended the NGA to prohibit market manipulation and also amended the NGA and the NGPA to increase civil and criminal penalties for any violations of the NGA, NGPA and any rules, regulations or orders of FERC to up to \$1,000,000 per day, per violation. In addition, FERC issued a final rule effective January 26, 2006, regarding market manipulation, which makes it unlawful for any entity, in connection with the purchase or sale of gas or transportation service subject to FERC jurisdiction, to defraud, make an untrue statement, or omit a material fact or engage in any practice, act, or course of business that operates or would operate as a fraud. This final rule works together with FERC's enhanced penalty authority to provide increased oversight of the gas marketplace.

The gas industry historically has been very heavily regulated; therefore, there is no assurance that the less stringent regulatory approach currently pursued by FERC will continue. However, we do not believe that any action taken will affect us in a way that materially differs from the way it affects other gas producers, gatherers and marketers.

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Generally, intrastate gas transportation is subject to regulation by state regulatory agencies, although FERC does regulate the rates, terms, and conditions of service provided by intrastate pipelines that transport gas subject to FERC's NGA jurisdiction pursuant to Section 311 of the NGA. The basis for state regulation of intrastate gas transportation and the degree of regulatory oversight and scrutiny given to intrastate gas pipeline rates and services varies from state to state. Insofar as such regulation within a particular state will generally affect all intrastate gas shippers within the state on a comparable basis, we believe that the regulation of similarly situated intrastate gas transportation in any states in which we operate and ship gas on an intrastate basis will not affect the operations of our properties in any way that is materially different from the effect of such regulation on our competitors.

### Gas Gathering in the United States

Section 1(b) of the NGA exempts gas gathering facilities from the jurisdiction of the FERC. FERC has developed tests for determining which facilities constitute jurisdictional transportation facilities under the NGA and which facilities constitute gathering facilities exempt from FERC's NGA jurisdiction. From time to time, FERC reconsiders its test for defining non-jurisdictional gathering. FERC has also permitted jurisdictional pipelines to "spin down" exempt gathering facilities into affiliated entities that are not subject to FERC jurisdiction, although FERC continues to examine the circumstances in which such a "spin down" is appropriate and whether it should reassert jurisdiction over certain gathering companies and facilities that previously had been "spun down." We cannot predict the effect that FERC's activities in this regard may have on the operations of our properties, but we do not expect these activities to affect the operations in any way that is materially different from the effect thereof on our competitors.

State regulation of gathering facilities generally includes various safety, environmental, and in some circumstances, non-discriminatory take or service requirements, but does not generally entail rate regulation. In the United States, gas gathering has received greater regulatory scrutiny at both the state and federal levels in the wake of the interstate pipeline restructuring under FERC Order 636. For example, the Texas Railroad Commission enacted a Natural Gas Transportation Standards and Code of Conduct to provide regulatory support for the state's more active review of rates, services and practices associated with the gathering and transportation of gas by an entity that provides such services to others for a fee, in order to prohibit such entities from unduly discriminating in favor of their affiliates.

### Regulation of Transportation of Oil in the United States

Sales of oil, condensate and gas liquids are not currently regulated and are made at negotiated prices. The transportation of oil in common carrier pipelines is subject to rate regulation. FERC regulates interstate oil pipeline transportation rates under the Interstate Commerce Act. In general, interstate oil pipeline rates must be cost-based, although settlement rates agreed to by all shippers are permitted and market-based rates may be permitted in certain circumstances. Effective January 1, 1995, FERC implemented regulations establishing an indexing system (based on inflation) for transportation rates for oil that allowed for an increase or decrease in the cost of transporting oil to the purchaser. A review of these regulations by FERC in 2000 was successfully challenged on appeal by an association of oil pipelines. On remand, FERC, in February 2003, increased the index slightly, effective July 2001. Intrastate oil pipeline transportation rates are subject to regulation by state regulatory commissions. The basis for intrastate oil pipeline regulations, and the degree of regulatory oversight and scrutiny given to intrastate oil pipeline rates varies from state to state. Insofar as effective interstate and intrastate rates are equally applicable to all comparable shippers, we believe that the regulation of oil transportation rates will not affect the operations of our properties in any way that is materially different from the effect of such regulation on our competitors.

Further, interstate and intrastate common carrier oil pipelines must provide service on a non-discriminatory basis. Under this open access standard, common carriers must offer service to all shippers requesting service on the same terms and under the same rates. When oil pipelines operate at full capacity, access is governed by prorationing provisions set forth in the pipelines' published tariffs. Accordingly, we believe that access to oil pipeline transportation

services generally will be available to us to the same extent as to our competitors.

All of our oil is sold on lease, at which time custody transfers, either by truck or pipeline. We are not able to determine how much of our sold oil is ultimately shipped to market centers using rail transportation facilities owned and operated by third parties. The U.S. Department of Transportation's ("U.S. DOT") Pipeline and Hazardous Materials Safety Administration ("PHMSA") establishes safety regulations relating to transportation of oil by rail transportation. In addition, third party rail operators are subject to the regulatory jurisdiction of the Surface Transportation Board of the U.S. DOT, the Federal Railroad Administration ("FRA") of the DOT, OSHA, as well as other federal regulatory agencies. Additionally, various state and local agencies have jurisdiction over disposal of hazardous waste and seek to regulate movement of hazardous materials in ways not preempted by federal law.

In response to rail accidents occurring between 2002 and 2008, the U.S. Congress passed the Rail Safety and Improvement Act of 2008, which implemented regulations governing different areas related to railroad safety. Recently, in response to train

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derailments occurring in 2013, U.S. regulators have been implementing or considering new rules to address the safety risks of transporting oil by rail. On January 23, 2014, the National Transportation Safety Board (“NTSB”) issued a series of recommendations to the FRA and PHMSA to address safety risks, including (i) requiring expanded hazardous material route planning for railroads to avoid populated and other sensitive areas, (ii) developing an audit program to ensure rail carriers that carry petroleum products have adequate response capabilities to address worst-case discharges of the entire quantity of product carried on a train, and (iii) auditing shippers and rail carriers to ensure they are properly classifying hazardous materials in transportation and that they have adequate safety and security plans in place. Additionally, on February 25, 2014 the DOT issued an emergency order requiring all persons, prior to offering oil into transportation, to ensure such product is properly tested and classed and to assure all shipments by rail of oil be handled as a Packing Group I or II hazardous material.

We do not currently own or operate rail transportation facilities or rail cars; however, the adoption of any regulations that impact the testing or handling of shipments of oil by rail transportation could increase our costs of doing business and limit our ability to transport and sell our oil at favorable prices at market centers throughout the United States, the consequences of which could have a material adverse effect on our financial condition, results of operations and cash flows. At this time, it is not possible to estimate the potential impact on our business if new federal or state rail transportation regulations are enacted.

## Environmental Matters

Oil and gas operations are subject to numerous federal, state and local laws and regulations controlling the generation, use, treatment, storage and disposal of materials and the discharge of materials into the environment or otherwise relating to the protection of the environment. These laws and regulations may:

- require the acquisition of a permit or other authorization before construction or drilling commences;
- impose design, construction and permitting requirements on facilities in conjunction with oil and gas operations, including the construction of pollution control devices;
- require protective measures to prevent drilling fluids from coming into contact with ground water;
- restrict the types, quantities and concentrations of various substances that can be released into the environment in connection with drilling, production, and gas processing activities;
- suspend, limit or prohibit construction, drilling and other activities in certain lands lying within wilderness, wetlands, and areas inhabited by threatened or endangered species and other protected areas;
- require remedial measures to mitigate pollution from historical and on-going operations such as the use of pits and plugging of abandoned wells;
  - require disclosure of chemicals injected into wells in conjunction with hydraulic fracturing operations;
- restrict injection of liquids into subsurface strata that may contaminate groundwater;
- restrict the availability of water necessary for hydraulic fracturing operations;
- impose substantial penalties for violations of environmental rules or pollution resulting from our operations; and

curtail production in association with permit limits or exceeding gas flaring limits.

Environmental permits that the operators of properties are required to possess may be subject to revocation, modification, and renewal by issuing authorities. Governmental authorities have the power to enforce compliance with their regulations and permits, and violations are subject to injunction, civil fines, and even criminal penalties. Our management believes that we are in substantial compliance with current environmental laws and regulations, and that we will not be required to make material capital expenditures to comply with existing laws. Nevertheless, changes in existing environmental laws and regulations or interpretations thereof could have a significant impact on our operations as well as the oil and gas industry in general, and thus we are unable to predict the ultimate cost and effects of future changes in environmental laws and regulations.

We are not currently involved in any administrative, judicial or legal proceedings arising under federal, state, or local environmental protection laws and regulations, or under federal or state common law, which would have a material adverse effect on our respective financial positions or results of operations. Moreover, we maintain insurance against the costs of clean-up operations,

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but we are not fully insured against all such risks. A serious incident of pollution may result in the suspension or cessation of operations in the affected area.

The following is a discussion of the current relevant environmental laws and regulations that relate to our operations.

Comprehensive Environmental Response, Compensation and Liability Act. The Comprehensive Environmental Response, Compensation and Liability Act, also known as Superfund, and which we refer to as CERCLA, and comparable state statutes impose strict joint, and several liability, without regard to fault or legality of conduct, on certain classes of persons who are considered to have contributed to the release of a “hazardous substance” into the environment. These persons include among others, the current and former owners or operators of a disposal site or sites where a release occurred and companies that arranged for the transportation or disposal of the hazardous substances released at the site. Under CERCLA, such persons or companies may be retroactively liable for the costs of cleaning up the hazardous substances that have been released into the environment, for damages to natural resources, and for the costs of certain health studies. CERCLA authorizes the Environmental Protection Agency (“EPA”), and in some cases third parties, to take actions in response to threats to the public health or the environment and to seek to recover from the responsible classes of persons the costs they incur. In addition, it is not uncommon for neighboring land owners and other third parties to file claims for personal injury, property damage, and recovery of response costs allegedly caused by the hazardous substances released into the environment.

In the course of our ordinary operations, certain wastes may be generated that may fall within CERCLA’s definition of a “hazardous substance.” We may be liable under CERCLA or comparable state statutes for all or part of the costs required to clean up sites at which these wastes have been disposed. Although CERCLA currently contains a “petroleum exclusion” from the definition of “hazardous substance,” state laws affecting our operations impose cleanup liability relating to petroleum and petroleum related products, including oil cleanups.

We currently own or lease, and have in the past owned or leased, numerous properties that for many years have been used for the exploration and production of oil and gas. Although we have utilized standard industry operating and disposal practices at the time, hydrocarbons or other wastes may have been disposed of or released on or under the properties we owned or leased or on or under other locations where such wastes have been taken for disposal. In addition, many of these properties have been operated by third parties whose treatment and disposal or release of hydrocarbons or other wastes was not under our control. These properties and the wastes disposed thereon may be subject to CERCLA, RCRA (as defined below), and analogous state laws. Under these laws, we could be required to remove or remediate previously disposed wastes, including wastes disposed or released by prior owners or operators; to clean up contaminated property, including contaminated groundwater; or to perform remedial operations to prevent future contamination.

Oil Pollution Act of 1990. Federal regulations also require certain owners and operators of facilities that store or otherwise handle oil to prepare and implement spill response plans relating to the potential discharge of oil into surface waters. The Federal Oil Pollution Act, which we refer to as OPA, and analogous state laws, contain numerous requirements relating to prevention of, reporting of, and response to oil spills into waters of the United States. A failure to comply with OPA’s requirements or inadequate cooperation during a spill response action may subject a responsible party to civil or criminal enforcement actions. We are not aware of any action or event that would subject us to liability under OPA, and we believe that compliance with OPA’s financial responsibility and other operating requirements will not have a material adverse effect on our financial position or results of operations.

Resource Conservation and Recovery Act. The Resource Conservation and Recovery Act, which we refer to as RCRA, is the principal federal statute governing the treatment, storage and disposal of hazardous and non-hazardous solid wastes. RCRA imposes stringent operating requirements and liability for failure to meet such requirements, on a person who is either a “generator” or “transporter” of hazardous waste or an “owner” or “operator” of a hazardous waste

treatment, storage or disposal facility. Analogous state laws further impose requirements associated with the management of solid wastes. At present, RCRA includes a statutory exemption that allows most oil and gas exploration and production wastes to be classified and regulated as non-hazardous wastes. A similar exemption is contained in many of the state counterparts to RCRA. At various times in the past, proposals have been made to amend RCRA to rescind the exemption that excludes oil and gas exploration and production wastes from regulation as hazardous wastes. Repeal or modification of the exemption by administrative, legislative or judicial process, or modification of similar exemptions in applicable state statutes, would increase the volume of hazardous waste we are required to manage and dispose and would cause us to incur increased operating expenses. Also, in the ordinary course of our operations, we generate small amounts of ordinary industrial wastes, such as paint wastes, waste solvents and waste oils that may be regulated as hazardous wastes. We believe that our operations comply in all material respects with the requirements of RCRA and its state counterparts.

Naturally Occurring Radioactive Materials, which we refer to as NORM, are materials not covered by the Atomic Energy Act, whose radioactivity is enhanced by technological processing such as mineral extraction or processing through exploration and production conducted by the oil and gas industry. NORM wastes are regulated under the RCRA framework, but primary responsibility



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for NORM regulation has been a state function. Standards have been developed for worker protection; treatment, storage and disposal of NORM waste; management of waste piles, containers and tanks; and limitations upon the release of NORM contaminated land for unrestricted use. We believe that the operations of our properties are in material compliance with all applicable NORM standards established by the various states in which we operate wells.

**Clean Water Act.** The Clean Water Act, which we refer to as the CWA, and analogous state laws, impose restrictions and controls on the discharge of pollutants, including spills and leaks of oil and other substances, into waters of the United States. The discharge of pollutants into regulated waters is prohibited, except in accordance with the terms of a permit issued by EPA or an analogous state agency. The CWA regulates storm water run-off from oil and gas facilities and requires a storm water discharge permit for certain activities. Such a permit requires the regulated facility to monitor and sample storm water run-off from its operations. The CWA and regulations implemented thereunder also prohibit discharges of dredged and fill material in wetlands and other waters of the United States unless authorized by an appropriately issued permit. Spill prevention, control and countermeasure requirements of the CWA require appropriate containment berms and similar structures to help prevent the contamination of waters of the United States in the event of a petroleum hydrocarbon tank spill, rupture or leak. EPA and the U.S. Army Corps of Engineers have adopted a rule that arguably expands the scope of “waters of the United States” that are regulated under the CWA. This rule could impact our operations by subjecting new waters to regulation; however, enforcement of the rule has been stayed while it is undergoing legal challenge in the federal courts and recently the U.S. Supreme Court agreed to take up jurisdiction issues related to the rulemaking. The CWA and comparable state statutes provide for civil, criminal and administrative penalties for unauthorized discharges of oil and other pollutants and impose liability on parties responsible for those discharges for the costs of cleaning up any environmental damage caused by the release and for resource damages resulting from the release. We believe that the operations of our properties comply in all material respects with the requirements of the CWA and state statutes enacted to control water pollution.

**Safe Drinking Water Act.** Our operations also produce wastewaters that are disposed via underground injection wells. These activities are regulated by the Safe Drinking Water Act, which we refer to as the SDWA, and analogous state and local laws. Underground injection is the subsurface placement of fluid through a well, such as the reinjection of brine produced and separated from oil and gas production. The main goal of the SDWA is the protection of usable aquifers. The primary objective of injection well operating requirements is to ensure the mechanical integrity of the injection apparatus and to prevent migration of fluids from the injection zone into underground sources of drinking water. Injection well operations are strictly controlled, and certain wastes, absent an exemption, cannot be injected into underground injection control wells. In most states, no underground injection may take place except as authorized by permit or rule. In addition, subsurface injection of water or other produced fluids from drilling or hydraulic fracturing processes have come under increased public and governmental scrutiny. Some jurisdictions, Texas for example, have adopted new and more stringent rules for injection wells aimed at reducing the potential for earthquakes associated with injection activities, including new restrictions on siting of such injection wells. We currently own and operate various underground injection wells. Failure to comply with our permits could subject us to civil and/or criminal enforcement. We believe that we are in compliance in all material respects with the requirements of applicable state underground injection control programs and our permits.

**Clean Air Act.** The Clean Air Act, which we refer to as the CAA, and state air pollution laws and regulations provide a framework for national, state and local efforts to protect air quality. The operations of our properties utilize equipment that emits air pollutants which may be subject to federal and state air pollution control laws. These laws require utilization of air emissions abatement equipment to achieve prescribed emissions limitations and ambient air quality standards, as well as operating permits for existing equipment and construction permits for new and modified equipment. In the past few years, EPA has adopted new more restrictive regulations governing air emissions from oil and gas operations and has proposed rules that are still under review, including regulations which impose new restrictions on emissions of methane, volatile organic compounds and hazardous air pollutants.

Permits and related compliance obligations under the CAA, as well as changes to state implementation plans for controlling air emissions in regional non-attainment areas may require oil and gas exploration and production operators to incur future capital expenditures in connection with the addition or modification of existing air emission control equipment and strategies. EPA has adopted a new ozone standard which will result in additional areas being designated as nonattainment and therefore subject to more stringent rules and permitting requirements. In addition, some oil and gas facilities may be included within the categories of hazardous air pollutant sources, which are subject to increasing regulation under the CAA. Failure to comply with these requirements could subject a regulated entity to monetary penalties, injunctions, conditions or restrictions on operations and enforcement actions. Oil and gas exploration and production facilities may be required to incur certain capital expenditures in the future for air pollution control equipment in connection with obtaining and maintaining operating permits and approvals for air emissions. We believe that we are in compliance in all material respects with the requirements of applicable federal and state air pollution control laws.

**Hydraulic Fracturing.** Most of our current operations depend on the use of hydraulic fracturing to enhance production from oil and gas wells. This technology involves the injection of fluids—usually consisting mostly of water but typically including small amounts of chemical additives—as well as sand, or other proppants, into a well under high pressure in order to create fractures in the rock that allow oil or gas to flow more freely to the wellbore. Many of our newer wells would not be economical without the

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use of hydraulic fracturing to stimulate the formation to enhance production from the well. Hydraulic fracturing operations have historically been overseen by state regulators as part of their oil and gas regulatory programs. In December 2016, the EPA issued its final report “Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States” which assessed the potential impact of hydraulic fracturing on drinking water resources. The report acknowledged data gaps and uncertainties, removed the draft finding of no widespread systemic impacts from hydraulic fracturing, but concluded that the agency could not quantify the frequency or severity of such impacts on a national level, thereby leaving the door open to additional regulations to protect drinking water resources. The U.S. Department of the Interior, Bureau of Land Management (“BLM”) released final regulations, in 2015, concerning hydraulic fracturing on federal and tribal lands, including chemical disclosure. These rules are currently under judicial challenge. In addition to these federal legislative and regulatory proposals, some states and local governments have considered imposing, or have adopted various conditions and restrictions on hydraulic fracturing operations, including but not limited to requirements regarding chemical disclosure, casing and cementing of wells, withdrawal of water for use in high-volume hydraulic fracturing of horizontal wells, baseline testing of nearby water wells, and restrictions on the type of additives that may be used in hydraulic fracturing operations. In some states, including Texas, water use may also be regulated and potentially curtailed by local groundwater management districts which could impact water available for hydraulic fracturing. If these types of restrictions are widely adopted, we could be subject to increased costs and possibly limits on the productivity of certain wells, and these laws could make it easier for third parties to initiate litigation against us in the event of perceived problems with water wells in the vicinity of an oil or gas well or other alleged environmental problems. Some states in which we operate have implemented disclosure requirements for chemicals used in hydraulic fracturing. Additional information concerning hydraulic fracturing is included under Item 1A. related to risk factors.

Climate Change Legislation and Greenhouse Gas Regulation. Studies over recent years have indicated that emissions of certain gases may be contributing to warming of the Earth’s atmosphere. In response to these studies, many nations have agreed to limit emissions of “greenhouse gases” or “GHGs” pursuant to the United Nations Framework Convention on Climate Change, and the “Kyoto Protocol.” Methane, a primary component of natural gas, and carbon dioxide, a byproduct of the burning of oil, gas, and refined petroleum products, are considered “greenhouse gases” regulated by the Kyoto Protocol. In December 2015, the U.S. participated in the 21st Conference of the Parties of the United Nations Framework Convention on Climate Change in Paris, France. The Paris Agreement (adopted at the conference) calls for nations to undertake efforts with respect to global temperatures and GHG emissions. If ratified, the Paris Agreement will take effect in 2020. It is possible that the Paris Agreement and subsequent domestic and international regulations will have adverse effects on the market for oil, gas and other fossil fuel products as well as adverse effects on the business and operations of companies engaged in the exploration for, and production of, oil, gas and other fossil fuel products. We are unable to predict the timing, scope and effect of any currently proposed or future investigations, laws, regulations or treaties regarding climate change and GHG emissions that may arise from the Paris Agreement, but the direct and indirect costs of such investigations, laws, regulations and treaties (if enacted) could materially and adversely affect our operations, financial condition and results of operations. In addition, several states have adopted legislation and regulations to reduce emissions of greenhouse gases. Restrictions on emissions of methane or carbon dioxide that may be imposed in various states could adversely affect our operations and demand for our products. As a result of the U.S. Supreme Court decision in *Massachusetts, et al. v. EPA*, on December 7, 2009, the EPA issued a finding that serves as the foundation under the Clean Air Act to issue other rules that would result in federal greenhouse gas regulations and emissions limits under the Clean Air Act, even without Congressional action. As part of this array of new regulations, the EPA has issued a GHG monitoring and reporting rule that requires certain parties, including participants in the oil and gas industry, to monitor and report their GHG emissions, including methane and carbon dioxide, to the EPA. These regulations may apply to our operations. The EPA has adopted other rules that would regulate GHGs, one of which would regulate GHGs from stationary sources, and may affect sources in the oil and gas exploration and production industry and the pipeline industry. Moreover, in May 2016 the EPA adopted rules to force the aggregation of wells and facilities for air emission permitting purposes, and also rules to reduce methane emissions from equipment and leaks from new oil and gas facilities. Both were part of the Obama

Administration's plans to reduce methane emissions from the oil and gas sector by 40 to 50 percent from 2012 emission levels by 2025. The EPA's finding, the greenhouse gas reporting rule, the methane rules and the other rules to regulate the emissions of greenhouse gases may affect the cost of our operations and also affect the outcome of other climate change lawsuits pending in United States federal courts in a manner unfavorable to our industry.

Although various climate change legislative measures have been under consideration by the U.S. Congress, it is not possible at this time to predict when, or if, Congress will act on climate change legislation or how and when the new Trump Administration will address the issues. Finally, some states, either individually or through multi-state regional initiatives, have begun implementing legal measures to reduce emissions of GHGs, primarily through the planned development of emission inventories or regional greenhouse gas cap and trade programs. Depending on the particular jurisdiction of our operations, we could be required to purchase and surrender allowances for GHG emissions resulting from our operations. Any of the climate change regulatory and legislative initiatives described above could have a material adverse effect on our business, financial condition, and results of operations. Additional information concerning climate change is included under Item 1A. related to risk factors.

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**National Environmental Policy Act.** Oil and gas exploration and production activities on federal lands are subject to the National Environmental Policy Act, which we refer to as NEPA. NEPA requires federal agencies, including the Department of Interior, to evaluate major agency actions having the potential to significantly impact the environment. In the course of such evaluations, an agency will prepare an Environmental Assessment that assesses the potential direct, indirect and cumulative impacts of a proposed project and, if necessary, will prepare a more detailed Environmental Impact Statement that may be made available for public review and comment. If we were to conduct any exploration and production activities on federal lands in the future, those activities would need to obtain governmental permits that are subject to the requirements of NEPA. This process has the potential to delay the development of oil and gas projects.

**Endangered Species Act.** The Endangered Species Act, which we refer to as the ESA, restricts activities that may affect endangered or threatened species or their habitats. While some of our properties may be located in areas that may be designated as habitat for endangered or threatened species, we believe that we are in substantial compliance with the ESA. Looking forward, we expect more listings of such species to occur, in light of consent decrees involving the U.S. Fish and Wildlife Service which require the agency to decide whether or not to list, as endangered or threatened, approximately 251 candidate species. Included in this group are a number of species which, if listed, could include habitat in areas where we operate or plan to operate. Further, some of the species could become subject to voluntary rangeland conservation plans that could affect our operations. Such listing of additional species, or the discovery of previously unidentified endangered or threatened species, or the adoption of conservation plans, could cause us to incur additional costs or become subject to operating restrictions, construction delays, or bans on operating in the affected areas.

**Abandonment Costs.** All of our oil and gas wells will require proper plugging and abandonment at some time in the future. We have posted bonds with most regulatory agencies to ensure compliance with our plugging responsibility. Plugging and abandonment operations and associated reclamation of the surface site are important components of our environmental management system. We plan accordingly for the ultimate disposition of properties that are no longer producing.

## Title to Properties

As is customary in the oil and gas industry, we make only a cursory review of title to undeveloped oil and gas leases at the time we acquire them. However, before drilling commences, we make a thorough title search, and any material defects in title are remedied prior to the time actual drilling of a well begins. To the extent title opinions or other investigations reflect title defects, we, rather than the seller/lessor of the undeveloped property, are typically obligated to cure any title defect at our expense. If we were unable to remedy or cure any title defect of a nature such that it would not be prudent to commence drilling operations on the property, we could suffer a loss of our entire investment in the property. We believe that we have good title to our properties, some of which are subject to immaterial encumbrances, easements and restrictions. The oil and gas properties we own are also typically subject to royalty and other similar non-cost bearing interests customary in the industry. We do not believe that any of these encumbrances or burdens will materially affect our ownership or use of our properties.

## Competition

We operate in a highly competitive environment. The principal resources necessary for the exploration and production of oil and gas are leasehold prospects under which oil and gas reserves may be discovered, drilling rigs and related equipment and services to explore for such reserves and knowledgeable personnel to conduct all phases of oil and gas operations. We must compete for such resources with both major oil and gas companies and independent operators. Many of these competitors have financial and other resources substantially greater than ours. Although we believe our current operating and financial resources are adequate to preclude any significant disruption of our near term

operations, we cannot assure you that such materials and resources will be available to us in the future.

#### Employees

As of March 10, 2017, we had 109 full-time employees. We retain independent geological, land, marketing engineering and health and safety consultants from time to time and expect to continue to do so in the future.

#### Available Information

We file annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission (“SEC”). You may read and copy any document we file with the SEC at the SEC’s public reference room at 100 F Street, NE, Room 1580, Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for information on the public reference room. The SEC maintains an internet web site that contains annual, quarterly and current reports, proxy statements and other information that issuers (including Abraxas) file electronically with the SEC. The SEC’s web site is [www.sec.gov](http://www.sec.gov).

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Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and other reports and amendments filed with the SEC are available free of charge on our web site at [www.abraxaspetroleum.com](http://www.abraxaspetroleum.com) in the Investor Relations section as soon as practicable after such reports are filed. Information on our web site is not incorporated by reference into this Form 10-K and should not be considered part of this report or any other filing that we make with the SEC.

Item 1A. Risk Factors

Risks Related to Our Business

Depressed oil and/or gas prices would have a material and adverse effect on us.

Our financial results and the value of our properties are highly dependent on the general supply and demand for oil, gas and NGL, which impact the prices we ultimately realize on our sales of these commodities. Since the second half of 2014, there has been a significant decline in oil, gas and NGL prices, which adversely affected our 2015 and 2016 operating results and contributed to a reduction in our anticipated future capital expenditures. In addition, this decline in commodity prices adversely impacted our estimated proved reserves and resulted in a proved property impairment of \$128.6 million to our oil and gas properties during 2015 and \$67.6 million in 2016. We could record impairments in future periods, the amount of which will be dependent upon many factors such as future prices of oil, gas and NGL, increases or decreases in our reserve base, changes in estimated costs and expenses, and oil and gas property acquisitions.

While oil and gas prices improved in late 2016, they have remained relatively low. A sustained weakness or further deterioration in commodity prices could materially and adversely impact our business by resulting in, or exacerbating, the following effects:

- reducing the amount of oil, gas and NGL that we can produce economically;
- reducing the borrowing base of our credit facility;
- limiting our financial flexibility, liquidity and access to sources of capital, such as equity and debt;
- reducing our revenues, operating cash flows and profitability;
- causing us to decrease our capital expenditures or maintain reduced capital spending for an extended period, resulting in lower future production of oil, gas and NGL; and
- reducing the carrying value of our properties, resulting in additional noncash write-downs.

Market prices and our realized prices have been volatile and are likely to continue to be volatile in the future due to numerous factors beyond our control. These factors include:

- the level of demand;
- domestic and global supplies of oil, NGL and gas;
- the price and quantity of imported and exported oil, NGL and gas;
- the actions of other oil exporting nations;
- weather conditions and changes in weather patterns;
- the availability, proximity and capacity of appropriate transportation facilities, gathering, processing and compression facilities, storage facilities and refining facilities;
- worldwide economic and political conditions, including political instability or armed conflict in oil and gas producing regions, competition for markets and political initiatives disfavoring fossil fuels;
- the price and availability of, and demand for, competing energy sources, including alternative energy sources;

the nature and extent of governmental regulation, including environmental regulation, regulation of derivatives transactions and hedging activities, tax laws and regulations and laws and regulations with respect to the import and export of oil, gas and related commodities;

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the level and effect of trading in commodity futures markets, including trading by commodity price speculators and others, and;  
the effect of worldwide energy conservation measures.

Our cash flows from operations, the results of operations and the borrowing base under our credit facility depend to a great extent on the prevailing prices for oil and gas. Prolonged or substantial declines in oil and/or gas prices would materially and adversely affect our liquidity, the amount of cash flows we have available for our capital expenditures and other operating expenses, our ability to access the credit and capital markets and our results of operations.

Any significant reduction in the borrowing base under our credit facility as a result of a periodic borrowing base redetermination or otherwise will negatively impact our liquidity and, consequently, our ability to fund our operations, and we may not have sufficient funds to repay borrowings under our credit facility or any other obligation if required as a result of a borrowing base redetermination

Availability under our credit facility is currently subject to a borrowing base of \$115.0 million. The borrowing base is subject to scheduled semiannual (April 1 and October 1) and other elective borrowing base redeterminations. The amount of the borrowing base is calculated by the lenders based upon their valuation of our proved reserves securing the facility utilizing these reserve reports and their own internal decisions. The lenders under our credit facility can unilaterally adjust the borrowing base and the borrowings permitted to be outstanding under our credit facility. A number of factors could reduce our borrowing base, including:

- lower commodity prices or production;
- a reduction in reserve estimates;
- inability to drill or unfavorable drilling results;
- increased operating and/or capital costs;
- the lenders' inability to agree to an adequate borrowing base; or
- adverse changes in the lenders' practices (including required regulatory changes) regarding estimation of reserves.

As of March 10, 2017, we had \$18.0 million of borrowings outstanding under our credit facility and availability of \$97.0 million. Any significant reduction in our borrowing base as a result of borrowing base redeterminations or otherwise will negatively impact our liquidity and our ability to fund our operations and, as a result, would have a material adverse effect on our financial position, results of operation and cash flow. Further, if the outstanding borrowings under our credit facility were to exceed the borrowing base as a result of redetermination, we would be required to repay the excess amount or pledge additional assets. We may not have sufficient funds to make such repayment and we do not have any substantial unpledged assets. If we do not have sufficient funds and we are otherwise unable to negotiate renewals of our borrowings or arrange new financing, we may have to sell significant assets. Any such sale could have a material adverse effect on our business and financial results.

Lower oil and/or gas prices may also reduce the amount of oil and/or gas that we can produce economically.

Sustained substantial declines in oil and/or gas prices may render uneconomic a significant portion of our exploration, development and exploitation projects, which may result in our having to make significant downward adjustments to our estimated proved reserves. As a result, a prolonged or substantial decline in oil and/or gas prices such as we have experienced since mid-2014 caused, and would likely in the future cause, a material and adverse effect on our future business, financial condition, results of operations, liquidity and ability to finance capital expenditures. Additionally, if we experience significant sustained decreases in oil and gas prices such that the expected future cash flows from our oil and gas properties falls below the net book value of our properties, we may be required to write down the value of our oil and gas properties. Any such asset impairments could materially and adversely affect our results of operations and, in turn, the trading price of our common stock.

We may not be able to fund the capital expenditures that will be required for us to increase reserves and production.

We must make capital expenditures to develop our existing reserves and to discover new reserves. Historically, we have financed our capital expenditures primarily with cash flow from operations, borrowings under credit facilities, sales of properties, monetizing derivative contracts and sales of debt and equity securities and we expect to continue to utilize these sources in the future. We cannot assure you that we will have sufficient capital resources in the future to finance all of our planned capital expenditures.

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Volatility in oil and gas prices, the timing of our drilling programs and drilling results will affect our cash flow from operations. Lower prices and/or lower production could also decrease revenues and cash flow, thus reducing the amount of financial resources available to meet our capital requirements, including reducing the amount available to pursue our drilling opportunities. If our cash flow from operations does not increase as a result of capital expenditures, a greater percentage of our cash flow from operations will be required for debt service and operating expenses and our capital expenditures would, by necessity, be decreased.

The borrowing base under our credit facility is determined from time to time by the lenders. Reductions in estimates of oil and gas reserves could result in a reduction in the borrowing base, which would reduce the amount of financial resources available under our credit facility to meet our capital requirements and/or trigger certain repayment obligations. Such a reduction could be the result of lower commodity prices and/or production, an inability to drill or unfavorable drilling results, changes in oil and gas reserve engineering, the lenders' inability to agree to an adequate borrowing base or adverse changes in the lenders' practices regarding estimation of reserves.

If cash flows from operations or our borrowing base decrease, our ability to undertake exploration and development activities could be adversely affected. As a result, our ability to replace production may be limited. In addition, if the borrowing base under our credit facility is reduced, we would be required to reduce borrowings under our credit facility so that such borrowings do not exceed the borrowing base. This could further reduce the cash available to us for capital spending and, if we did not have sufficient capital to reduce our borrowing level, we may be in default under the credit facility.

We have sold producing properties to provide us with liquidity and capital resources in the past and we may continue to do so in the future. After any such sale, we would expect to utilize the proceeds to reduce our indebtedness and/or to drill new wells on our remaining properties. If we cannot replace the production from the properties sold with production from our remaining properties, our cash flows from operations will likely decrease, which in turn, could decrease the amount of cash available for additional capital spending.

We have indebtedness which may adversely affect our cash flow and business operations.

At December 31, 2016, we had a total of \$93.0 million of indebtedness under our credit facility and total indebtedness of \$97.4 million (including the current portion). While the amount borrowed under our credit facility at March 10, 2017 was \$18.0 million (and total indebtedness was \$21.8 million), this amount will likely increase as we pursue drilling and completion of wells. Our indebtedness could have important consequences to us, including:

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

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

- a substantial portion of our cash flow from operations will be used to make principal and interest payments on our indebtedness, reducing the funds that would otherwise be available for operations and future business opportunities; and

- making us more vulnerable to competitive pressures if there is a downturn in our business or the economy in general, than our competitors with less debt.

Our ability to service our indebtedness will depend upon, among other things, our future financial and operating performance, which will be affected by prevailing economic conditions and financial, business, regulatory and other

factors, some of which are beyond our control. If our operating results are not sufficient to service our current or future indebtedness, we will be forced to take actions such as reducing or delaying capital expenditures, acquisitions and/or selling assets, restructuring or refinancing our indebtedness or seeking additional debt or equity capital or bankruptcy protection. We may not be able to effect any of these remedies on satisfactory terms or at all.

A breach of the terms and conditions of our credit facility, including borrowings in excess of the borrowing base or the inability to comply with the required financial covenants, could result in an event of default. If an event of default occurs (after any applicable notice and cure periods), the lenders would be entitled to terminate any commitment to make further extensions of credit under our credit facility and to accelerate the repayment of amounts outstanding (including accrued and unpaid interest and fees). Upon a default under our credit facility, the lenders could also foreclose against any collateral securing such obligations, which may be all or substantially all of our assets. If that occurred, we may not be able to continue to operate as a going concern.

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Restrictive debt covenants could limit our growth and our ability to finance our operations, fund our capital needs, respond to changing conditions and engage in other business activities that may be in our best interests.

Our credit facility contains a number of significant covenants that, among other things, limit our ability to:

- incur or guarantee additional indebtedness and issue certain types of preferred stock or redeemable stock;
- transfer or sell assets;
- create liens on assets;
- pay dividends or make other distributions on capital stock or make other restricted payments, including repurchasing, redeeming or retiring capital stock or subordinated debt or making certain investments or acquisitions;
- engage in transactions with affiliates;
- guarantee other indebtedness;
- make any change in the principal nature of our business;
- permit a change of control; or
- consolidate, merge or transfer all or substantially all of our assets.

In addition, our credit facility requires us to maintain compliance with specified financial covenants. Our ability to comply with these covenants may be adversely affected by events beyond our control, and we cannot assure you that we can maintain compliance with these covenants. These financial covenants could limit our ability to obtain future financings, make needed capital expenditures, withstand a downturn in our business or the economy in general or otherwise conduct necessary or desirable business activities. We are also required to use the proceeds from the termination of any derivative contracts to repay outstanding amounts under the credit facility and to use any amount of cash on hand and liquid investments in excess of \$10 million to repay outstanding amounts under the credit facility.

A breach of any of these covenants could result in a default under our credit facility. A default, if not cured or waived, could result in all of our indebtedness becoming immediately due and payable. If that should occur, we may not be able to pay all such debt or to borrow sufficient funds to refinance it. Even if new financing were then available, it may not be on terms acceptable or favorable to us.

Lower oil and gas prices increase the risk of ceiling limitation write-downs.

We use the full cost method to account for our oil and gas operations. Accordingly, we capitalize the cost to acquire, explore for and develop our oil and gas properties. Under full cost accounting rules, the net capitalized cost of our oil and gas properties may not exceed a “ceiling limit” which is based upon the present value of estimated future net cash flows from our proved reserves, discounted at 10%. If the net capitalized costs of our oil and gas properties exceed the ceiling limit, we must charge the amount of the excess to earnings. This is called a “ceiling limitation write-down.” This charge does not impact cash flow from operating activities, but it does reduce our stockholders’ equity and earnings. The risk that we will be required to write-down the carrying value of our oil and gas properties increases when oil and gas prices are low, which could be further impacted by the SEC’s modernized oil and gas reporting disclosures, which require us to use an average price over the prior 12-month period, rather than the year-end price, when calculating the PV-10. In addition, write-downs may occur if we experience substantial downward adjustments to our estimated proved reserves. An expense recorded in one period may not be reversed in a subsequent period even though oil and gas prices may have increased the ceiling applicable in the subsequent period.

At December 31, 2015, the net capitalized costs of our oil and gas properties exceeded the present value of our proved reserves, resulting in recognition of impairments totaling \$128.6 million. During 2016 we recognized additional impairments of \$67.6 million. If commodity prices decrease in the future, we would likely be required to record further write downs.

An increase in the differential between NYMEX and the reference or regional index price used to price our oil and gas would reduce our cash flow from operations.

Our oil and gas is priced in the local markets where it is produced based on local or regional supply and demand factors. The prices we receive for our oil and gas are typically lower than the relevant benchmark prices, such as NYMEX. The difference between the benchmark price and the price we receive is called a differential. Numerous factors may influence local pricing, such as refinery capacity, location to market, product quality, pipeline capacity and specifications, upsets in the midstream or downstream sectors of the industry, trade restrictions and governmental regulations. Additionally, insufficient pipeline capacity, lack of demand

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in any given operating area or other factors may cause the differential to increase in a particular area compared with other producing areas. For example, production increases from competing Canadian and Rocky Mountain producers, combined with limited refining and pipeline capacity in the Rocky Mountain area, have gradually widened differentials in this area. In addition, we have a contract related to certain gas and NGL in the Rocky Mountain Region, that if certain margins of gas and NGL prices are not met by the purchaser, we receive no sales proceeds.

During 2016, our differentials averaged \$(6.33) per Bbl of oil and \$(1.29) per Mcf of gas. Approximately 81% of our oil and NGL production during 2016 was from the Rocky Mountain region. Historically, this region has experienced wider differentials than our Permian/Delaware Basin and South Texas properties. If the percentage of our production from the Rocky Mountain region continues to increase, we expect that the effect of our price differentials on our revenues will also increase. Increases in the differential between the benchmark prices for oil and gas and the realized price we receive could significantly reduce our revenues and our cash flow from operations.

Our derivative contracts could result in financial losses or could reduce our cash flow.

To achieve more predictable cash flow and reduce our exposure to adverse fluctuations in the prices of oil and gas, we enter into derivative contracts, which we sometimes refer to as hedging arrangements, for a significant portion of our oil and gas production that could result in both realized and unrealized derivative contract losses. We have entered into NYMEX-based fixed price commodity swap arrangements on approximately 70% of the oil production from our estimated net proved developed producing reserves (as of December 31, 2016) through December 31, 2017, 77% for 2018 and 64% for 2019. We have also entered into a NYMEX-based collar on approximately 56% of the gas production from our estimated net proved developed producing reserves (as of December 31, 2016) through December 31, 2017 and a 500 Bopd Midland-Cushing oil price differential swap at (\$0.65)/Bbl. These arrangements may be inadequate to protect us from declines in oil and gas prices. Any new hedging arrangements will be priced at then-current market prices and may be significantly lower than the commodity swaps we currently have in place. The extent of our commodity price exposure will be related largely to the effectiveness and scope of our commodity price derivative contracts. For example, the prices utilized in our derivative contracts are currently NYMEX-based, which may differ significantly from the actual prices we receive for oil and gas which are based on the local markets where the oil and gas is produced. The prices that we receive for our oil and gas production are typically lower than the relevant benchmark prices that are used for calculating commodity derivative positions. The difference between the benchmark price and the price we receive is called a differential, a significant portion of which is based on the delivery location which is called the basis differential. As a result, our cash flow from operations could be affected if the basis differentials widen more than we anticipate. Our cash flow from operations could also be affected based upon the levels of our production. If production is higher than we estimate, we will have greater commodity price exposure than we intended. If production is lower than the nominal amount that is subject to our hedging arrangements, we may be forced to satisfy all or a portion of our hedging arrangements without the benefit of the cash flow from our sale of the underlying physical commodity, resulting in a substantial reduction in cash flows.

If the prices at which we hedge our oil and gas production are less than current market prices, our cash flow opportunity from operations could be adversely affected.

When our derivative contract prices are higher than market prices, we will incur realized and unrealized gains on our derivative contracts and conversely, when our contract prices are lower than market prices, we will incur realized and unrealized losses. For the year ended December 31, 2016, we recognized a realized gain on oil and gas derivative contracts of \$1.8 million and an unrealized loss of \$19.8 million. The realized gain resulted in an increase in cash flow from operations. We expect to continue to enter into similar hedging arrangements in the future to reduce our cash flow volatility.

We cannot assure you that the derivative contracts that we have entered into, or will enter into, will adequately protect us from financial loss in the future due to circumstances such as:

- highly volatile oil and gas prices;
- our production being less than expected; or
- a counterparty to one of our hedging transactions defaulting on its contractual obligations.

The counterparties to our derivative contracts may be unable to perform their obligations to us which could adversely affect our cash flow.

At times when market prices are lower than our derivative contract prices, we are entitled to cash payments from the counterparties to our derivative contracts. Any number of factors may adversely affect the ability of our counterparties to fulfill



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their contractual obligations to us. If one of our counterparties is unable or unwilling to make the required payments to us, it could adversely affect our cash flow.

The Company's expectations for future drilling activities will be realized over several years, making them susceptible to uncertainties that could materially alter the occurrence or timing of such activities.

The Company has identified drilling locations and prospects for future drilling opportunities, including development and exploratory drilling activities. These drilling locations and prospects represent a significant part of the Company's future drilling plans. For example, the Company's proved reserves as of December 31, 2016 include proved undeveloped reserves and proved developed reserves that are behind pipe of 16,976 MBbls of oil, 6,137 MBbls of NGLs and 45,597 MMcf of gas. The Company's ability to drill and develop these locations depends on a number of factors, including the availability of capital, regulatory approvals, negotiation of agreements with third parties, commodity prices, costs, access to and availability of equipment, services, resources and personnel and drilling results. There can be no assurance that the Company will drill these locations or that the Company will be able to produce oil or gas reserves from these locations or any other potential drilling locations. Changes in the laws or regulations on which the Company relies in planning and executing its drilling programs could adversely impact the Company's ability to successfully complete those programs. For example, under current Texas laws and regulations the Company may receive permits to drill, and may drill and complete, certain horizontal wells that traverse one or more units and/or leases; a change in those laws or regulations could adversely impact the Company's ability to drill those wells. Because of these uncertainties, the Company cannot give any assurance as to the timing of these activities or that they will ultimately result in the realization of proved reserves or meet the Company's expectations for success. As such, the Company's actual drilling activities may materially differ from the Company's current expectations, which could have a significant adverse effect on the Company's proved reserves, financial condition and results of operations.

A significant portion of the Company's total estimated proved reserves at December 31, 2016 were undeveloped, and those proved reserves may not ultimately be developed.

At December 31, 2016, approximately 66% of the Company's total estimated proved reserves on a Boe basis (33% on a PV-10 basis) were undeveloped. Recovery of proved undeveloped reserves requires significant capital expenditures and successful drilling. The Company's reserve data assumes that the Company can and will make these expenditures and conduct these operations successfully, which assumptions may not prove correct. If the Company chooses not to spend the capital to develop these proved undeveloped reserves, or if the Company is not otherwise able to successfully develop these proved undeveloped reserves, the Company will be required to write-off these reserves. In addition, under the SEC's rules, because proved undeveloped reserves may be booked only if they relate to wells planned to be drilled within five years of the date of booking, the Company may be required to write-off any proved undeveloped reserves that are not developed within this five-year timeframe. As with all oil and gas leases, the Company's leases require the Company to drill wells that are commercially productive and to maintain the production in paying quantities, and if the Company is unsuccessful in drilling such wells and maintaining such production, the Company could lose its rights under such leases. The Company's future production levels and, therefore, its future cash flow and income are highly dependent on successfully developing its proved undeveloped leasehold acreage.

We may be unable to acquire or develop additional reserves, in which case our results of operations and financial condition could be adversely affected.

Our future oil and gas production, and therefore our success, is highly dependent upon our ability to find, acquire and develop additional reserves that are profitable to produce. The rate of production from our oil and gas properties and our proved reserves will decline as our reserves are produced. Unless we acquire additional properties containing proved reserves, conduct successful development and exploration activities or, through engineering studies, identify

additional behind-pipe zones or secondary recovery reserves, we cannot assure you that our exploration and development activities will result in increases in our proved reserves. Based on the reserve information set forth in our reserve report as of December 31, 2016, our average annual estimated decline rate for our net proved developed producing reserves is 40%; 15%; 12%; 11% and 9% in 2018, 2019, 2020, 2021 and 2022, respectively, 9% in the following five years, and approximately 9% thereafter. These rates of decline are estimates and actual production declines could be materially higher. While we have had some success in finding, acquiring and developing additional reserves, we have not always been able to fully replace the production volumes lost from natural field declines and prior property sales. As our proved reserves and consequently our production decline, our cash flow from operations, and the amount that we are able to borrow under our credit facility could also decline. In addition, approximately 66% of our total estimated proved reserves on a Boe basis (33% on a PV-10 basis) at December 31, 2016 were classified as undeveloped. By their nature, estimates of undeveloped reserves are less certain. Recovery of such reserves will require significant capital expenditures and successful drilling operations. Even if we are successful in our development efforts, it could take several years for a significant portion of these undeveloped reserves to generate positive cash flow.

We may not find any commercially productive oil and gas reservoirs.

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Drilling involves numerous risks, including the risk that the new wells we drill will be unproductive or that we will not recover all or any portion of our capital investment. Drilling for oil and gas may be unprofitable. Wells that are productive but do not produce sufficient net revenues after drilling, operating and other costs are unprofitable. The inherent risk of not finding commercially productive reservoirs is compounded by the fact that 66% of our total estimated proved reserves on a Boe basis (33% on a PV-10 basis) as of December 31, 2016 were classified as undeveloped. By their nature, estimates of undeveloped reserves are less certain. Recovery of such reserves will require significant capital expenditures and successful drilling and completion operations. In addition, our properties may be susceptible to drainage from production by other operations on adjacent properties. If the volume of oil and gas we produce decreases, our cash flow from operations may decrease.

The results of our drilling in unconventional formations, principally in emerging plays with limited drilling and production history using long laterals and modern completion techniques, are subject to more uncertainties than our drilling program in the more established plays and may not meet our expectations for reserves or production.

We drill wells in unconventional formations in several emerging plays. Part of our drilling strategy to maximize recoveries from these formations involves the drilling of long horizontal laterals and the use of modern completion techniques of multi-stage fracture stimulations that have proven to be successful in other basins. Risks that we face include landing our well bore in the desired drilling zone, staying in the desired drilling zone, running casing the entire length of the well bore and being able to run tools and recover equipment the entire length of the well bore during completion. Our experience with horizontal drilling and multi-stage fracture stimulations of these formations to date, as well as the industry's drilling and production history in these formations, is relatively limited. The ultimate success of these drilling and completion strategies and techniques will be better evaluated over time as more wells are drilled and longer term production profiles are established. In addition, based on reported decline rates in these emerging plays as well as the industry's experience in these formations, we estimate that the average monthly rates of production may decline as much as 95% during the first twelve months of production. Actual decline rates may differ significantly. Accordingly, the results of our drilling in these unconventional formations are more uncertain than drilling results in other more established plays with longer reserve and production histories.

We may not be able to keep pace with technological developments in our industry.

The oil and gas industry is characterized by rapid and significant technological advancements and introductions of new products and services using new technologies. As others use or develop new technologies, we may be placed at a competitive disadvantage, and competitive pressures may force us to implement those new technologies at substantial cost. In addition, other oil and gas companies may have greater financial, technical and personnel resources that allow them to enjoy technological advantages and may in the future allow them to implement new technologies before we can. We may not be able to respond to these competitive pressures and implement new technologies on a timely basis or at an acceptable cost. If one or more of the technologies we use now or in the future were to become obsolete or if we are unable to use the most advanced commercially available technology, our business, financial condition and results of operations could be materially adversely affected.

We may not adhere to our proposed drilling schedule.

Our final determination of whether to drill any scheduled or budgeted wells will be dependent on a number of factors, including:

- prevailing and anticipated prices for oil and gas;
- the availability and costs of drilling and service equipment and crews;
- economic and industry conditions at the time of drilling;
- the availability of sufficient capital resources;

- the results of our exploitation efforts;
- the acquisition, review and interpretation of seismic data;
- our ability to obtain permits for and to access drilling locations;
- continuous drilling obligations; and
- lease expirations.

Although we have identified or budgeted for numerous drilling locations, we may not be able to drill those locations within our expected time frame or at all. In addition, our drilling schedule may vary from our expectations because of future uncertainties.

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We cannot control the activities on the properties we do not operate and are unable to ensure their proper operation and profitability.

We currently do not operate all of the properties in which we have an interest. As a result, we have limited ability to exercise influence over and control the risks associated with operation of these properties. The failure of an operator to adequately perform operations, an operator's breach of the applicable agreements or an operator's failure to act in our best interests could reduce our production and revenues. The success and timing of our drilling and development activities on properties operated by others therefore depends upon a number of factors outside of our control, including:

- the operator could refuse to initiate exploitation or development projects and if we proceed with any of those projects, we may not receive any funding from the operator with respect to that project;

- the operator may initiate exploitation or development projects on a different schedule than we would prefer;

- the operator may propose greater capital expenditures than we wish, including expenditures to drill more wells or build more facilities on a project than we have funds for, which may mean that we cannot participate in those projects and thus, not participate in the associated revenue stream; and

- the operator may not have sufficient expertise or resources.

Any of these events could significantly and adversely affect our anticipated exploitation and development activities.

Seasonal weather conditions and other factors could adversely affect our ability to conduct drilling activities.

Our operations could be adversely affected by weather conditions and wildlife restrictions on federal leases. In the Williston and the Powder River Basins, drilling and other oil and gas activities cannot be conducted as efficiently during the winter and spring months. Winter and severe weather conditions limit and may temporarily halt the ability to operate during such conditions. These constraints and the resulting shortages or high costs could delay or temporarily halt our oil and gas operations and materially increase our operating and capital costs, which could have a material adverse effect on our business, financial condition and results of operations.

The lack of availability or high cost of drilling rigs, equipment, supplies, personnel and oil field services could adversely affect our ability to execute our exploitation and development plans on a timely basis and within our budget.

Our industry is cyclical and, from time to time, there has been a shortage of drilling rigs, equipment, supplies, oil field services or qualified personnel. During these periods, the costs and delivery times of rigs, equipment and supplies are substantially greater. In addition, the demand for, and wage rates of, qualified drilling rig crews rise as the number of active rigs in service increases. During times and in areas of increased activity, the demand for oilfield services will also likely rise, and the costs of these services will likely increase, while the quality of these services may suffer. If the lack of availability or high cost of drilling rigs, equipment, supplies, oil field services or qualified personnel were particularly severe in any of our areas of operation, we could be materially and adversely affected. Delays could also have an adverse effect on our results of operations, including the timing of the initiation of production from new wells.

Our drilling operations may be curtailed, delayed or cancelled as a result of a variety of factors that are beyond our control.

Our drilling operations are subject to a number of risks, including:

- unexpected drilling conditions;
- facility or equipment failure or accidents;
- adverse weather conditions;
- title problems;
- unusual or unexpected geological formations;
- fires, blowouts and explosions; and
- uncontrollable pressures or flows of oil or gas or well fluids.

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Any of these events could adversely affect our ability to conduct operations or cause substantial losses, including personal injury or loss of life, damage to or destruction of property, natural resources and equipment, pollution or other environmental contamination, loss of wells, regulatory penalties, suspension of operations, and attorney's fees and other expenses incurred in the prosecution or defense of litigation.

We do not insure against all potential operating risks. We might incur substantial losses from, and be subject to substantial liability claims for, uninsured or underinsured risks related to our oil and gas operations.

We do not insure against all risks. Our oil and gas exploitation and production activities are subject to hazards and risks associated with drilling for, producing and transporting oil and gas, and any of these risks can cause substantial losses resulting from:

environmental hazards, such as uncontrollable flows of oil, gas, brine, well fluids, toxic gas or other pollution into the environment, including groundwater, shoreline contamination, underground migration and surface spills or mishandling of chemical additives;

abnormally pressured formations;

mechanical difficulties, such as stuck oil field drilling and service tools and casing collapse;

leaks of gas, oil, condensate, NGL and other hydrocarbons or losses of these hydrocarbons as a result of accidents during drilling and completion operations, or in the gathering and transportation of hydrocarbons, malfunctions of pipelines, measurement equipment or processing or other facilities in the Company's operations or at delivery points to third parties;

fires and explosions;

personal injuries and death;

regulatory investigations and penalties; and

natural disasters.

We might elect not to obtain insurance if we believe that the cost of available insurance is excessive relative to the risks presented. In addition, pollution and environmental risks generally are not fully insurable. Losses and liabilities arising from uninsured and underinsured events or in amounts in excess of existing insurance coverage could have a material adverse effect on our business, financial condition or results of operations.

Hydraulic fracturing, the process used for extracting oil and gas from shale and other formations, has recently come under increased scrutiny and could be the subject of further regulation that could impact the timing and cost of development.

Hydraulic fracturing is the primary completion method used to extract reserves located in many of the unconventional oil and gas plays. Hydraulic fracturing involves the injection of water, sand and chemicals under pressure, usually down tubing or casing that is cemented in the wellbore, into hydrocarbon-bearing formations at depth to stimulate oil and gas production. We use this completion technique on substantially all of our wells. Depending on the legislation that may ultimately be enacted or the regulations that may be adopted at the federal and state levels, exploration, exploitation and production activities that entail hydraulic fracturing could be subject to additional regulation and permitting requirements. Some states in which we operate, including Texas, have recently implemented disclosure

requirements related to chemicals used in hydraulic fracturing, and the U.S. Department of the Interior, Bureau of Land Management (“BLM”) has adopted final rules governing hydraulic fracturing on federal and tribal lands, including requiring chemical disclosure. The BLM's rules have been struck down by a federal court, but that ruling is now on appeal to the Tenth Circuit Court of Appeals. Individually or collectively, such existing and new legislation or regulation could lead to operational delays or increased operating costs and could result in additional burdens that could increase the costs and delay the development of unconventional oil and gas resources from formations which are not commercial without the use of hydraulic fracturing. This could have an adverse effect on our business, financial condition and results of operations.

Hydraulic fracturing is typically regulated by state oil and gas commissions; however, the EPA has asserted federal regulatory authority over hydraulic fracturing involving diesel fuels under the Underground Injection Control Program established under the Safe Drinking Water Act, or SDWA, and published permitting guidance and an interpretive memorandum addressing the performance of such activities. In August 2012, the EPA published final rules under the CAA, which became effective October 15, 2012, that, among other things, require producers to reduce volatile organic compound emissions from certain subcategories of fractured and refractured gas wells for which well completion operations are being conducted by routing flowback emissions



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to a gathering line or capturing and combusting flowback emissions using a combustion device, such as a flare, until January 1, 2015 or performing reduced emission completions, also known as “green completions,” with or without combustion devices, on or after January 1, 2015. In addition, the U.S. Congress, from time to time, has considered adopting legislation intended to provide for federal regulation of hydraulic fracturing and to require disclosure of the chemicals used in the hydraulic-fracturing process. Moreover, the BLM has adopted final rules that impose more stringent technical requirements and the disclosure of chemicals used in hydraulic fracturing operations on public and Native American lands. These rules are currently under judicial challenge. In the event that a new federal level of legal restrictions relating to the hydraulic fracturing process is adopted in areas where we currently or in the future plan to operate, we may incur additional costs to comply with such federal requirements that may be significant in nature, become subject to additional permitting requirements and experience added delays or curtailment in the pursuit of exploration, development or production activities.

Certain states in which we operate, including Texas, have adopted, and other states are considering adopting, regulations that could impose new or more stringent permitting, disclosures, and/or well-construction requirements on hydraulic-fracturing operations. For example, Texas adopted a law in June 2011 requiring disclosure to the Texas Railroad Commission and the public disclosure of certain information regarding the components used in the hydraulic-fracturing process. In addition to state laws, local land use restrictions, such as city ordinances, may restrict or prohibit drilling in general or hydraulic fracturing in particular. In some states, including Texas, water use may also be regulated and potentially curtailed by local groundwater management districts which could impact water available for hydraulic fracturing. We believe that we follow applicable standard industry practices and legal requirements for groundwater protection in our hydraulic fracturing activities. Nonetheless, in the event state or local restrictions are adopted in areas where we are currently conducting, or in the future plan to conduct operations, we may incur additional costs to comply with such requirements that may be significant in nature, experience delays or curtailment in the pursuit of exploration, development, or production activities, and perhaps be limited or precluded in the drilling of wells or in the amounts that we are ultimately able to produce from our reserves.

Certain governmental reviews were recently conducted or are underway that focus on environmental aspects of hydraulic fracturing practices. In December 2016 the EPA issued its final report “Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States” which assessed the potential impact of hydraulic fracturing on drinking water resources. The report acknowledged data gaps and uncertainties, removed the draft finding of no widespread systemic impacts from hydraulic fracturing, but concluded that the agency could not quantify the frequency or severity of such impacts on a national level, thereby leaving the door open to additional regulations to protect drinking water resources. Moreover, the EPA has adopted pre-treatment standards addressing the discharge of wastewater pollutants from hydraulic fracturing operations to publicly owned treatment works. The EPA is also conducting a study of private wastewater treatment facilities that accept oil and gas extraction wastewater. Other governmental agencies, including the U.S. Department of Energy and the U.S. Department of the Interior, are evaluating various other aspects of hydraulic fracturing. These studies, or future studies, depending on their degree of pursuit and any meaningful results obtained, could spur initiatives to further regulate hydraulic fracturing under the SDWA or other regulatory mechanisms. See “Item 1. Business – Environmental Matters – Hydraulic Fracturing” above for additional discussion related to environmental risks associated with our hydraulic fracturing activities.

Studies noting a connection between increased seismic activity and the injection of wastewater from oil and gas operations could result in new laws or regulations which would increase our cost of operations. Some studies have noted an increase in localized frequency of seismic activity associated with underground disposal of wastewater from oil and gas operations. If the results of these studies are confirmed, new legislative and regulatory initiatives could require additional monitoring, restrict the injection of produced water in certain disposal wells or modify or curtail hydraulic fracturing operations. These actions could lead to operational delays, increased compliance costs or otherwise adversely impact our operations.

We face various risks associated with the trend toward increased anti-development activity.

As new technologies have been applied to our industry, we have seen significant growth in oil and gas supply in recent years, particularly in the U.S. With this expansion of oil and gas development activity, opposition toward oil and gas drilling and development activity has been growing both in the U.S. and globally. Companies in the oil and gas industry, such as us, can be the target of opposition to development from certain stakeholder groups. These anti-development efforts could be focused on:

- limiting oil and gas development;

- reducing access to federal and state owned lands;

- delaying or canceling certain projects such as offshore drilling, shale development, and pipeline construction;

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- limiting or banning the use of hydraulic fracturing;
- denying air-quality permits for drilling; and
- advocating for increased regulations on shale drilling and hydraulic fracturing.

Future anti-development efforts could result in the following:

- blocked development;
- denial or delay of drilling permits;
- shortening of lease terms or reduction in lease size;
- restrictions on installation or operation of gathering or processing facilities;
- restrictions on the use of certain operating practices, such as hydraulic fracturing;
- reduced access to water supplies or restrictions on water disposal;
- limited access or damage to or destruction of our property;
- legal challenges or lawsuits;
- increased regulation of our business;
- damaging publicity and reputational harm;
- increased costs of doing business;
- reduction in demand for our products; and
- other adverse effects on our ability to develop our properties and expand production.

Our need to incur costs associated with responding to these initiatives or complying with any new legal or regulatory requirements resulting from these activities that are substantial and not adequately provided for, could have a material adverse effect on our business, financial condition and results of operations. In addition, the use of social media channels can be used to cause rapid, widespread reputational harm.

The marketability of our production depends largely upon the availability, proximity and capacity of oil and gas gathering systems, pipelines, storage and processing facilities.

The marketability of our production depends in part upon processing, storage and transportation facilities. Transportation space on such gathering systems and pipelines is occasionally limited and at times unavailable due to repairs or improvements being made to such facilities or due to such space being utilized by other companies with priority transportation agreements. Our access to transportation options can also be affected by federal and state, regulation of oil and gas production and transportation, general economic conditions and changes in supply and demand. These factors and the availability of markets are beyond our control. If our access to these transportation and storage options dramatically changes, the financial impact on us could be substantial and adversely

affect our ability to produce and market our oil and gas.

The adoption of derivatives legislation and regulations related to derivative contracts could have an adverse impact on our ability to hedge risks associated with our business.

Title VII of the Dodd-Frank Wall Street Reform and Consumer Protection Act, or the Dodd-Frank Act establishes federal oversight and regulation of over-the-counter, or OTC, derivatives and requires the Commodity Futures Trading Commission, or CFTC, and the SEC to enact further regulations affecting derivative contracts, including the derivative contracts we use to hedge our exposure to price volatility through the OTC market. Although the CFTC and the SEC have issued final regulations in certain areas, final rules in other areas and the scope of relevant definitions and/or exemptions still remain to be finalized. In one of its rulemaking proceedings still pending under the Dodd-Frank Act, on November 5, 2013 (as modified and re-proposed on December 30, 2016), the CFTC approved a proposed rule imposing position limits for certain futures and option contracts in various

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commodities (including gas) and for swaps that are their economic equivalents. Certain specified types of hedging transactions are proposed to be exempt from these position limits, provided that such hedging transactions satisfy the CFTC's requirements for "bona fide hedging" transactions or positions. Similarly, on December 16, 2016, the CFTC issued a proposed rule regarding the capital that a swap dealer, or major swap participant, is required to post with respect to its swap business, but has not yet issued a final rule. On January 6, 2016, the CFTC issued a final rule on margin requirements for uncleared swap transactions, which includes an exemption for commercial end-users, entering into uncleared swaps in order to hedge commercial risks affecting their business, from any requirement to post margin to secure such swap transactions. In addition, on July 19, 2012, the CFTC issued a final rule authorizing an exception for commercial end-users using swaps to hedge their commercial risks from the otherwise applicable mandatory obligation under the Dodd-Frank Act to clear all swap transactions through a registered derivatives clearing organization and to trade all such swaps on a registered exchange. The Dodd-Frank Act also imposes recordkeeping and reporting obligations on counterparties to swap transactions and other regulatory compliance obligations. All of the above regulations and requirements could increase the costs to us of entering into derivative contracts to hedge or mitigate our exposure to volatility in oil, gas and NGL prices and other commercial risks affecting our business.

While it is not possible at this time to predict when the CFTC will issue final rules applicable to position limits or capital requirements, depending on our ability to satisfy the CFTC's requirements for the various exemptions available for a commercial end-user using swaps to hedge or mitigate its commercial risks, these rules and regulations may require us to comply with position limits and with certain clearing and trade-execution requirements in connection with our derivative activities. In addition, The Dodd-Frank Act may require our current counterparties to post additional capital as a result of entering into uncleared derivative contracts with us, which could increase the cost to us of entering into such derivative contracts. When a final rule on capital requirements is issued, the Dodd-Frank Act may require our current swap counterparties to post additional capital as a result of entering into uncleared derivatives with us, which could increase our costs of future derivative transactions. The Dodd-Frank Act may also require our current counterparties to spin off some of their derivatives activities to separate entities, which may not be as creditworthy as the current counterparties, and may cause some entities to cease their current business as hedge providers. These changes could reduce the liquidity of the financial derivatives markets thereby reducing the ability of commercial end-users to have access to derivative contracts to hedge or mitigate their exposure to volatility in oil, gas and NGL prices. The Dodd-Frank Act and any new regulations could significantly increase the cost of derivative contracts (including through requirements to post collateral which could adversely affect our available capital for other commercial operations purposes), materially alter the terms of future swaps relative to the terms of our existing bilaterally negotiated derivative contracts, and reduce the availability of derivatives to protect us against commercial risks we encounter.

In addition, federal banking regulators have adopted new capital requirements for certain regulated financial institutions in connection with the Basel III Accord. The Federal Reserve Board also issued proposed regulations on September 30, 2016, proposing to impose higher risk-weighted capital requirements on financial institutions active in physical commodities, such as oil and gas. If and when these proposed regulations are fully implemented, financial institutions subject to these higher capital requirements may require that we provide cash or other collateral with respect to our obligations under the financial derivatives and other contracts we may enter into with such financial institutions in order to reduce the amount of capital such financial institutions may have to maintain. Alternatively, financial institutions subject to these capital requirements may price transactions so that we will have to pay a premium to enter into derivatives and other physical commodity transactions in an amount that will compensate the financial institutions for the additional capital costs relating to such derivatives and physical commodity transactions. Rules implementing the Basel III Accord and higher risk-weighted capital requirements could materially reduce our liquidity and increase the cost of derivative contracts and other physical commodity contracts (including through requirements to post collateral, which could adversely affect our available capital for other commercial operations purposes).

If we reduce our use of derivative contracts as a result of any of the foregoing regulations or requirements, our results of operations may become more volatile and cash flows less predictable, which could adversely affect our ability to plan for and fund capital expenditures. Finally, the legislation was intended, in part, to reduce the volatility of oil, gas, and NGL prices, which some legislators attributed to speculative trading in derivatives and commodity instruments related to oil, gas, and NGLs. Our revenues could therefore be adversely affected if a consequence of the legislation and regulations is to lower commodity prices. Any of these consequences could have a material adverse effect on our financial position, results of operations, or cash flows.

If we were to experience an ownership change, we could be limited in our ability to use net operating losses arising prior to the ownership change to offset future taxable income. In addition, our ability to use net operating loss carry forwards to reduce future tax payments may be limited if our taxable income does not reach sufficient levels.

As of December 31, 2016, we had a net operating loss ("NOL") carryforward for federal income tax purposes of \$230.5 million. If we were to experience an "ownership change," as determined under Section 382 of the Internal Revenue Code of 1986, as amended (the "Code"), our ability to offset taxable income arising after the ownership change with NOLs arising prior to the ownership change would be limited, possibly substantially. An ownership change would establish an annual limitation on the amount of our pre-change NOL we could utilize to offset our taxable income in any future taxable year to an amount generally

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equal to the value of our stock immediately prior to the ownership change multiplied by the long-term tax-exempt rate. In general, an ownership change will occur if there is a cumulative increase in our ownership of more than 50 percentage points by one or more "5% shareholders" (as defined in the Code) at any time during a rolling three-year period. In addition, under the Code, NOL can generally be carried forward to offset future taxable income for a period of 20 years. Our ability to use our NOL during this period will be dependent on our ability to generate taxable income, and the NOL could expire before we generate sufficient taxable income.

Cyber attacks targeting systems and infrastructure used by the oil and gas industry may adversely impact our operations.

Our business has become increasingly dependent on digital technologies to conduct certain exploration, development and production activities. We depend on digital technology to estimate quantities of oil and gas reserves, process and record financial and operating data, analyze seismic and drilling information, and communicate with our employees and third-party partners. Unauthorized access to our seismic data, reserves information or other proprietary information could lead to data corruption, communication interruption, or other operational disruptions in our exploration or production operations. In addition, computer technology controls nearly all of the oil and gas distribution systems in the United States and abroad, which are necessary to transport our production to market. A cyber attack directed at oil and gas distribution systems could damage critical distribution and storage assets or the environment, delay or prevent delivery of production to markets and make it difficult or impossible to accurately account for production and settle transactions.

While we have not experienced significant cyber attacks, we may suffer such attacks in the future. Further, as cyber attacks continue to evolve, we may be required to expend significant additional resources to continue to modify or enhance our protective measures or to investigate and remediate any vulnerability to cyber attacks.

We rely on independent experts and technical or operational service providers over whom we may have limited control.

We use independent contractors to provide us with certain technical assistance and services. We rely upon the owners and operators of rigs and drilling equipment, and upon providers of field services, to drill and develop our prospects to production. We also rely upon the services of other third parties to explore and/or analyze our prospects to determine a method in which the prospects may be developed in a cost-effective manner. Our limited control over the activities and business practices of these service providers, any inability on our part to maintain satisfactory commercial relationships with them or their failure to provide quality services could materially adversely affect our business, results of operations and financial condition.

We depend on our President, CEO and Chairman of the Board and the loss of his services could have an adverse effect on our operations.

We depend to a large extent on Robert L.G. Watson, our President and Chief Executive Officer, for our management and business and financial contacts. Mr. Watson may terminate his employment agreement with us at any time on 30 days' notice, but, if he terminates without good reason, he would not be entitled to the severance benefits provided under the terms of that agreement. Mr. Watson is not precluded from working for, with or on behalf of a competitor upon termination of his employment with us. If Mr. Watson were no longer able or willing to act as President, Chief Executive Officer and Chairman of the Board, the loss of his services could have an adverse effect on our operations.

## Risks Related to Our Industry

Market conditions for oil and gas, and particularly volatility of prices for oil and gas, could adversely affect our revenue, cash flows, profitability and growth.

Our revenue, cash flows, profitability and future rate of growth depend substantially upon prevailing prices for oil and gas. Prices also affect the amount of cash flow available for capital expenditures and our ability to borrow money or raise additional capital. Lower prices may also make it uneconomical for us to increase or even continue current production levels of oil and gas.

Prices for oil and gas are subject to large fluctuations in response to relatively minor changes in the supply and demand for oil and gas, market uncertainty and a variety of other factors beyond our control, including:

- changes in foreign and domestic supply and demand for oil and gas;
- political stability and economic conditions in oil producing countries, particularly in the Middle East;
- weather conditions;
- price and level of foreign imports;
- terrorist activity;



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- availability of pipeline and other secondary capacity;
- general economic conditions;
- domestic and foreign governmental regulation; and
- the price and availability of alternative fuel sources.

Estimates of proved reserves and future net revenue are inherently imprecise.

The process of estimating oil and gas reserves in accordance with SEC requirements is complex and involves decisions and assumptions in evaluating the available geological, geophysical, engineering and economic data. Accordingly, these estimates are imprecise. Actual future production, oil and gas prices, revenues, taxes, capital expenditures, operating expenses and quantities of recoverable oil and gas reserves most likely will vary from those estimated. Any significant variance could materially affect the estimated quantities and present value of our reserves. In addition, we may adjust estimates of proved reserves to reflect production history, results of exploration and development, prevailing oil and gas prices and other factors, many of which are beyond our control.

The estimates of our reserves as of December 31, 2016 are based upon various assumptions about future production levels, prices and costs that may not prove to be correct over time. In particular, estimates of oil and gas reserves, future net revenue from proved reserves and the PV-10 thereof for our oil and gas properties are based on the assumption that future oil and gas prices remain the same as the twelve month first-day-of-the-month average oil and gas prices for the year ended December 31, 2016. The average realized sales prices as of such date used for purposes of such estimates were \$1.41 per Mcf of gas and \$35.54 per Bbl of oil. The December 31, 2016 estimates also assume that we will make future capital expenditures of approximately \$267.8 million in the aggregate primarily from 2017 through 2021, which are necessary to develop and realize the value of proved reserves on our properties. We cannot assure you that we will have sufficient capital in the future to make these capital expenditures. In addition, approximately 66% of our total estimated proved reserves on a Boe basis (33% on a PV-10 basis) as of December 31, 2016 were classified as undeveloped. By their nature, estimates of undeveloped reserves are less certain than proved developed reserves. Any significant variance in actual results from these assumptions could also materially affect the estimated quantity and value of our reserves set forth or incorporated by reference in this report.

The present value of future net cash flows from our proved reserves is not necessarily the same as the current market value of our estimated reserves. Any material inaccuracies in our reserve estimates or underlying assumptions will materially affect the quantities and present value of our reserves, which could adversely affect our business, results of operations and financial condition.

As required by SEC regulations, we based the estimated discounted future net cash flows from our proved reserves as of December 31, 2016 on the twelve month first-day-of-the-month average oil and gas prices for the year ended December 31, 2016 and costs in effect on December 31, 2016, the date of the estimate. However, actual future net cash flows from our properties will be affected by factors such as:

- supply of and demand for our oil and gas;
- actual prices we receive for our oil and gas;
- our actual operating costs;
- the amount and timing of our capital expenditures;
- the amount and timing of our actual production; and

- changes in governmental regulations or taxation.

In addition, the 10% discount factor we use when calculating discounted future net cash flow, which is required by the SEC, may not be the most appropriate discount factor based on interest rates in effect from time to time and risks associated with us or the oil and gas industry in general. Any material inaccuracies in our reserve estimates or underlying assumptions will materially affect the quantities and present value of our reserves, which could adversely affect our business, results of operations and financial condition.

Our operations are subject to the numerous risks of oil and gas drilling and production activities.

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Our oil and gas drilling and production activities are subject to numerous risks, many of which are beyond our control. These risks include the risk of fire, explosions, blow-outs, pipe failure, abnormally pressured formations and environmental hazards. Environmental hazards include oil and salt water spills, gas leaks, ruptures, discharges of toxic gases, underground migration and surface spills or mishandling of any toxic fracture fluids, including chemical additives. In addition, title problems, weather conditions and mechanical difficulties or shortages or delays in delivery of drilling rigs and other equipment could negatively affect our operations. If any of these or other similar industry operating risks occur, we could have substantial losses. Substantial losses also may result from injury or loss of life, severe damage to or destruction of property, clean-up responsibilities, environmental damage, regulatory investigation and penalties and suspension of operations. In accordance with industry practice, we maintain insurance against some, but not all, of the risks described above. We cannot assure you that our insurance will be adequate to cover losses or liabilities. Also, we cannot predict the continued availability of insurance at premium levels that justify its purchase.

We operate in a highly competitive industry which may adversely affect our operations.

We operate in a highly competitive environment. The principal resources necessary for the exploration and production of oil and gas are leasehold prospects under which oil and gas reserves may be discovered, drilling rigs and related equipment to explore for such reserves and knowledgeable personnel to conduct all phases of operations. We must compete for such resources with both major oil and gas companies and independent operators. Many of these competitors have financial and other resources substantially greater than ours. Although we believe our current operating and financial resources are adequate to preclude any significant disruption of our operations, we cannot assure you that such resources will be available to us in the future.

Our oil and gas operations are subject to various U.S. federal, state and local regulations that materially affect our operations.

In the oil and gas industry, matters regulated include permits for drilling and completion operations, drilling and abandonment bonds, reports concerning operations, the spacing of wells and unitization and pooling of properties, the disposal of wastes and taxation. At various times, regulatory agencies have imposed price controls and limitations on production. In order to conserve supplies of oil and gas, these agencies have at times restricted the rates of flow from oil and gas wells below actual production capacity. U.S. federal, state and local laws regulate production, handling, storage, transportation and disposal of oil and gas by-products and other substances and materials produced or used in connection with oil and gas operations. To date, our expenditures related to complying with these laws and for remediation of existing environmental contamination have not been significant. We believe that we are in substantial compliance with all applicable laws and regulations. However, the requirements of such laws and regulations are frequently changed. We cannot predict the ultimate cost of compliance with these requirements or their effect on our operations.

Proposed federal legislation concerning tax deductions currently available with respect to oil and gas drilling may adversely affect our net earnings.

Congress has recently considered, is considering, and may continue to consider, legislation that, if adopted in its proposed or similar form, would deprive some companies involved in oil and gas exploration and production activities in certain U.S. federal income tax incentives and deductions currently available to such companies. These changes include, but are not limited to (i) the repeal of the percentage depletion allowance for oil and gas properties, (ii) the elimination of current deductions for intangible drilling and development costs, (iii) the elimination of the deduction for certain domestic production activities and (iv) an extension of the amortization period for certain geological and geophysical expenditures.

It is unclear whether these or similar changes will be enacted and, if enacted, how soon any such changes could become effective and whether such changes may apply retroactively. Although we are unable to predict whether any of these or other proposals will ultimately be enacted, the passage of any legislation as a result of these proposals or any other similar changes to U.S. federal income tax laws could eliminate or postpone certain tax deductions that are currently available to us, and any such change could negatively affect our financial condition and results of operations.

Possible regulation related to global warming and climate change could have an adverse effect on our operations and demand for oil and gas.

Studies over recent years have indicated that emissions of certain gases may be contributing to warming of the Earth's atmosphere. In response to these studies, governments have begun adopting domestic and international climate change regulations that requires reporting and reductions of the emission of greenhouse gases. Methane, a primary component of gas, and carbon dioxide, a by-product of the burning of oil, gas and refined petroleum products, are considered greenhouse gases. Internationally, the United Nations Framework Convention on Climate Change and the Kyoto Protocol address greenhouse gas emissions, and several countries including the European Union have established greenhouse gas regulatory systems. In December 2015, the U.S. participated in the 21st Conference of the Parties of the United Nations Framework Convention on Climate Change in Paris, France.

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The Paris Agreement (adopted at the conference) calls for nations to undertake efforts with respect to global temperatures and GHG emissions. If ratified, the Paris Agreement will take effect in 2020. It is possible that the Paris Agreement and subsequent domestic and international regulations will have adverse effects on the market for oil, gas and other fossil fuel products as well as adverse effects on the business and operations of companies engaged in the exploration for, and production of, oil, gas and other fossil fuel products. In the United States, at the state level, several states, either individually or through multi-state regional initiatives, have begun implementing legal measures to reduce emissions of greenhouse gases, primarily through the planned development of emission inventories or regional greenhouse gas cap and trade programs or have begun considering adopting greenhouse gas regulatory programs. At the federal legislative level, various climate change legislative measures have been considered by the U.S. Congress, but it is not possible at this time to predict when, or if, Congress will act on climate change legislation, although any major initiatives in this area are unlikely to become law in the near future due to opposition in Congress. We are unable to predict the timing, scope and effect of any currently proposed or future investigations, laws, regulations or treaties regarding climate change and GHG emissions, but the direct and indirect costs of such investigations, laws, regulations and treaties (if enacted) could materially and adversely affect our operations, financial condition and results of operations.

As a result of the U.S. Supreme Court decision in *Massachusetts, et al. v. EPA*, on December 7, 2009, the EPA issued a finding that serves as the foundation under the Clean Air Act to issue other rules that would result in federal greenhouse gas regulations and emissions limits under the Clean Air Act, even without Congressional action. As part of this array of new regulations, the EPA has issued a GHG monitoring and reporting rule that requires certain parties, including participants in the oil and gas industry, to monitor and report their GHG emissions, including methane and carbon dioxide, to the EPA. These regulations may apply to our operations. The EPA has adopted other rules that would regulate GHGs, one of which would regulate GHGs from stationary sources, and may affect sources in the oil and gas exploration and production industry and the pipeline industry. In May 2016, the EPA adopted rules to force the aggregation of wells and facilities for air emission permitting purposes, and also rules to reduce methane emissions from equipment and leaks from new oil and gas facilities. The EPA's finding, the greenhouse gas reporting rule, and the rules to regulate the emissions of greenhouse gases may affect the cost of our operations and also affect the outcome of other climate change lawsuits pending in United States federal courts in a manner unfavorable to our industry.

Any laws or regulations that may be adopted to restrict or reduce emissions of greenhouse gases could require us to incur increased operating and compliance costs, and could have an adverse effect on demand for the oil and gas that we produce and as a result, our financial condition and results of operations could be adversely affected.

EPA's new ground-level ozone standards may result in more stringent regulation of air emissions from, and adverse economic impacts on, our operations.

Effective December 2015, the EPA adopted a final rule under the Clean Air Act, lowering the National Ambient Air Quality Standard (NAAQS) for ground-level ozone from 75 parts per billion to 70 parts per billion under both the primary and secondary standards designed to provide protection of public health and welfare, respectively. Certain areas of the country in compliance with the ground-level ozone NAAQS standard may be reclassified as non-attainment and such reclassification may make it more difficult to construct new or modified sources of air pollution, including those associated with our operations, in newly designated non-attainment areas. Moreover, states are expected to implement more stringent regulations necessary to come into compliance with the new NAAQS, which could apply to our operations. Compliance with these final rules could, among other things, require installation of new emission controls on some of our equipment, result in longer permitting timelines, and significantly increase our capital expenditures and operating costs.

Proposed legislation and regulation under consideration regarding rail transportation could increase our operating costs, reduce our liquidity, delay our operations or otherwise alter the way we conduct our business.

We presently sell all of our oil production at the lease, either by truck or pipeline, where custody transfers to the purchaser, accordingly it is unknown to us how much of the oil production is ultimately shipped by rail. In response to recent train derailments occurring in the United States, U.S. regulators are implementing or considering new rules to address the safety risks of transporting oil by rail. On January 23, 2014, the NTSB issued a series of recommendations to address safety risks, including (i) requiring expanded hazardous material route planning for railroads to avoid populated and other sensitive areas, (ii) developing an audit program to ensure rail carriers that carry petroleum products have adequate response capabilities to address worst-case discharges of the entire quantity of product carried on a train, and (iii) auditing shippers and rail carriers to ensure they are properly classifying hazardous materials in transportation and that they have adequate safety and security plans in place. Additionally, on February 25, 2014 the DOT issued an emergency order requiring all persons, prior to offering oil into transportation, to ensure such product is properly tested and classed and to assure all shipments by rail of oil be handled as a Packing Group I or II hazardous material. The introduction of these or other regulations that result in new requirements addressing the type, design, specifications or construction of rail cars used to transport oil could result in severe transportation capacity constraints during the period in which new rail cars are retrofitted or constructed to meet new specifications.

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We do not currently own or operate rail transportation facilities or rail cars; however, the adoption of any regulations that impact the testing or rail transportation of oil could increase our costs of doing business and limit our ability to transport and sell our oil at favorable prices at market centers throughout the United States, the consequences of which could have a material adverse effect on our financial condition, results of operations and cash flows.

### Risks Related to Our Common Stock

Future issuance of additional shares of common stock could cause dilution of ownership interests and adversely affect our stock price.

We are currently authorized to issue 200,000,000 shares of common stock with such rights as determined by our board of directors. In the future, we may increase our authorized shares of common stock or issue previously authorized and unissued securities, resulting in the dilution of the ownership interests of current stockholders. The potential issuance of any such additional shares of common stock may create downward pressure on the trading price of our common stock. We may also issue additional shares of common stock or other securities that are convertible into or exercisable for common stock for capital raising or other business purposes. Future sales of substantial amounts of common stock, or the perception that sales could occur, could have a material adverse effect on the price of our common stock.

We will not pay dividends on our common stock for the foreseeable future.

We currently anticipate that we will retain all future earnings, if any, to finance the growth and development of our business. We do not intend to pay cash dividends in the foreseeable future. In addition, our credit facility prohibits us from paying dividends and making other cash distributions.

Shares eligible for future sale may depress our stock price.

At December 31, 2016, we had 135,094,017 shares of common stock outstanding (163,844,017 shares after the completion of the offering of 28.8 million shares of common stock in January 2017) of which 9,891,194 shares were held by affiliates and, in addition, 8,153,775 shares of common stock were subject to outstanding options granted under stock option plans (of which 4,808,263 shares were vested at December 31, 2016).

All of the shares of common stock held by affiliates are restricted or are control securities under Rule 144 promulgated under the Securities Act. The shares of common stock issuable upon exercise of stock options have been registered under the Securities Act. Sales of shares of common stock under Rule 144 or another exemption under the Securities Act or pursuant to a registration statement could have a material adverse effect on the price of our common stock and could impair our ability to raise additional capital through the sale of equity securities.

The price of our common stock has been volatile and could continue to fluctuate substantially.

Our common stock is traded on The NASDAQ Stock Market. The market price of our common stock has been volatile and could fluctuate substantially based on a variety of factors, including the following:

- fluctuations in commodity prices;
- variations in results of operations;
- legislative or regulatory changes;
- general trends in the oil and gas industry;
- sales of common stock or other actions by our stockholders;
- additions or departures of key management personnel;

- commencement of or involvement in litigation;
- speculation in the press or investment community regarding our business;
- an inability to maintain the listing of our common stock on a national securities exchange;
- market conditions; and
- analysts' estimates and other events in the oil and gas industry.

We may issue shares of preferred stock with greater rights than our common stock.



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Subject to the rules of The NASDAQ Stock Market, our articles of incorporation authorize our board of directors to issue one or more series of preferred stock and set the terms of the preferred stock without seeking any further approval from holders of our common stock. Any preferred stock that is issued may rank ahead of our common stock in terms of dividends, priority and liquidation premiums and may have greater voting rights than our common stock.

Anti-takeover provisions could make a third party acquisition of us difficult.

Our articles of incorporation and bylaws provide for a classified board of directors, with each member serving a three-year term, and eliminate the ability of stockholders to call special meetings or take action by written consent. Each of the provisions in our articles of incorporation and bylaws could make it more difficult for a third party to acquire us without the approval of our board. In addition, the Nevada corporate statute also contains certain provisions that could make an acquisition by a third party more difficult.

## Item 1B. Unresolved Staff Comments

None.

## Item 2. Properties

## Exploratory and Developmental Acreage

Our principal oil and gas properties consist of producing and non-producing oil and gas leases, including reserves of oil and gas in place. The following table sets forth our developed and undeveloped acreage and fee mineral acreage as of December 31, 2016.

	Developed Acreage		Undeveloped Acreage		Fee Mineral Acreage (1)		Total Net Acres (2)
	Gross Acres	Net Acres	Gross Acres	Net Acres	Gross Acres	Net Acres	
Rocky Mountain	30,978	16,767	20,407	11,361	3,078	346	28,474
Permian/Delaware Basin	15,945	13,392	10,432	8,010	12,008	5,272	26,673
South Texas	7,958	7,476	5,010	4,890	2,939	872	13,238
Total	54,881	37,635	35,849	24,261	18,025	6,490	68,385

(1) Fee mineral acreage represents fee simple absolute ownership of the mineral estate or fraction thereof.

(2) Includes 1,217 net acres in the Permian Basin region that are included in both developed and fee mineral acres.

The following table sets forth Abraxas' net undeveloped acreage subject to expire by year:

	2017	2018	2019	2020	2021
Rocky Mountain	—	647	3	426	—
Permian/Delaware Basin	9	—	—	—	704
South Texas	1,942	359	1,270	100	13

## Productive Wells

The following table sets forth our gross and net productive wells, expressed separately for oil and gas, as of December 31, 2016:

Productive Wells

Oil            Gas

Gross Net   Gross Net

Rocky Mountain        366.0 69.2   414.0 11.0

Permian/Delaware Basin 138.0 126.6 44.0   26.8

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South Texas	17.0	8.0	22.0	20.2
Total	521.0	203.8	480.0	58.0

## Reserves Information

The estimation and disclosure requirements we employ conform to the definition of proved reserves with the Modernization of Oil and Gas Reporting rules, which were issued by the SEC at the end of 2008. This accounting standard requires that the average first-day-of-the-month price during the 12-month period preceding the end of the year be used when estimating reserve quantities and permits the use of reliable technologies to determine proved reserves, if those technologies have been demonstrated to result in reliable conclusions about reserves volumes.

For the year ended December 31, 2016, DeGolyer and MacNaughton, of Dallas, Texas estimated reserves for Abraxas' properties comprising approximately 99% of the PV-10 of our proved oil and gas reserves. Proved reserves for the remaining 1% of our properties were estimated by Abraxas personnel because we determined that it was not practical for DeGolyer and MacNaughton to prepare reserve estimates for these properties as they are located in a widely dispersed geographic area and have relatively low value. DeGolyer and MacNaughton's reserve report as of December 31, 2016 included a total of 313 properties and our internal report included 326 properties.

The technical personnel responsible for preparing the reserve estimates at DeGolyer and MacNaughton meet the requirements regarding qualifications, independence, objectivity, and confidentiality set forth in the Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information promulgated by the Society of Petroleum Engineers. DeGolyer and MacNaughton is an independent firm of petroleum engineers, geologists, geophysicists, and petrophysicists. They do not own an interest in any of our properties and are not employed on a contingent fee basis. All reports by DeGolyer and MacNaughton were developed utilizing their own geological and engineering data, supplemented by data provided by Abraxas. The report of DeGolyer and MacNaughton dated February 13, 2017, which contains further discussions of the reserve estimates and evaluations prepared by DeGolyer and MacNaughton as well as the qualifications of DeGolyer and MacNaughton's technical personnel responsible for overseeing such estimates and evaluations is attached as Exhibit 99.1 to this report.

Estimates of reserves at December 31, 2016 were based on studies performed by the engineering department of Abraxas which is directly responsible for Abraxas' reserve evaluation process. The Vice President of Engineering manages this department and is the primary technical person responsible for this process. The Vice President of Engineering holds a Bachelor of Science degree in Petroleum Engineering and is a Registered Professional Engineer in the State of Texas; he has 38 years of experience in reserve evaluations. The operations department of Abraxas assisted in the process. Reserve information as well as models used to estimate such reserves are stored on secured databases. Non-technical inputs used in reserve estimation models, include oil and gas prices, production costs, future capital expenditures and Abraxas' net ownership percentages which are obtained from other departments within Abraxas.

Oil and gas reserves and the estimates of the present value of future net revenues therefrom were determined based on prices and costs as prescribed by SEC and FASB guidelines. Reserve calculations involve the estimate of future net recoverable reserves of oil and gas and the timing and amount of future net revenues to be received therefrom. Such estimates are not precise and are based on assumptions regarding a variety of factors, many of which are variable and uncertain. Proved oil and gas reserves are the estimated quantities of oil and gas that geological and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoirs under existing economic and operating conditions. Proved developed oil and gas reserves are those expected to be recovered through existing wells with existing equipment and operating methods. Proved reserves were estimated in accordance with guidelines established by the SEC and the FASB, which require that reserve estimates be prepared under existing economic and operating conditions with no provision for price and cost escalations or de-escalations except by

contractual arrangements. For the year ended December 31, 2016, commodity prices over the prior 12-month period and year end costs were used in estimating future net cash flows.

The following table sets forth certain information regarding estimates of our oil and gas reserves as of December 31, 2016. All of our reserves are located in the United States.

Summary of Oil, NGL and Gas Reserves

As of December 31, 2016

Reserve Category	Oil (MBbls)	NGL (MBbls)	Gas (MMcf)	Oil Equivalents (MBoe)
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Proved

Developed 7,818 2,568 27,792 15,018

Undeveloped 16,391 6,076 43,037 29,639

Total Proved 24,209 8,644 70,829 44,657

Our estimates of proved developed reserves, proved undeveloped reserves, and total proved reserves at December 31, 2014, 2015, and 2016, and changes in proved reserves during the last three years are presented in the Supplemental Oil and Gas Disclosures under Item 8 of this Report. Also presented in the Supplemental Information are our estimates of future net cash flows and discounted future net cash flows from proved reserves.

We have not filed information with a federal authority or agency with respect to our estimated total proved reserves at December 31, 2016. We report gross proved reserves of operated properties in the United States to the U.S. Department of Energy on an annual basis; these reported reserves are derived from the same data used to estimate and report proved reserves in this report.

The process of estimating oil and gas reserves is complex and involves decisions and assumptions in evaluating the available geological, geophysical, engineering and economic data. Accordingly, these estimates are imprecise. Actual future production, oil and gas prices, revenues, taxes, capital expenditures, operating expenses and quantities of recoverable oil and gas reserves most likely will vary from those estimated. Any significant variance could materially affect the estimated quantities and present value of our reserves set forth or incorporated by reference in this report. We may also adjust estimates of reserves to reflect production history, results of exploration and development, prevailing oil and gas prices and other factors, many of which are beyond our control. In particular, estimates of oil and gas reserves, future net revenue from reserves and the PV-10 thereof for the oil and gas properties described in this report are based on the assumption that future oil and gas prices remain the same as oil and gas prices utilized in the December 31, 2016 report. The average realized sales prices used for purposes of such estimates were \$35.54 per Bbl of oil and \$1.41 per Mcf of gas. It is also assumed that we will make future capital expenditures of approximately \$267.8 million in the aggregate primarily in the years 2017 through 2021, which are necessary to develop and realize the value of proved reserves on our properties. Any significant variance in actual results from these assumptions could also materially affect the estimated quantity and value of reserves set forth herein.

You should not assume that the present value of future net revenues referred to in this report is the current market value of our estimated oil and gas reserves. In accordance with SEC requirements, the estimated discounted future net cash flows from proved reserves are calculated using the average first-day-of-the-month price over the prior 12-month period. Costs used in the estimated discounted future net cash flows are costs as of the end of the period. Because we use the full cost method to account for our oil and gas operations, we are susceptible to significant non-cash charges during times of volatile commodity prices because the full cost pool may be impaired when prices are low. This is known as a “ceiling limitation write-down.” This charge does not impact cash flow from operating activities but does reduce our stockholders’ equity and reported earnings. We have experienced ceiling limitation write-downs in the past and we cannot assure you that we will not experience additional ceiling limitation write-downs in the future. As of December 31, 2016, the Company’s net capitalized costs of oil and gas properties did not exceed the present value of our estimated proved reserves, however, during the first three quarters of 2016, we incurred a proved property impairment of \$67.6 million. If commodity prices decrease further, we could be required to further write down the carrying value of our reserves during 2017 which would also reduce our net income.

For more information regarding the full cost method of accounting, you should read the information under “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Critical Accounting Policies.”

Actual future prices and costs may be materially higher or lower than the prices and costs used in the estimate. Any changes in consumption by gas purchasers or in governmental regulations or taxation will also affect actual future net cash flows. The timing of both the production and the expenses from the development and production of oil and gas properties will affect the timing of actual future net cash flows from proved reserves and their present value. In addition, the 10% discount factor, which is required by the SEC to be used in calculating discounted future net cash flows for reporting purposes, is not necessarily the most accurate discount factor. Our effective interest rate on borrowings at various times and the risks associated with us or the oil and gas industry in general will affect the accuracy of the 10% discount factor.

#### Proved Undeveloped Reserves

Changes in PUDs. Significant changes to PUDs occurring during 2016 are summarized in the table below. Revisions of prior estimates reflect the addition of new PUDs associated with current development plans, revisions to prior PUDs, revisions

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to infill drilling development plans, as well as the transfer of PUDs to unproved reserve categories due to changes in development plans during the year. Our year-end development plans are consistent with SEC guidelines for PUDs development within five years unless specific circumstances warrant a longer development time horizon. There are no PUDs as of December 31, 2014, 2015 and 2016, included in this report that are not planned to be developed within five years.

	MMBoe
PUDs at December 31, 2015	25,996
Revisions of prior estimates	2,855
Extensions, discoveries, and other additions	823
Conversion to developed	—
Sales	(35 )
PUDs at December 31, 2016	29,639

The following is a summary of the changes to the Company's proved undeveloped reserves that occurred during 2016. Revisions of prior estimates:

An increase of 5,005 MBoe of reserves was attributed to the Company's Bakken and Three Forks proved undeveloped locations in McKenzie County, ND, due to continuing improvement in the Company's producing well production results. Well results improved as a result of the application of optimized completion methods. A decrease of 329 MBoe of reserves was attributed to two Porcupine Field proved undeveloped locations in Campbell County, WY. This decrease was due to poorer-than-anticipated performance of the Hedgehog State 16-2H producing well which offsets the two proved undeveloped locations. There was also a reduction in this category of 1,821 MBoe of reserves attributable to shortened economic life calculations at the lower commodity pricing experienced during 2016.

Extensions, discoveries and other additions:

The Company added five new proved undeveloped Wolfcamp locations in Ward County, TX, accounting for 805 MBoe of net reserves. These locations are direct offsets to the Caprito 99 302H, a new Wolfcamp producer developed during 2016. The Company also added eight new proved undeveloped Bakken/Three Forks locations on non-operated units in McKenzie County, ND, accounting for 18 MBoe of net reserves. These locations were added in response to operator well proposals.

Conversion to developed:

The Company did not convert any proved undeveloped locations to proved developed reserves during 2016.

Sales:

The Company sold one proved undeveloped location in connection with the sale of its Portilla Field located in San Patricio County, TX. This location accounted for 35 MBoe of net reserves.

Reconciliation of Standardized Measure to PV-10

PV-10 is the estimated present value of the future net revenues from our proved oil and gas reserves before income taxes discounted using a 10% discount rate. PV-10 is considered a non-GAAP financial measure under SEC regulations because it does not include the effects of future income taxes, as is required in computing the standardized measure of discounted future net cash flows. We believe that PV-10 is an important measure that can be used to evaluate the relative significance of our oil and gas properties and that PV-10 is widely used by securities analysts and investors when evaluating oil and gas companies. Because many factors that are unique to each individual company impact the amount of future income taxes to be paid, the use of a pre-tax measure provides greater comparability of assets when evaluating companies. We believe that most other companies in the oil and gas industry calculate PV-10 on the same basis. PV-10 is computed on the same basis as the standardized measure of discounted future net cash

flows but without deducting income taxes.

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The following table provides a reconciliation of the standardized measure of discounted future net cash flows to PV-10 at December 31, 2015 and 2016:

	December 31, 2015      2016 (In thousands)	
Standardized measure of discounted future net cash flows	\$ 197,251	\$ 160,600
Present value of future income taxes discounted at 10%	—	—
PV-10	\$ 197,251	\$ 160,600

## Oil and Gas Production, Sales Prices and Production Costs

The following table presents our net oil, gas and NGL production, the average sales price per Bbl of oil and NGLs and per Mcf of gas produced and the average cost of production per Boe of production sold, for the three years ended December 31, by our major operating regions:

	2014	2015	2016
Oil production (Bbls)			
Rocky Mountain	816,323	1,000,425	1,102,852
Permian/Delaware Basin	86,614	76,391	85,966
South Texas	491,142	363,404	183,543
Total	1,394,079	1,440,220	1,372,361
Gas production (Mcf)			
Rocky Mountain	1,057,759	1,146,953	1,756,462
Permian/Delaware Basin	1,003,018	973,840	742,280
South Texas	856,928	894,039	660,978
Total	2,917,705	3,014,832	3,159,720
NGL production (Bbls)			
Rocky Mountain	95,384	132,846	300,669
Permian/Delaware Basin	79,321	54,877	52,294
South Texas	32,592	50,392	10,376
Total	207,297	238,115	363,339
Total production (MBoe) (1)	2,088	2,181	2,262
Average sales price per Bbl of oil (2)			
Rocky Mountain	\$ 78.59	\$ 39.23	\$ 36.31
Permian/Delaware Basin	\$ 84.38	\$ 44.69	\$ 41.30
South Texas	\$ 88.44	\$ 45.71	\$ 40.13
Composite	\$ 82.42	\$ 41.15	\$ 37.14
Average sales price per Mcf of gas (2)			
Rocky Mountain	\$ 4.41	\$ 1.46	\$ 0.61
Permian/Delaware Basin	\$ 4.29	\$ 2.24	\$ 2.25
South Texas	\$ 3.73	\$ 2.24	\$ 1.87
Composite	\$ 4.17	\$ 1.94	\$ 1.26
Average sales price per Bbl of NGL			
Rocky Mountain	\$ 36.41	\$ 5.49	\$ 2.64
Permian/Delaware Basin	\$ 31.10	\$ 13.03	\$ 12.70
South Texas	\$ 21.41	\$ 8.60	\$ 8.94

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Composite	\$ 32.02	\$ 7.89	\$ 4.27
Average sales price per Boe (2)	\$ 64.04	\$ 30.72	\$ 24.97
Average cost of production per Boe produced (3)			

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Rocky Mountain	\$7.36	\$6.43	\$3.68
Permian/Delaware Basin	\$15.15	\$15.76	\$13.97
South Texas	\$9.30	\$12.71	\$16.54
Composite	\$9.22	\$9.31	\$6.60

- (1) Oil and gas were combined by converting gas to Boe on the basis of 6 Mcf of gas to 1 Bbl of oil.  
(2) Before the impact of hedging activities.  
(3) Production costs include controllable direct lease operating costs but exclude ad valorem taxes, production taxes and non-recurring lease operating costs.

Within the above major operating regions, the Rocky Mountain and the Permian/Delaware regions represented more than 15% of our proved reserves as of December 31, 2016. The following is a summary, by product sold, for each primary field in these regions, which represented 15% or more of our total proved reserves as of December 31, 2016, for the three years ended December 31:

	2014	2015	2016
<b>Rocky Mountain Region</b>			
Oil production (Bbls)			
Bakken/Three Forks	660,447	862,458	997,641
Gas production (Mcf)			
Bakken/Three Forks	570,792	687,200	1,437,965
NGL production (Bbls)			
Bakken/Three Forks	77,120	116,392	286,232
Average sales price per Bbl of oil (1)			
Bakken/Three Forks	\$78.01	\$39.15	\$36.38
Average sales price per Mcf of gas (1)			
Bakken/Three Forks	\$4.60	\$1.07	\$0.40
Average sales price per Bbl of NGL			
Bakken/Three Forks	\$34.86	\$3.78	\$2.00
Average cost of production per Boe produced (2)			
Bakken/Three Forks	\$6.88	\$4.05	\$2.40
<b>Permian/Delaware Region</b>			
Oil production (Bbls)			
Montoya	552	601	1,121
Gas production (Mcf)			
Montoya	376,857	317,077	237,892
NGL production (Bbls)			
Montoya	11,180	8,852	7,748
Average sales price per Bbl of oil (1)			
Montoya	\$80.96	\$42.95	\$38.57
Average sales price per Mcf of gas (1)			
Montoya	\$4.32	\$2.47	\$2.41
Average sales price per Bbl of NGL			
Montoya	\$33.29	\$13.66	\$12.99
Average cost of production per Boe produced (2)			
Montoya	\$1.61	\$2.60	\$2.75

- (1) Before the impact of hedging activities.
- (2) Production costs include direct lease operating costs but exclude ad valorem taxes and production taxes.

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## Drilling Activities

The following table sets forth our gross and net interests in exploratory and development wells drilled during the three years ended December 31:

	2014		2015		2016	
	Gross	Net	Gross	Net	Gross	Net
Exploratory						
Productive						
Rocky Mountain	—	—	—	—	—	—
Permian/Delaware Basin	—	—	—	—	1.0	1.0
South Texas	—	—	—	—	1.0	1.0
Total	—	—	—	—	2.0	2.0
Dry wells						
Permian/Delaware Basin	—	—	—	—	—	—
Total	—	—	—	—	—	—
Development						
Productive						
Rocky Mountain	10.0	6.4	21.0	6.8	6.0	4.7
Permian/Delaware Basin	—	—	—	—	—	—
South Texas	10.0	10.0	4.0	4.0	—	—
Total	20.0	16.4	25.0	10.8	6.0	4.7

In addition to the above drilling activity, as of December 31, 2016 we had 4.0 gross (3.0) operated wells and 6.0 gross (0.38 net) non-operated well that were drilled and uncompleted that are not represented in the above table.

## Present Activities

## Permian/Delaware Basin

In Ward County, Texas, we are currently drilling a two well pad in the Caprito 98-201H and Caprito 98-301HR. The Caprito 98-301HR will target the Wolfcamp A2 zone and replaces the Caprito 98-301H, which was abandoned due to a surface issue. The Caprito 98-201H will target an additional prospective zone in the Wolfcamp A1. Abraxas owns a working interest of approximately 88% in the Caprito 98-201H and 98-301HR, respectively.

Following the drilling of the Caprito 98-201H and 301HR we will drill a second two well pad targeting the Wolfcamp A2 and the Wolfcamp B. Following these two completions, Abraxas will drill a third two well pad targeting the Wolfcamp A1 and Third Bone Spring. Following the results of these wells we believe that we will have potentially derisked four prospective horizons allowing for an efficient development of our Caprito acreage in the Delaware Basin assets.

## Williston Basin

At our North Fork prospect, in McKenzie County, North Dakota, we have drilled the lateral sections of the Stenehjem 6H, 8H and 9H. We are currently drilling the lateral section of the Stenehjem 7H. Our working interest in the Stenehjem 6H-9H is approximately 75%.

Following the completion of these wells, we plan to mobilize the rig to our Yellowstone unit to spud a three well pad. We anticipate having a 52% working interest in these wells.

Eagle Ford/Austin Chalk

In Atascosa County, Texas, we plan to combine our Shut Eye and Red Eye units. The new combined unit will be the Shut Eye unit where we plan to drill the Shut Eye 1H targeting the Eagle Ford with a 100% working interest. We are currently sourcing a rig to drill this well.

Office Facilities

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Our executive and administrative offices are located at 18803 Meisner Drive, San Antonio, Texas 78258, and consist of approximately 21,000 square feet. We own the building which is subject to a real estate lien note. The note bears interest at a fixed rate of 4.25%, and is payable in monthly installments of principal and interest of \$34,354. Beginning August 20, 2018, the interest rate will adjust to the current bank prime rate plus 1.00% with a maximum rate of 7.25%. The note matures in July 2023. The note is secured by a first lien deed of trust on the property and improvements. As of December 31, 2016, \$3.9 million was outstanding on the note. We lease office space in Dickinson, North Dakota for a monthly rental of \$2,320 through October 2018. The lease expires on October 31, 2018. We lease office space in Lusk, Wyoming for a monthly rental of \$750. The lease expires on December 31, 2017. We also lease office space in Denver, Colorado for a monthly rental of \$1,107. The lease expires on December 31, 2017.

Other Properties

We own an office building, workshop, warehouse and house in San Patricio County, Texas, 613 acres of land and an office building in Scurry County, Texas, 50 acres of land in DeWitt County, Texas, 582 acres of land in McKenzie County, North Dakota and 12,178 acres of land in Pecos County, Texas.

We own 23 vehicles which are used in the field by employees. We own two workover rigs, which are used for servicing our wells. Raven Drilling owns a 2000 HP drilling rig, primarily to be used for drilling wells in the Williston Basin. We own three houses in North Dakota and a man-camp in North Dakota to house rig crews.

Item 3. Legal Proceedings

From time to time, we are involved in litigation relating to claims arising out of our operations in the normal course of business. At December 31, 2016, we were not engaged in any legal proceedings that are expected, individually or in the aggregate, to have a material adverse effect on our financial condition.

Item 4. Mine Safety Disclosures

Not applicable.

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## Part II

## Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

## Market Information

Our common stock is traded on The NASDAQ Stock Market under the symbol "AXAS." The following table sets forth certain information as to the high and low sales price quoted for our common stock.

Period	High	Low
2015		
First Quarter	\$3.56	\$2.60
Second Quarter	3.98	2.82
Third Quarter	2.95	1.20
Fourth Quarter	1.95	0.84
2016		
First Quarter	\$1.31	\$0.65
Second Quarter	1.58	0.89
Third Quarter	1.73	1.07
Fourth Quarter	2.70	1.52
2017		
16First Quarter (Through March 10, 2017)	\$2.99	\$1.67

## Holders

As of March 10, 2017, we had 163,844,255 shares of common stock outstanding and approximately 990 stockholders of record.

## Dividends

We have not paid any cash dividends on our common stock and it is not presently determinable when, if ever, we will pay cash dividends in the future. In addition, our credit facility prohibits the payment of cash dividends on our common stock.

## Performance Graph

Set forth below is a performance graph comparing yearly cumulative total stockholder return on our common stock with (a) the monthly index of stocks included in the Standard and Poor's 500 Index and (b) a market capitalization weighted index of comparable companies based on 1) companies of similar size, 2) other similar companies in the oil and gas exploration industry, and 3) similar operations in comparable geographies compiled in 2015 by Longnecker & Associates ("L&A"). L&A then analyzed each company based on:

- Market capitalization;
- Revenue;
- Assets;
- Enterprise value; and
- Operational similarities.



Using these criteria, the following is a list of comparable companies utilized in the graph below: Approach Resources, Inc. (AREX), Callon Petroleum Company (CPE), Comstock Resources, Inc. (CRK), Contango Oil & Gas Company (MCF), Earthstone Energy Inc. (ESTE), Evolution Petroleum Corp. (EPM), Gastar Exploration Inc. (GST), Northern Oil and Gas, Inc (NOG) and Ring Energy Inc.(REI). The following companies which were utilized in the 2015 graph were eliminated in the 2016 graph as a result of bankruptcy filings or other corporate events or transactions during the year: Clayton Williams Energy, Inc. (CWEI), Emerald Oil, Inc. (EOX), Magnum Hunter Resources Corporation (MHR), Penn Virginia Corporation (PVA), Swift Energy Co. (SFY), Triangle Petroleum Corporation (TPLM) and Warren Resources, Inc. (WRES). We added Earthstone Energy, Inc. and Ring Energy, Inc. utilizing the same criteria as L&A in 2016

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All of these cumulative total returns are computed assuming the value of the investment in our common stock and each index as \$100.00 on December 31, 2011, and the reinvestment of dividends at the frequency with which dividends were paid during the applicable years. The years compared are 2012, 2013, 2014, 2015 and 2016.

	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016
Small Cap Index	\$100.00	\$83.02	\$104.73	\$60.43	\$43.59	\$70.21
S&P 500	\$100.00	\$113.41	\$146.98	\$163.72	\$162.53	\$178.02
AXAS	\$100.00	\$66.36	\$98.82	\$89.09	\$32.12	\$77.88
2015 Peer Group	\$100.00	\$64.66	\$90.18	\$44.41	\$20.86	\$41.02

The information contained above under the caption “Performance Graph” is being “furnished” to the SEC and shall not be deemed to be “soliciting material” or to be “filed” with the SEC, nor shall such information be incorporated by reference into any future filing under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, except to the extent that we specifically incorporate it by reference into such filing.

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## Item 6. Selected Financial Data

The following selected financial data is derived from our Consolidated Financial Statements as of and for the years ended December 31, 2012 through 2016. The data should be read in conjunction with our Consolidated Financial Statements and Notes thereto and other financial information included herein. See “Financial Statements and Supplementary Data” in Item 8.

	Year Ended December 31,				
	2012	2013	2014	2015	2016
	(In thousands, except per share data)				
Total revenue - continuing operations	\$65,664	\$92,324	\$133,776	\$67,030	\$56,555
Net (loss) income	\$(18,791 )	\$38,647	\$63,269	\$(127,110)	\$(96,378 )
Net income (loss) from continuing operations	\$3,106	\$46,841	(2)\$61,951	\$(127,090)(5)	\$(96,378 )(6)
Net (loss) income from discontinued operations - net of tax	\$(21,897 )(1)	\$(8,194 )(3)	\$1,318	(4)\$ (20 )	\$—
Net income (loss) per common share – diluted - continuing operations	\$0.04	\$0.50	\$0.61	\$(1.21 )	\$(0.79 )
Weighted average shares outstanding – diluted	91,914	93,538	101,468	104,605	122,132
Total assets	\$240,607	\$223,650	\$374,899	\$267,872	\$161,648
Long-term debt, excluding current maturities	\$124,101	\$41,790	\$76,554	\$138,402	\$96,616
Total stockholders' equity	\$46,700	\$86,906	\$207,495	\$84,465	\$18,505

(1)Includes proved property impairment of \$19.8 million related to discontinued operations.

(2)Includes a gain on the sale of properties of \$33.4 million.

(3)Includes proved property impairment of \$6.0 million related to discontinued operations.

(4)Includes a gain of \$1.9 million on the sale of our Canadian subsidiary.

(5)Includes proved property impairment of \$128.6 million.

(6)Includes proved property impairment of \$67.6 million.

## Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following is a discussion of our consolidated financial condition, results of operations, liquidity and capital resources. This discussion excludes the results of our Canadian subsidiary which was sold on October 31, 2014. The results of these foreign operations are included as discontinued operations in the accompanying Consolidated Financial Statements and Notes thereto.

This discussion should be read in conjunction with our Consolidated Financial Statements and the Notes thereto. See “Financial Statements and Supplementary Data” in Item 8.

## General

We are an independent energy company primarily engaged in the acquisition, exploration, exploitation, development and production of oil and gas in the United States. Historically, we have grown through the acquisition and subsequent development and exploitation of producing properties, principally through the redevelopment of old fields utilizing new technologies such as modern log analysis and reservoir modeling techniques as well as 3-D seismic surveys and horizontal drilling. As a result of these activities, we believe that we have a number of development opportunities on our properties. In addition, we intend to expand upon our development activities with complementary acreage

acquisitions in our core areas of operation. Success in our development and exploration activities is critical in the maintenance and growth of our current production levels and associated reserves.

While we have attained positive net income in two of the last five years, there can be no assurance that operating income and net earnings will be achieved in future periods. Our financial results depend upon many factors which significantly affect our results of operations including the following:

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- commodity prices and the effectiveness of our hedging arrangements;
- the level of total sales volumes of oil and gas;
- the availability of and our ability to raise additional capital resources and provide liquidity to meet cash flow needs;
- the level of and interest rates on borrowings; and
- the level and success of exploration and development activity.

Commodity Prices and Hedging Arrangements. The results of our operations are highly dependent upon the prices received for our oil and gas production. The prices we receive for our production are dependent upon spot market prices, differentials and the effectiveness of our derivative contracts, which we sometimes refer to as hedging arrangements. Substantially all of our sales of oil and gas are made in the spot market, or pursuant to contracts based on spot market prices, and not pursuant to long-term, fixed-price contracts. Accordingly, the prices received for our oil and gas production are dependent upon numerous factors beyond our control. Significant declines in prices for oil and gas could have a material adverse effect on our financial condition, results of operations, cash flows and quantities of reserves recoverable on an economic basis.

Oil and gas prices have been volatile, and this volatility is expected to continue. As a result of the many uncertainties associated with the world political environment, worldwide supplies of oil, NGL and gas, the availability of other worldwide energy supplies and the relative competitive relationships of the various energy sources in the view of consumers, we are unable to predict what changes may occur in oil, NGL, and gas prices in the future. The market price of oil and condensate, NGL and gas in 2017 will impact the amount of cash generated from operating activities, which will in turn impact our financial position. As of March 10, 2017, the NYMEX oil and gas price was \$48.49 per Bbl of oil and \$3.00 per Mcf of gas, respectively, representing increases of 12% and 18%, respectively, from the average NYMEX prices in 2016.

During 2016, the NYMEX future price for oil averaged \$43.47 per barrel as compared to \$48.76 per barrel in 2015. During 2016 the NYMEX future spot price for gas averaged \$2.55 per MMBtu compared to \$2.63 per MMBtu in 2015. Prices closed on December 31, 2016 at \$53.72 per Bbl of oil and \$3.72 per MMBtu of gas. If commodity prices decline from these levels, our revenue and cash flow from operations will also likely decline. In addition, lower commodity prices could also reduce the amount of oil and gas that we can produce economically. If oil and gas prices remain depressed or continue to decline, our revenues, profitability and cash flow from operations will also likely decrease which could cause us to alter our business plans, including reducing our drilling activities. Such declines could also require us to write down the carrying value of our oil and gas assets which would also cause a reduction in net income. Finally, low commodity prices will likely cause a reduction of the borrowing base under our credit facility. The borrowing base under our credit facility is scheduled to be redetermined on April 1, 2017.

The realized prices that we receive for our production differ from NYMEX futures and spot market prices, principally due to:

- basis differentials which are dependent on actual delivery location;
- adjustments for BTU content;
- quality of the hydrocarbons; and
- gathering, processing and transportation costs.

The following table sets forth our average differentials for the years ended December 31, 2014, 2015 and 2016:

	Oil			Gas		
	2014	2015	2016	2014	2015	2016
Average realized price (1)	\$82.42	\$41.15	\$37.14	\$4.17	\$1.94	\$1.26
Average NYMEX price	\$92.91	\$48.76	\$43.47	\$4.26	\$2.63	\$2.55
Differential	\$(10.49)	\$(7.61)	\$(6.33)	\$(0.09)	\$(0.69)	\$(1.29)

(1) Average realized prices are before the impact of hedging activities.

The Company's derivative contracts as of December 31, 2016 consisted of NYMEX-based fixed price swaps, basis differential swaps and costless collars. Under fixed price swaps, we receive a fixed price for our production and pay a variable market price to the contract counter-party. Under a costless collar contract, we pay the counterparty if the market price is above the ceiling price (short call) and the counterparty pays us if the market price is below the floor price (long put).

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Our hedging arrangements equate to approximately 70% of the oil production of our estimated net proved developed producing reserves (as of December 31, 2016) through December 31, 2017, 77% for 2018 and 64% for 2019. As of December 31, 2016, we also had NYMEX-based costless collar commodity arrangements on approximately 56% of our estimated net proved developed producing gas reserves (as of December 31, 2016) through December 31, 2017 and a 500 Bopd Midland - Cushing oil price differential swap at (\$0.65)/Bbl. By removing a portion of price volatility on our future oil and gas production, we believe we will mitigate, but not eliminate, the potential effects of changing commodity prices on our cash flow from operations for those periods. However, when prevailing market prices are higher than our contract prices, we will not realize increased cash flow on the portion of the production that has been hedged. We have in the past and will in the future sustain realized and unrealized losses on our derivative contracts if market prices are higher than our contract prices. Conversely, when prevailing market prices are lower than our contract prices, we will sustain realized and unrealized gains on our commodity derivative contracts. In 2014, we incurred a net gain of \$25.2 million, consisting of a gain of \$0.3 million related to closed contracts and a gain of \$24.9 million related to open contracts. In 2015, we incurred a gain of \$19.3 million, consisting of a gain of \$9.5 million on closed contracts and a gain of \$9.8 million related to open contracts. In 2016, we incurred a loss of \$18.0 million, consisting of a gain of \$1.8 million on closed contracts and a loss of \$19.8 million related to open contracts. We have not designated any of these derivative contracts as a hedge as prescribed by applicable accounting rules.

The following table sets forth our derivative contracts at December 31, 2016:

## Fixed Price Swaps:

Contract Periods	Oil - WTI	
	Daily Volume (Bbl)	Swap Price (per Bbl)
Fixed Swaps		
2017	2,401	\$54.53
2018	1,796	\$47.48
2019	1,200	\$54.54

## Basis Swap

2017	500	\$0.65
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## Collar contracts:

	Daily Volume (Bbl)	Floor (Long Put)	Ceiling (Short Call)
2017	5,000	\$ 3.00	\$ 3.90

At December 31, 2016, the aggregate fair market value of our commodity derivative contracts was a liability of approximately \$9.0 million.

**Production Volumes.** Our proved reserves will decline as oil and gas is produced, unless we find, acquire or develop additional properties containing proved reserves or conduct successful exploration and development activities. Based on the reserve information set forth in our reserve report as of December 31, 2016, our average annual estimated decline rate for our net proved developed producing reserves is 40%; 15%; 12%; 11% and 9% in 2018, 2019, 2020, 2021 and 2022, respectively, 9% in the following five years, and approximately 9% thereafter. These rates of decline are estimates and actual production declines could be materially higher. While we have had some success in finding, acquiring and developing additional reserves, we have not always been able to fully replace the production

volumes lost from natural field declines and property sales. Our ability to acquire or find additional reserves in the future will be dependent, in part, upon the amount of available funds for acquisition, exploration and development projects.

We had capital expenditures during 2016 of \$31.7 million related to our exploration and development activities. We have a capital expenditure budget for 2017 of approximately \$110.0 million. Approximately \$52.5 million of the 2017 budget will be allocated to developing our Permian and Delaware Basin assets including approximately \$15.0 million dedicated to expanding our acreage position in the Delaware Basin. The 2017 budget also allocates approximately \$42.2 million for drilling and completion of wells in our Bakken/Three Forks play in North Dakota, with the remaining amount allocated to the Austin Chalk/Eagle Ford area in South Texas as well as lease acquisition and general corporate expenses. The 2017 capital expenditure budget is subject



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to change depending upon a number of factors, including the availability and costs of drilling and service equipment and crews, economic and industry conditions at the time of drilling, prevailing and anticipated prices for oil and gas, the availability of sufficient capital resources including under our credit facility, the results of our exploitation efforts, our financial results and our ability to obtain permits for drilling locations.

The following table presents historical net production volumes for the years ended December 31, 2014, 2015 and 2016:

	Year Ended December		
	31,		
	2014	2015	2016
Total production (MBoe)	2,088	2,181	2,262
Average daily production (Boepd)	5,720	5,975	6,181
% Oil	67 %	66 %	61 %

**Availability of Capital.** As described more fully under “Liquidity and Capital Resources” below, our sources of capital are cash flow from operating activities, borrowings under our credit facility, cash on hand, proceeds from the sale of properties, monetizing of derivative instruments, and if an appropriate opportunity presents itself, the sale of debt or equity securities, although we may not be able to complete any financing on terms acceptable to us, if at all. As of December 31, 2016, we had approximately \$22.0 million of availability under our credit facility. As of March 10, 2017, we had approximately \$97.0 million available under our credit facility. The availability under our credit facility is subject to a borrowing base determined by our lenders. This borrowing base is subject to semi-annual redeterminations. The next redetermination becomes effective on April 1, 2017.

**Borrowings and Interest.** At December 31, 2016, we had a total of \$93.0 million outstanding under our credit facility and total indebtedness of \$97.4 million (including the current portion). As of March 10, 2017, we had a total of \$18.0 million outstanding under our credit facility and total indebtedness of \$21.8 million (including the current portion). If interest expense increases as a result of higher interest rates or increased borrowings, more cash flow from operations would be used to meet debt service requirements. As a result, we would need to increase our cash flow from operations in order to fund the development of our drilling opportunities which, in turn, will be dependent upon the level of our production volumes and commodity prices.

**Exploration and Development Activity.** We believe that our high quality asset base, high degree of operational control and inventory of drilling projects position us for future growth. At December 31, 2016, we operated properties accounting for approximately 95% of our PV-10, giving us substantial control over the timing and incurrence of operating and capital expenditures. We have identified numerous additional drilling locations on our existing leaseholds, the successful development of which we believe could significantly increase our production and proved reserves. Over the five years ended December 31, 2016, we drilled or participated in 124 gross (46.2 net) wells of which 97% were commercially productive.

Our future oil and gas production, and therefore our success, is highly dependent upon our ability to find, acquire and develop additional reserves that are profitable to produce. The rate of production from our oil and gas properties and our proved reserves will decline as our reserves are produced unless we acquire additional properties containing proved reserves, conduct successful development and exploration activities or, through engineering studies, identify additional behind-pipe zones or secondary recovery reserves. We cannot assure you that our exploration and development activities will result in increases in our proved reserves. If our proved reserves decline in the future, our production may also decline and, consequently, our cash flow from operations and the amount that we are able to borrow under our credit facility may also decline. In addition, approximately 66% of our estimated proved reserves on a BOE basis (33% on a PV-10 basis) at December 31, 2016 were undeveloped. By their nature, estimates of undeveloped reserves are less certain. Recovery of such reserves will require significant capital expenditures and

successful drilling operations. We may be unable to acquire or develop additional reserves, in which case our results of operations and financial condition could be adversely affected.

#### 2017 Outlook

Market prices for oil, gas and NGL are inherently volatile. Accordingly, we cannot predict with certainty the future prices for the commodities we produce and sell. Current market fundamentals indicate prices for oil, gas and NGL will be higher than experienced during much of 2016, although remaining much lower than prices prior to mid 2014. Lower prices for oil and gas have had and will likely continue to have a material adverse effect on our results of operations and liquidity.

Our primary sources of liquidity are cash flow from operations and borrowings under our credit facility. Cash flow from operations is sensitive to many variables, the most volatile of which is the price of the oil, gas and NGL we produce and sell. Lower prices and/or lower production will cause our cash flow from operations to decrease. Availability under our credit facility is currently subject to a borrowing base of \$115.0 million. The borrowing base is subject to scheduled semiannual (April 1 and

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October 1) and other elective borrowing base redeterminations. The amount of the borrowing base is calculated by the lenders based upon their valuation of our proved reserves securing the facility utilizing these reserve reports and their own internal decisions. The lenders under our credit facility can unilaterally adjust the borrowing base and the borrowings permitted to be outstanding under our credit facility. As a result of the decline in commodity prices for oil, gas and NGL, our borrowing base was reduced in 2016. If prices were to decline again in 2017, we would likely experience a further decrease in the borrowing base.

In 2015, as a result of the sharp decline in commodity prices, we incurred an impairment to our proved properties of \$128.6 million. We incurred additional impairments of our oil and gas properties of \$67.6 million during 2016. If commodity prices decrease in the future, we would likely incur additional impairments.

## Results of Operations

Selected Operating Data. The following table sets forth operating data from continuing operations for the periods presented.

	Year Ended December 31,		
	(In thousands, except per unit data)		
	2014	2015	2016
Operating revenue (1):			
Oil sales	\$114,898	\$59,270	\$50,965
Gas sales	12,166	5,854	3,978
NGL sales	6,637	1,878	1,550
Total operating revenues	\$133,701	\$67,002	\$56,493
Operating income (loss)	\$39,922	\$(141,805)	\$(73,387)
Oil sales (MBbls)	1,394	1,440	1,372
Gas sales (MMcf)	2,918	3,015	3,160
NGL sales (MBbls)	207	238	363
Oil equivalents (MBoe)	2,088	2,181	2,262
Average oil sales price (per Bbl)(1)	\$82.42	\$41.15	\$37.14
Average gas sales price (per Mcf)(1)	\$4.17	\$1.94	\$1.26
Average NGL sales price (per Bbl)	\$32.02	\$7.89	\$4.27
Average oil equivalent sales price (per Boe)	\$64.04	\$30.72	\$24.97

(1) Revenue and average sales prices are before the impact of hedging activities.

## Comparison of Year Ended December 31, 2016 to Year Ended December 31, 2015

Operating Revenue. During the year ended December 31, 2016, operating revenue decreased to \$56.5 million from \$67.0 million in 2015. The decrease in revenue was primarily due to lower commodity prices in 2016 and lower oil sales, partially offset by slightly higher gas and NGL sales in 2016 as compared to 2015. Lower commodity prices had a negative impact on revenue of \$9.0 million in 2016. The lower volume of oil sales negatively impacted revenue by \$2.8 million partially offset by higher gas and NGL sales which added \$1.3 million. During 2016, we experienced a decline in the average realized oil price of approximately 10% from 2015 levels. Average realized gas prices declined by approximately 35% and average realized NGL prices declined approximately 46% from 2015 levels.

Oil sales volumes decreased to 1,372 MBbls for the year ended December 31, 2016 from 1,440 MBbls for the same period of 2015. The decrease in oil sales volumes was due to natural field declines, sales of non-core properties and a

significant reduction in drilling and completion activity in 2016. Six wells that were drilled in late 2015 were not completed until the latter part of the third quarter of 2016. New production brought on line added 357.8 Mboe to sales in 2016. Gas sales volumes increased to 3,160 MMcf for the year ended December 31, 2016 from 3,015 MMcf for the year ended December 31, 2015. During 2015, we were subject to pipeline constraints and gas plant capacity issues that improved somewhat in 2016. New wells brought onto production during 2016 contributed 427 MMcf to production for the year ended December 31, 2016. NGL sales increased to 363 MBbls for the year ended December 31, 2016 from 238 MBbls for the same period of 2015. The increase in NGL sales was primarily due to increased gas production from fields in West Texas, Wyoming and North Dakota that have a higher NGL content than our historical gas production.

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Lease Operating Expenses (“LOE”). LOE for the year ended December 31, 2016 decreased to \$18.2 million from \$23.1 million in 2015. The decrease in LOE was primarily due to lower cost of services, and less non-recurring LOE in 2016 compared to 2015. Additionally, due to the continued weakness in commodity prices, marginal wells were temporarily shut in to control costs. LOE per Boe for the year ended December 31, 2016 was \$8.05 compared to \$10.58 for the same period of 2015. The decrease in LOE per Boe was attributable to lower cost as well as slightly higher sales volumes in 2016.

Production and Ad Valorem Taxes. Production and ad valorem taxes for the year ended December 31, 2016 decreased to \$5.5 million from \$6.7 million in 2015. The decrease was primarily due to lower realized prices and a lower volume of oil sales in 2016 as compared to 2015, partially offset by increased gas and NGL sales volumes in 2016 as compared to 2015. Production and ad valorem taxes as a percentage of oil and gas revenue remained constant at 10% in 2016 and 2015.

General and Administrative (“G&A”) Expense. G&A expense, excluding stock-based compensation, increased to \$10.4 million for the year ended December 31, 2016 from \$7.9 million in 2015. The increase was primarily due to incentive bonuses earned in 2016. G&A expense per Boe was \$4.58 for the year ended December 31, 2016 compared to \$3.61 for the same period of 2015.

Stock-Based Compensation. Options granted to employees and directors are valued at the date of grant and expense is recognized over the options vesting period. In addition to options, restricted shares of common stock have been granted and are valued at the date of grant and expense is recognized over their vesting period. Stock-based compensation for the year ended December 31, 2016 decreased to \$3.2 million from \$3.9 million in 2015. The decrease was due to lower grant prices in 2016 as compared to 2015.

Depreciation, Depletion, and Amortization (“DD&A”) Expenses. DD&A expense decreased to \$24.4 million for the year ended December 31, 2016 from \$38.7 million in 2015. DD&A decreased primarily due to proved property impairments recognized in 2015 and the first three quarters of 2016, as well as decreased future development costs included in the 2016 reserve reports. DD&A per Boe for 2016 was \$10.80 compared to \$17.76 in 2015. The decrease in DD&A per Boe was due to a lower depletable base as the result of impairments as well as lower future development cost in 2016 as compared to 2015.

Interest Expense. Interest expense increased to \$4.3 million in 2016 from \$3.9 million for 2015. The increase was primarily due to higher interest rates in 2016 as compared to 2015.

Income Taxes. In 2015 an income tax benefit was recognized as the result of an overpayment of state income taxes in 2014 that was refunded in 2015, as well as a benefit of a capital loss carryback which resulted in a refund of prior year federal taxes of \$242,000. Due to losses incurred and loss carry forwards, we did not recognize any income tax expense for the year ended December 31, 2016.

Loss (Gain) on Derivative Contracts. Derivative gains or losses are determined by actual derivative settlements during the period and by periodic mark to market valuation of derivative contracts in place. We have elected not to apply hedge accounting to our derivative contracts as prescribed by Accounting Standards Codification 815, Derivatives and Hedging “ASC 815”; therefore, fluctuations in the market value of the derivative contracts are recognized in earnings during the current period. Our derivative contracts consisted of fixed price swaps, basis differential swaps and collar contracts in 2016 and fixed price swaps and three way collar contracts in 2015. The net estimated value of our commodity derivative contracts was a liability approximately \$9.0 million as of December 31, 2016. When our derivative contract prices are higher than prevailing market prices, we incur gains and conversely, when our derivative contract prices are lower than prevailing market prices, we incur losses. For the year ended December 31, 2016, we

recognized a loss on our derivative contracts of approximately \$18.0 million, consisting of a gain of \$1.8 million on closed contracts and a loss of \$19.8 million on the mark to market valuation of open contracts. For the year-ended December 31, 2015, we incurred a gain of \$19.3 million, consisting of a gain of \$9.5 million on closed contracts and a gain of \$9.8 million related to open contracts.

**Monetization of Derivative Contracts.** During 2016, we monetized certain of our derivative contracts. Proceeds from the monetization were approximately \$14.4 million. During 2015, proceeds from the monetization of derivative contracts were approximately \$4.6 million.

**Ceiling Limitation Write-Down.** We record the carrying value of our oil and gas properties using the full cost method of accounting for oil and gas properties. Under this method, we capitalize the cost to acquire, explore for and develop oil and gas properties. Under the full cost accounting rules, the net capitalized cost of oil and gas properties less related deferred taxes, are limited by country, to the lower of the unamortized cost or the cost ceiling, defined as the sum of the present value of estimated unescalated future net revenues from proved reserves, discounted at 10%, plus the cost of properties not being amortized, if any,

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plus the lower of cost or estimated fair value of unproved properties included in the costs being amortized, if any, less related income taxes. If the net capitalized cost of oil and gas properties exceeds the ceiling limit, we are subject to a ceiling limitation write-down to the extent of such excess. A ceiling limitation write-down is a charge to earnings which does not impact cash flow from operating activities. However, such write-downs do impact the amount of our stockholders' equity and reported earnings. As of December 31, 2015, the net capitalized cost of our oil and gas properties exceeded the present value of our estimated proved reserves, resulting in the recognition of an impairment of \$128.6 million in 2015. During 2016 we incurred impairments of \$67.6 million. The year-end amount was calculated in accordance with SEC rules utilizing the twelve month first-day-of-the-month average oil and gas prices for the year ended 2016 which were \$42.74 per Bbl for oil and \$2.50 per Mcf for gas as adjusted to reflect the expected realized prices for our oil and gas reserves.

## Comparison of Year Ended December 31, 2015 to Year Ended December 31, 2014

**Operating Revenue.** During the year ended December 31, 2015, operating revenue decreased to \$67.0 million from \$133.7 million in 2014. The decrease in revenue was primarily due to a significant decline in commodity prices in 2015. Lower commodity prices had a negative impact on revenue of \$69.0 million in 2015. During 2015 we experienced a decline in the average realized oil price of approximately 50% from 2014 levels. Average realized gas prices declined by approximately 53% and average realized NGL prices declined approximately 75% from 2014 levels. Higher sales volumes of all products added \$2.3 million to revenue in 2015 as compared to 2014.

Oil sales volumes increased to 1,440 MBbbls for the year ended December 31, 2015 from 1,394 MBbbls for the same period of 2014. The increase in oil sales volumes was due to new production brought on line in 2015. New wells brought onto production in 2015 contributed 298 MBbbls to production for the year ended December 31, 2015, offset by natural field declines and property sales. Gas sales volumes increased to 3,015 MMcf for the year ended December 31, 2015 from 2,918 MMcf for the year ended December 31, 2014. The increase in gas production was due to new wells being brought on line, offset by natural field declines. New wells brought onto production during 2015 contributed 299 MMcf to production for the year ended December 31, 2015. NGL sales increased to 238 MBbbls for the year ended December 31, 2015 from 207 MBbbls for the same period of 2014. The increase in NGL sales was primarily due to increased gas production from fields in West Texas, Wyoming and North Dakota that have a higher NGL content than our historical gas production.

**Lease Operating Expenses.** LOE for the year ended December 31, 2015 decreased to \$23.1 million from \$25.9 million in 2014. The decrease in LOE was primarily due to lower cost of services, and less non-recurring LOE in 2015 compared to 2014. Additionally, due to the significant decline in commodity prices, marginal wells were temporarily shut in to control costs. LOE per Boe for the year ended December 31, 2015 was \$10.58 compared to \$12.39 for the same period of 2014. The decrease in LOE per Boe was attributable to higher sales volumes in 2015 as well as lower costs.

**Production and Ad Valorem Taxes.** Production and ad valorem taxes for the year ended December 31, 2015 decreased to \$6.7 million from \$11.5 million in 2014. The decrease was primarily due to significantly lower realized prices in 2015 as compared to 2014 which was partially offset by increased production in 2015 as compared to 2014. Production and ad valorem taxes as a percentage of oil and gas revenue increased to 10% in 2015 from 9% in 2014. The increase was due primarily to a higher production in the Rocky Mountain region that has a higher tax rate.

**General and Administrative Expense.** G&A expense, excluding stock-based compensation, decreased to \$7.9 million for the year ended December 31, 2015 from \$10.7 million in 2014. G&A expense per Boe was \$3.61 for the year ended December 31, 2015 compared to \$5.11 for the same period of 2014. The decrease in G&A was primarily due to performance bonuses in 2014 that did not occur in 2015. Additionally, as a result of the depressed price environment, emphasis was placed on reducing cost.

Stock-Based Compensation. Options granted to employees and directors are valued at the date of grant and expense is recognized over the options vesting period. In addition to options, restricted shares of common stock have been granted and are valued at the date of grant and expense is recognized over their vesting period. Stock-based compensation for the year ended December 31, 2015 increased to \$3.9 million from \$2.7 million in 2014. The increase was due to the grant of a greater number of options in 2015 as compared to 2014.

Depreciation, Depletion, and Amortization (“DD&A”) Expenses. DD&A expense decreased to \$38.7 million for the year ended December 31, 2015 from \$43.1 million in 2014. DD&A decreased primarily due to decreased future development costs included in the 2015 reserve reports. DD&A per Boe for 2015 was \$17.76 compared to \$20.66 in 2014. The decrease in DD&A per BOE was due to lower future development cost in 2015 as compared to 2014.



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**Interest Expense.** Interest expense increased to \$3.9 million in 2015 from \$2.6 million for 2014. The increase was primarily due to higher levels of debt during 2015 as compared to 2014.

**Income Taxes.** An income tax benefit was recognized in 2015 as the result of an overpayment of state income taxes in 2014 that was refunded in 2015, as well as a benefit of a capital loss carryback which resulted in a refund of prior year federal taxes of \$242,000.

**Loss (Gain) on Derivative Contracts.** Gains or losses are determined by actual derivative settlements during the period and by the periodic mark to market valuation of derivative contracts in place. We have elected not to apply hedge accounting to our derivative contracts as prescribed by ASC 815; therefore, fluctuations in the market value of the derivative contracts are recognized in earnings during the current period. The net estimated value of our commodity derivative contracts was an asset of approximately \$27.4 million as of December 31, 2015. When our derivative contract prices are higher than prevailing market prices, we incur gains and conversely, when our derivative contract prices are lower than prevailing market prices, we incur losses. For the year ended December 31, 2015, we realized a gain on our derivative contracts of \$19.3 million, consisting of a gain of \$9.5 million on our closed contracts and a gain of \$9.8 million related to open contracts. For the year-ended December 31, 2014, we incurred a gain of \$25.2 million, consisting of a gain of \$0.3 million on closed contracts and a gain of \$24.9 million related to our open contracts.

**Monetization of Derivative Contracts.** During 2015, we monetized certain of our derivative contracts. Proceeds from the monetization were approximately \$4.6 million. During 2014, proceeds from the monetization of derivative contracts were approximately \$0.2 million.

**Ceiling Limitation Write-Down.** As of December 31, 2015, the net capitalized cost of our oil and gas properties exceeded the present value of our estimated proved reserves, resulting in the recognition of an impairment of \$128.6 million. The year-end amount was calculated in accordance with SEC rules utilizing the twelve month first-day-of-the-month average oil and gas prices for the year ended 2015 which were \$50.12 per Bbl for oil and \$2.63 per Mcf for gas as adjusted to reflect the expected realized prices for our oil and gas reserves. As of December 31, 2014, the net capitalized cost of our oil and gas properties did not exceed the present value of our estimated proved reserves.

## Liquidity and Capital Resources

**General.** The oil and gas industry is a highly capital intensive and cyclical business. Our capital requirements are driven principally by our obligations to service debt and to fund the following:

- the development and exploration of existing properties, including drilling and completion costs of wells;
- acquisition of interests in additional oil and gas properties; and
- production and gathering facilities.

The amount of capital expenditures we are able to make has a direct impact on our ability to increase cash flow from operations and, thereby, will directly affect our ability to service our debt obligations and to grow the business through the development of existing properties and the acquisition of new properties.

Our principal sources of capital are cash flow from operations, borrowings under our credit facility, cash on hand, proceeds from the sale of properties, and if an opportunity presents itself, the sale of debt or equity securities, although we may not be able to complete any financings on terms acceptable to us, if at all.

**Operating Cash Flow.** Our operating cash flow is sensitive to many variables, the most volatile of which is the prices of the oil, gas and NGL we produce and sell. Our consolidated cash flow from operations increased in 2016, primarily due to the monetization of derivative positions of \$14.4 million. We expect cash flow from operations to continue to be a primary source of liquidity in 2017.

**Commodity Prices.** Prices are determined primarily by prevailing market conditions. Regional and worldwide economic activity, weather and other substantially variable factors influence market conditions for these products. These factors, which are difficult to predict, create volatility in prices and are beyond our control. We have entered into NYMEX-based fixed price commodity swap arrangements on approximately 70% of the oil production of our estimated net proved developed producing reserves (as of December 31, 2016) through December 31, 2017, 77% for 2018 and 64% for 2019. We have also entered into a NYMEX-based collar on approximately 56% of the gas production of our estimated net proved developed producing reserves (as of December 31, 2016) through December 31, 2017 and a 500 Bopd Midland-Cushing oil price differential swap at (\$0.65)/Bbl.

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The key terms of our derivative financial instruments as of December 31, 2016 are presented in Note 11 in “Item 8. Financial Statements and Supplementary Data” of this report.

Commodity prices can also affect our operating cash flow through an indirect effect on operating expenses. Significant commodity price decreases can lead to a decrease in drilling and development activities. As a result, the demand and cost for people, services, equipment and materials may also decrease, causing a positive impact on our cash flow as the prices paid for services and equipment decline.

**Working Capital (Deficit).** At December 31, 2016, our current liabilities of \$31.1 million exceeded our current assets of \$23.9 million resulting in a working capital deficit of \$7.2 million. This compares to a working capital deficit of \$2.4 million at December 31, 2015. Current assets at December 31, 2016 primarily consisted of accounts receivable of \$13.5 million, assets held for sale of \$9.7 million other current assets of \$0.6 million and the current portion of our derivative asset of \$0.1 million. Current liabilities at December 31, 2016 primarily consisted of trade payables of \$18.4 million, revenues due third parties of \$8.9 million, current maturities of long-term debt of \$0.8 million, the current amount of our derivative liability of \$2.4 million and accrued expenses of \$0.6 million. The working capital deficit is expected to be funded by cash flow from operations and borrowings under our credit facility.

**Capital Expenditures.** Capital expenditures in 2014, 2015 and 2016 were \$192.8 million, \$69.4 million, and \$31.7 million, respectively. The table below sets forth the components of these capital expenditures:

Year Ended December 31,  
2014    2015    2016  
(In thousands)

Expenditure category:

Exploration/Development	\$ 189,210	\$ 68,631	\$ 30,787
Facilities and other	3,589	760	876
Total	\$ 192,799	\$ 69,391	\$ 31,663

During 2014, 2015 and 2016 our expenditures were primarily for exploration and for the development of our existing properties, as well as acquisitions of leaseholds.

We anticipate making capital expenditures in 2017 of approximately \$110.0 million. Approximately \$52.5 million of the 2017 budget will be allocated to developing our Permian/Delaware Basin assets including approximately \$15.0 million dedicated to expanding our acreage position in the Delaware Basin. The 2017 budget also allocates approximately \$42.2 million for drilling and completion of wells in our Williston Basin/Bakken/Three Forks play in North Dakota, with the remaining amount allocated to the Austin Chalk/Eagle Ford area in South Texas as well as lease acquisition and general corporate expenses. The 2017 capital expenditure budget is subject to change depending upon a number of factors, including the availability and costs of drilling and service equipment and crews, economic and industry conditions at the time of drilling, prevailing and anticipated prices for oil and gas, the availability of sufficient capital resources, our financial results and our ability to obtain permits for drilling locations. Our capital expenditures could also include expenditures for the acquisition of producing properties, if such opportunities arise. Additionally, the level of capital expenditures will vary during future periods depending on economic and industry conditions and commodity prices. Should the prices of oil and gas decline and if our costs of operations increase or if our production volumes decrease, our cash flows will decrease which may result in a reduction of the capital expenditure budget. If we decrease our capital expenditure budget, we may not be able to offset oil and gas production decreases caused by natural field declines.

**Sources of Capital.** The net funds provided by and/or used in each of the operating, investing and financing activities are summarized in the following table and discussed in further detail below:

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	Year Ended December 31,		
	2014	2015	2016
	(In thousands)		
Net cash provided by operating activities	\$94,462	\$6,999	\$26,872
Net cash used in investing activities	(186,800)	(69,253)	(14,071 )
Net cash (used in) provided by financing activities	87,857	62,042	(16,341 )
Total	\$(4,481 )	\$(212 )	\$(3,540 )

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Operating activities for the year ended December 31, 2016 provided \$26.9 million in cash. Non-cash expense items and net changes in operating assets and liabilities and the monetization of derivative positions accounted for most of these funds. Investing activities used \$14.1 million. Financing activities used \$16.3 million primarily for reductions of amount due under our credit facility, offset by proceeds from long term borrowings and proceeds from the issuance 28.8 million shares of common stock in May 2016.

Operating activities for the year ended December 31, 2015 provided \$7.0 million in cash. Non-cash expense items and net changes in operating assets and liabilities accounted for most of these funds. Investing activities used \$69.3 million. Financing activities provided \$62.0 million primarily from long-term borrowings offset by payments on long-term debt.

Operating activities for the year ended December 31, 2014 provided \$94.5 million in cash. Non-cash expense items and net changes in operating assets and liabilities accounted for most of these funds. Investing activities used \$186.8 million. Financing activities provided \$87.9 million, primarily from the issuance of 11.5 million shares of common stock in June 2014, and proceeds from long-term borrowings offset by payments on long-term debt.

Future Capital Resources. Our principal sources of capital going forward are cash flow from operations, borrowings under our credit facility, cash on hand, proceeds from the sale of properties, monetizing of derivative instruments and if an opportunity presents itself, the sale of debt or equity securities, although we may not be able to complete financing on terms acceptable to us, if at all. In January 2017 we completed an offering of 28.8 million shares of common stock for net proceeds of approximately \$65.3 million. Proceeds from the offering were used to reduce amounts outstanding under our credit facility.

Cash from operating activities is dependent upon commodity prices and production volumes. A decrease in commodity prices from current levels would likely reduce our cash flows from operations. This could cause us to alter our business plans, including reducing our exploration and development plans. Unless we otherwise expand and develop reserves, our production volumes may decline as reserves are produced. In the future we may continue to sell producing properties, which could further reduce our production volumes. To offset the loss in production volumes resulting from natural field declines and sales of producing properties, we must conduct successful exploration and development activities, acquire additional producing properties or identify and develop additional behind-pipe zones or secondary recovery reserves. We believe our numerous drilling opportunities will allow us to increase our production volumes; however, our drilling activities are subject to numerous risks, including the risk that no commercially productive oil and gas reservoirs will be found. If our proved reserves decline in the future, our production will also decline and, consequently, our cash flow from operations and the amount that we are able to borrow under our credit facility will also decline. The availability under our credit facility is subject to a borrowing base determined by our lenders. This borrowing base is subject to semi-annual redeterminations. The next redetermination becomes effective on April 1, 2017. The risk of not finding commercially productive reservoirs will be compounded by the fact that 66% of our total estimated proved reserves on a Boe basis (33% on a PV-10 basis) at December 31, 2016 were classified as undeveloped.

We have in the past, and may in the future, sell properties and/or monetize derivative instruments. We have also sold debt and equity securities in the past, and may sell additional debt and equity securities in the future when the opportunity presents itself.

Contractual Obligations. We are committed to making cash payments in the future on the following types of agreements:

Long-term debt; and  
 Operating leases for office facilities.

Below is a schedule of the future payments that we are obligated to make based on agreements in place as of December 31, 2016:

Contractual Obligations (In thousands)	Total	Payments due in twelve month periods ending:			
		December 31, 2017	December 31, 2018-2019	December 31, 2020-2021	Thereafter
Long-term debt (1)	\$97,402	\$ 786	\$ 93,534	\$ 582	\$ 2,500
Interest on long-term debt (2)	5,408	3,206	1,810	241	151
Lease obligations (3)	73	50	23	—	—
Total	\$102,883	\$ 4,042	\$ 95,367	\$ 823	\$ 2,651

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- (1) These amounts represent the balances outstanding under our credit facility, the rig loan agreement and the real estate lien note. These payments assume that we will not borrow additional funds.
- (2) Interest expense assumes the balances of long-term debt at the end of the period and current effective interest rates. Lease on office space in Dickinson, North Dakota, which expires on October 31, 2018, office space in Lusk, Wyoming, which expires on December 31, 2017 and office space in Denver, Colorado which expires on December 31, 2017.

We maintain a reserve for costs associated with the retirement of tangible long-lived assets. At December 31, 2016, our reserve for these obligations totaled \$8.6 million for which no contractual commitments exist. For additional information relating to this obligation, see Note 1 of the Notes to Consolidated Financial Statements.

Off-Balance Sheet Arrangements. At December 31, 2016, we had no existing off-balance sheet arrangements, as defined under SEC regulations that have, or are reasonably likely to have a current or future material effect on our financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that are material to investors.

Contingencies. From time to time, we are involved in litigation relating to claims arising out of our operations in the normal course of business. At December 31, 2016, we were not engaged in any legal proceedings that are expected, individually or in the aggregate, to have a material adverse effect on us.

## Long-Term Indebtedness.

Long-term debt consisted of the following:

	December 31, 2015	December 31, 2016
	(In thousands)	
Credit facility	\$134,000	\$93,000
Rig loan agreement	2,620	535
Real estate lien note	4,112	3,867
	140,732	97,402
Less current maturities	(2,330 )	(786 )
	\$138,402	\$96,616

## Credit Facility

We have a senior secured credit facility with Société Générale, as administrative agent and issuing lender, and certain other lenders, which we refer to as the credit facility. As of December 31, 2016, \$93.0 million was outstanding under the credit facility. As of March 10, 2017, \$18.0 million was outstanding under the credit facility.

The credit facility has a maximum commitment of \$300.0 million and availability is subject to a borrowing base. At December 31, 2016, we had a borrowing base of \$115.0 million. The borrowing base is determined semi-annually by the lenders based upon our reserve reports, one of which must be prepared by our independent petroleum engineers and one of which may be prepared internally. The amount of the borrowing base is calculated by the lenders based upon their valuation of our proved reserves securing the facility utilizing these reserve reports and their own internal decisions. In addition, the lenders, in their sole discretion, are able to make one additional borrowing base redetermination during any six-month period between scheduled redeterminations and we are able to request one redetermination during any six-month period between scheduled redeterminations. The next redetermination will be effective on April 1, 2017. Outstanding borrowings in excess of the borrowing base must be repaid immediately or we must pledge additional oil and gas properties or other assets as collateral. We do not currently have any substantial

unpledged assets and we may not have the financial resources to make any mandatory principal payments. In addition, a reduction of the borrowing base could also cause us to fail to be in compliance with the financial covenants described below. The borrowing base will be automatically reduced in connection with any sales of producing properties with a market value of 5% or more of our then-current borrowing base and in connection with any hedge termination which could reduce the collateral value by 5% or more. Our borrowing base can never exceed the \$300.0 million maximum commitment amount. Outstanding amounts under the credit facility bear interest at (a) the greater of (1) the reference rate announced from time to time by Société Générale, (2) the Federal Funds Rate plus 0.5%, and (3) a rate determined by Société Générale as the daily one-month LIBOR plus, in each case, (b) 0.75%—1.75%, depending on the utilization of the borrowing base, or, if we elect LIBOR plus 1.75%—2.75%, depending on the utilization of the borrowing base. At December 31, 2016, the interest rate on the credit facility was 3.27% based on 1-month LIBOR borrowings and level of utilization.



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Subject to earlier termination rights and events of default, the stated maturity date of the credit facility is June 30, 2018. Interest is payable quarterly on reference rate advances and not less than quarterly on LIBOR advances. We are permitted to terminate the credit facility and are able, from time to time, to permanently reduce the lenders' aggregate commitment under the credit facility in compliance with certain notice and dollar increment requirements.

Each of our subsidiaries has guaranteed our obligations under the credit facility on a senior secured basis. Obligations under the credit facility are secured by a first priority perfected security interest, subject to certain permitted encumbrances, in all of our and our subsidiary guarantors' material property and assets. The collateral is required to include properties comprising at least 90% of the PV-10 of our proven reserves. We have also granted our lenders a security interest in our headquarters building and a ranch that we own in West Texas.

Under the credit facility, we are subject to customary covenants, including certain financial covenants and reporting requirements. We are required to maintain a current ratio, as of the last day of each quarter of not less than 1.00 to 1.00 and an interest coverage ratio of not less than 2.50 to 1.00. We are also required as of the last day of each quarter to maintain a total debt to EBITDAX ratio of not more than 4.00 to 1.00. The current ratio is defined as the ratio of consolidated current assets to consolidated current liabilities. For the purposes of this calculation, current assets include the portion of the borrowing base which is undrawn but excludes any cash deposited with a counter-party to a hedging arrangement and any assets representing a valuation account arising from the application of ASC 815 and ASC 410-20 and current liabilities exclude the current portion of long-term debt and any liabilities representing a valuation account arising from the application of ASC 815 and ASC 410-20. The interest coverage ratio is defined as the ratio of consolidated EBITDAX to consolidated interest expense for the four fiscal quarters ended on the calculation date. For the purposes of this calculation, EBITDAX is defined as the sum of consolidated net income plus interest expense, oil and gas exploration expenses, income, franchise or margin taxes, depreciation, amortization, depletion and other non-cash charges including non-cash charges resulting from the application of ASC 718, ASC 815 and ASC 410-20 plus all realized net cash proceeds arising from the settlement or monetization of any hedge contracts plus expenses incurred in connection with the negotiation, execution, delivery and performance of the Credit Facility plus expenses incurred in connection with any acquisition permitted under the Credit Facility plus expenses incurred in connection with any offering of senior unsecured notes, subordinated debt or equity plus up to \$1.0 million of extraordinary expenses in any 12-month period plus extraordinary losses minus all non-cash items of income which were included in determining consolidated net income, including all non-cash items resulting from the application of ASC 815 and ASC 410-20. Interest expense includes total interest, letter of credit fees and other fees and expenses incurred in connection with any debt. The total debt to EBITDAX ratio is defined as the ratio of total debt to consolidated EBITDAX for the four fiscal quarters ended on the calculation date. For the purposes of this calculation, total debt is the outstanding principal amount of debt, excluding debt associated with the office building, Raven Drilling's rig loan and obligations with respect to surety bonds and derivative contracts.

At December 31, 2016, we were in compliance with all of our debt covenants. As of December 31, 2016, the interest coverage ratio was 10.49 to 1.00, the total debt to EBITDAX ratio was 2.32 to 1.00, and our current ratio was 1.64 to 1.00.

The credit facility contains a number of covenants that, among other things, restrict our ability to:

- incur or guarantee additional indebtedness;
- transfer or sell assets;
- create liens on assets;
- engage in transactions with affiliates other than on an "arm's length" basis;
- make any change in the principal nature of our business; and
- permit a change of control.

The credit facility also contains certain additional covenants including:

100% of the net proceeds from any terminations of derivative contracts must be used to repay amounts outstanding under the credit facility; and

if the sum of our cash on hand plus liquid investments exceeds \$10.0 million, then the amount in excess of \$10.0 million must be used to pay amounts outstanding under the credit facility.

The credit facility also contains customary events of default, including nonpayment of principal or interest, violations of covenants, cross default and cross acceleration to certain other indebtedness, bankruptcy and material judgments and liabilities.

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### Rig Loan Agreement

On September 19, 2011 Raven Drilling entered into a rig loan agreement, secured by our Oilwell 2000 HP diesel electric drilling rig (the "Collateral"). The original principal amount of the note was \$7.0 million and bears interest at 4.26%. The note is payable in monthly interest and principal payments in the amount of \$179,695. Subject to earlier prepayment provisions and events of default, the stated maturity date of the note is February 14, 2017. As of December 31, 2016, \$0.5 million, was outstanding under the rig loan agreement. This loan was repaid in full in March 2017.

### Real Estate Lien Note

We have a real estate lien note secured by a first lien deed of trust on the property and improvements which serves as our corporate headquarters. The note bears interest for five years at a fixed rate of 4.25% and is payable in monthly installments of \$34,354. Beginning August 20, 2018, the interest rate will adjust to the current bank prime rate plus 1.00% with a maximum rate of 7.25%. The maturity date of the note is July 20, 2023. As of December 31, 2015 and 2016, \$4.1 million and \$3.9 million, respectively, were outstanding on the note.

### Hedging Activities

Our results of operations are significantly affected by fluctuations in commodity prices and we seek to reduce our exposure to price volatility by hedging our production through swaps, options and other commodity derivative instruments. We have entered into NYMEX-based fixed price commodity swap arrangements on approximately 70% of the oil production of our estimated net proved developed producing reserves (as of December 31, 2016) through December 31, 2017, 77% for 2018 and 64% for 2019. We have also entered into a NYMEX-based collar on approximately 56% of the gas production of our estimated net proved developed producing reserves (as of December 31, 2016) through December 31, 2017 and a 500 Bopd Midland-Cushing oil price differential swap at (\$0.65)/Bbl.

The Company's derivative contracts consist of NYMEX-based fixed price swaps, basis differential swaps and collar contracts. Under fixed price swaps, we receive a fixed price for our production and pay a variable market price to the contract counter-party. Collar contracts combine a long put, a short put and a short call. Under a collar, we pay the counterparty if the market price is above the ceiling price (short call) and the counterparty pays us if the market price is below the floor price (short put).

By removing a portion of price volatility on our future oil and gas production, we believe that we will mitigate, but not eliminate, the potential effects of changing commodity prices on our cash flow from operations. However, when prevailing market prices are higher than our contract prices, we will not realize increased cash flow on the portion of the production that has been hedged. We have sustained, and in the future will sustain losses on our derivative contracts when market prices are higher than our contract prices. Conversely, when prevailing market prices are lower than our contract prices, we will sustain gains on our commodity derivative contracts. For the year ended December 31, 2016, we incurred a loss of \$18.0 million, consisting of a gain of \$1.8 million on our closed contracts and a loss of \$19.8 million related to our open contract positions. For the year ended December 31, 2015, we incurred a gain of \$19.3 million, consisting of a gain of \$9.5 million on closed contracts and a gain of \$9.8 million related to our open contract positions. For the year ended December 31, 2014, we incurred a net gain of \$25.2 million, consisting of a gain of \$0.3 million on our closed contracts and a gain of \$24.9 million related to our open contract positions. If the disparity between our contract prices and market prices continues, we will sustain gains or losses on our derivative contracts. While gains and losses resulting from the periodic mark to market of our open contracts do not impact our cash flow from operations, gains and losses from settlements of our closed contracts do impact our cash flow from operations. In addition, as our derivative contracts expire over time, we expect to enter into new derivative contracts at then-current market prices. If the prices at which we hedge future production are significantly lower than our

existing derivative contracts, our future cash flow from operations would likely be materially lower. In addition, borrowings under our credit facility bear interest at floating rates. If interest expense increases as a result of higher interest rates or increased borrowings, more cash flow from operations would be used to meet debt service requirements. As a result, we would need to increase our cash flow from operations in order to fund the development of our drilling opportunities which, in turn, will be dependent upon the level of our production volumes and commodity prices.

See “—Quantitative and Qualitative Disclosures about Market Risk—Hedging Sensitivity” for further information.

#### Net Operating Loss Carryforwards

At December 31, 2016, we had, subject to the limitation discussed below, \$230.5 million of net operating loss carryforward for tax purposes. The loss carryforward will expire through 2036, if not utilized.

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Uncertainties exist as to the future utilization of the operating loss carryforwards under the criteria set forth under ASC 740-10 “Income Taxes”. Therefore, we have established a valuation allowance of \$137.8 million for deferred tax assets at December 31, 2016.

### Related Party Transactions

We have adopted a policy that transactions between us and our officers, directors, principal stockholders, or affiliates of any of them, will be on terms no less favorable to us than can be obtained on an arm’s length basis in transactions with third parties and must be approved by our audit committee. There were no related party transactions in 2014, 2015 or 2016.

### Critical Accounting Policies

The preparation of financial statements in conformity with U.S. generally accepted accounting principles (“GAAP”) requires that management apply accounting policies and make estimates and assumptions that affect results of operations and the reported amounts of assets and liabilities in the financial statements. The following represents those policies that management believes are particularly important to the financial statements and that require the use of estimates and assumptions to describe matters that are inherently uncertain.

**Full Cost Method of Accounting for Oil and Gas Activities.** SEC Regulation S-X Rule 4-10 and ASC 932 defines the financial accounting and reporting standards for companies engaged in oil and gas activities. Two methods are prescribed: the successful efforts method and the full cost method. We have chosen to follow the full cost method under which all costs associated with property acquisition, exploration and development are capitalized. We also capitalize internal costs that can be directly identified with our acquisition, exploration and development activities but do not include any costs related to production, general corporate overhead or similar activities. Sales of oil and gas properties are treated as a reduction of the full cost pool with no gain or loss being recognized, except under certain circumstances. Under the successful efforts method, geological and geophysical costs and costs of carrying and retaining undeveloped properties are charged to expense as incurred. Costs of drilling exploratory wells that do not result in proved reserves are charged to expense. Depreciation, depletion, amortization and impairment of oil and gas properties are generally calculated on a well by well or lease or field basis versus the “full cost” pool basis. Additionally, gain or loss is generally recognized on all sales of oil and gas properties under the successful efforts method. As a result, our financial statements will differ from those of companies that apply the successful efforts method since we will generally reflect a higher level of capitalized costs as well as a higher depreciation, depletion and amortization rate on our oil and gas properties.

At the time it was adopted, management believed that the full cost method would be preferable, as earnings tend to be less volatile than under the successful efforts method. However, the full cost method makes us susceptible to significant non-cash charges during times of volatile commodity prices because the full cost pool may be impaired when prices are low. These charges are not recoverable when prices return to higher levels. We have experienced this situation several times over the years. Our oil and gas reserves have a relatively long life. However, temporary drops in commodity prices can have a material impact on our business including impact from impairment testing procedures associated with the full cost method of accounting as discussed below.

Under full cost accounting rules, the net capitalized cost of oil and gas properties, less related deferred taxes, may not exceed a “ceiling limit” which is based upon the present value of estimated future net cash flows from proved reserves on a pool by pool basis, discounted at 10%, plus the lower of cost or fair market value of unproved properties and the cost of properties not being amortized, less income taxes. If net capitalized costs of oil and gas properties exceed the ceiling limit, we must charge the amount of the excess to earnings. This is called a “ceiling limitation write-down.” This charge does not impact cash flow from operating activities, but does reduce our stockholders’ equity and reported

earnings. The risk that we will be required to write down the carrying value of oil and gas properties increases when oil and gas prices are depressed. In addition, write-downs may occur if we experience substantial downward adjustments to our estimated proved reserves. An expense recorded in one period may not be reversed in a subsequent period even though higher oil and gas prices may have increased the ceiling applicable to the subsequent period. We apply the full cost ceiling test on a quarterly basis on the date of the latest balance sheet presented.

Estimates of Proved Oil and Gas Reserves. Estimates of our proved reserves included in this report are prepared in accordance with GAAP and SEC guidelines. The accuracy of a reserve estimate is a function of:

- the quality and quantity of available data;
- the interpretation of that data;
- the accuracy of various mandated economic assumptions; and

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- the judgment of the persons preparing the estimate.

Our proved reserve information included in this report was based on studies performed by our independent petroleum engineers assisted by the engineering and operations departments of Abraxas. Reserve estimates were made by our independent petroleum engineers. Estimates prepared by other third parties may be higher or lower than those included herein. Because these estimates depend on many assumptions, all of which may substantially differ from future actual results, reserve estimates will be different from the quantities of oil and gas that are ultimately recovered. In addition, results of drilling, testing and production after the date of an estimate may justify material revisions to the estimate.

You should not assume that the present value of future net cash flows is the current market value of our estimated proved reserves. In accordance with SEC requirements, we based the estimated discounted future net cash flows from proved reserves on costs on the date of the estimate and for the years ended December 31, 2014, 2015 and 2016 oil and gas prices were based on the average 12-month first-day-of-the-month pricing. Actual future prices and costs may be materially higher or lower than the prices and costs used in the estimate.

The estimates of proved reserves materially impact DD&A expense. If the estimates of proved reserves decline, the rate at which we record DD&A expense will increase, reducing future net income. Such a decline may result from lower market prices, which may make it uneconomic to drill for and produce higher cost fields.

**Asset Retirement Obligations.** The estimated costs of restoration and removal of facilities are accrued. The fair value of a liability for an asset's retirement obligation is recorded in the period in which it is incurred and the corresponding cost is capitalized by increasing the carrying amount of the related long-lived asset. The liability is accreted to its then present value each period, and the capitalized cost is depreciated over the useful life of the related asset. For all periods presented, we have included estimated future costs of abandonment and dismantlement in our full cost amortization base and we amortize these costs as a component of our depletion expense.

**Accounting for Derivatives.** Gains or losses are determined by actual derivative settlements during the period and on the periodic mark to market valuation of derivative contracts in place. The derivative instruments we utilize are based on index prices that may and often do differ from the actual oil and gas prices realized in our operations. We have elected not to apply hedge accounting to our derivative contracts. As a result, fluctuations in the market value of the derivative contract are recognized in earnings during the current period. Our derivative contracts consisted of commodity swaps and three way collars and fixed price swaps in 2015 and fixed price swaps, basis swaps and a costless collar in 2016. Due to the volatility of oil and gas prices, our financial condition and results of operations can be significantly impacted by changes in the market value of our derivative instruments. As of December 31, 2015 and 2016, the net market value of our commodity derivatives was a net asset of \$27.4 million and a liability of \$9.0 million, respectively.

**Share-Based Payments.** We currently utilize a standard option pricing model (i.e., Black-Scholes) to measure the fair value of stock options granted to employees and directors. Additional information about management's assumptions can be found in Note 5 to the consolidated financial statements. Options granted to employees and directors are valued at the date of grant and expense is recognized over the options vesting period. Restricted stock awards are awards of common stock that are subject to restrictions on transfer and to a risk of forfeiture if the awardee terminates employment with the Company prior to the lapse of the restrictions. The value of such stock is determined using the market price on the grant date and expense is recognized over the vesting period. For the years ended December 31, 2014, 2015 and 2016, stock-based compensation was approximately \$2.7 million, \$3.9 million, and \$3.2 million, respectively.

New Accounting Standards and Disclosures.

See Note 1, "Organization and Significant Accounting Policies," to our consolidated financial statements in Item 8 of this report for a discussion of new accounting requirements.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

Commodity Price Risk

As an independent oil and gas producer, our revenue, cash flow from operations, other income and profitability, reserve values, access to capital and future rate of growth are substantially dependent upon the prevailing prices of oil and gas. Declines in commodity prices will adversely affect our financial condition, liquidity, ability to obtain financing and operating results. Lower commodity prices may reduce the amount of oil and gas that we can produce economically. Prevailing prices for such commodities



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are subject to wide fluctuation in response to relatively minor changes in supply and demand and a variety of additional factors beyond our control, such as global, political and economic conditions. Historically, prices received for our oil and gas production have been volatile and unpredictable, and such volatility is expected to continue. Most of our production is sold at market prices. Generally, if the commodity indices fall, the price that we receive for our production will also decline. Therefore, the amount of revenue that we realize is partially determined by factors beyond our control. Assuming the production levels we attained during the year ended December 31, 2016, a 10% decline in oil and gas prices would have reduced our operating revenue and cash flow by approximately \$5.6 million for the year. If commodity prices remain at their current levels the impact on operating revenues and cash flow, could be much more significant. However, we do have derivative contracts in place that will mitigate the impact of low commodity prices.

### Derivative Instrument Sensitivity

At December 31, 2016, the aggregate fair market value of our commodity derivative contracts was a liability of approximately \$9.0 million. The fair market value of our commodity derivative contracts is sensitive to changes in the market price for oil and gas. When our derivative contract prices are higher than prevailing market prices, we incur gains and conversely, when our derivative contract prices are lower than prevailing market prices, we incur losses.

For the year ended December 31, 2016, we recognized a loss of \$18.0 million, consisting of a gain of \$1.8 million on our closed contracts and a loss of \$19.8 million related to our open contract positions. We have not designated any of these derivative contracts as a hedge as prescribed by applicable accounting rules.

### Interest Rate Risk

We are subject to interest rate risk associated with borrowings under our credit facility. As of December 31, 2016, we had \$93.0 million of outstanding indebtedness under our credit facility. Outstanding amounts under the credit facility bear interest at (a) the greater of (1) the reference rate announced from time to time by Société Générale, (2) the Federal Funds Rate plus 0.5%, and (3) a rate determined by Société Générale as the daily one-month LIBOR plus, in each case, (b) 0.75%—1.75%, depending on the utilization of the borrowing base, or, if we elect LIBOR plus 1.75%—2.75%, depending on the utilization of the borrowing base. At December 31, 2016, the interest rate on the credit facility was 3.27% based on 1-month LIBOR borrowings and level of utilization. An increase in the interest rate of 1% would increase our interest expense by \$0.9 million on an annual basis, based on the outstanding balance at December 31, 2016.

### Item 8. Financial Statements and Supplementary Data

For the financial statements and supplementary data required by this Item 8, see the Index to Consolidated Financial Statements.

### Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

### Item 9A. Controls and Procedures

#### Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our Chief Executive Officer (our principal executive officer) and our Chief Financial Officer (our principal financial officer), we evaluated the

effectiveness of our disclosure controls and procedures (as defined under Rule 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). Based on this evaluation, our Chief Executive Officer and our Chief Financial Officer believe that the disclosure controls and procedures as of December 31, 2016 were effective to ensure that information we are required to disclose in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms and are effective to ensure that information required to be disclosed by us is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

#### Changes in Internal Controls

There were no changes in our internal control over financial reporting during the year ended December 31, 2016 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

#### Management’s Annual Report on Internal Control Over Financial Reporting

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Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed by, or under the supervision of, the Company's principal executive and principal financial officers and implemented by the Company's Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that: (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial statements. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2016.

The effectiveness of our internal control over financial reporting as of December 31, 2016 has been audited by BDO USA, LLP, an independent registered public accounting firm, as stated in their report which is included herein.

### Item 9B. Other Information

None.

### PART III

### Item 10. Directors, Executive Officers and Corporate Governance

There is incorporated in this Item 10 by reference to that portion of our definitive proxy statement for the 2017 Annual Meeting of Stockholders which appears therein under the caption "Election of Directors – Board of Directors and Executive Officers," "– Code of Ethics" and "– Committees of the Board of Directors."

#### Audit Committee and Audit Committee Financial Expert

The Audit Committee of our board of directors consists of Brian L. Melton., W. Dean Karrash, Paul A. Powell, Jr. and Jerry J. Langdon. The board of directors has determined that each of the members of the Audit Committee is independent as determined in accordance with the listing standards of The NASDAQ Stock Market and Item 407(a) of Regulation S-K. In addition, the board of directors has determined that Brian L. Melton and W. Dean Karrash, as defined by SEC rules, are audit committee financial experts.

#### Section 16(a) Compliance

Section 16(a) of the Exchange Act requires our directors and executive officers and persons who own more than 10% of a registered class of Abraxas equity securities to file with the SEC and The NASDAQ initial reports of ownership

and reports of changes in ownership of Abraxas common stock. Officers, directors and greater than 10% stockholders are required by SEC regulations to furnish us with copies of all such forms they file. Based solely on a review of the copies of such reports furnished to us and written representations that no other reports were required, we believe that all our directors and executive officers complied on a timely basis with all applicable filing requirements under Section 16(a) of the Exchange Act during 2016.

Item 11. Executive Compensation

There is incorporated in this Item 11 by reference that portion of our definitive proxy statement for the 2017 Annual Meeting of Stockholders which appears therein under the captions “Election of Directors – Committees of the Board of Directors” and “Executive Compensation.”

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Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

There is incorporated in this Item 12 by reference that portion of our definitive proxy statement for the 2017 Annual Meeting of Stockholders which appears therein under the caption “Securities Holdings of Principal Stockholders, Directors, Nominees and Officers.”

Item 13. Certain Relationships and Related Transactions, and Director Independence

There is incorporated in this Item 13 by reference that portion of our definitive proxy statement for the 2017 Annual Meeting of Stockholders which appears therein under the captions “Certain Relationship and Related Party Transactions” and “Election of Directors – Director Independence.”

Item 14. Principal Accountant Fees and Services

There is incorporated in this Item 14 by reference that portion of our definitive proxy statement for the 2017 Annual Meeting of Stockholders which appears therein under the caption “Principal Auditor Fees and Services.”

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PART IV

Item 15. Exhibits and Financial Statement Schedules

(a)1. Consolidated Financial Statements

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(a)2. Financial Statement Schedules

All schedules have been omitted because they are not required, not applicable, or the information required is included in the Consolidated Financial Statements or related notes thereto.

(a)3. Exhibits

The following Exhibits have previously been filed by the Registrant or are included following the Index to Exhibits.

Exhibit

Number Description

- 3.1 Articles of Incorporation of Abraxas dated August 30, 1990. (Filed as Exhibit 3.1 to our Registration Statement on Form S-4, No. 33-36565. (the "S-4 Registration Statement")).
- 3.2 Articles of Amendment to the Articles of Incorporation of Abraxas dated October 22, 1990. (Filed as Exhibit 3.3 to the S-4 Registration Statement).
- 3.3 Articles of Amendment to the Articles of Incorporation of Abraxas dated December 18, 1990. (Filed as Exhibit 3.4 to the S-4 Registration Statement).
- 3.4 Articles of Amendment to the Articles of Incorporation of Abraxas dated June 8, 1995. (Filed as Exhibit 3.4 to our Registration Statement on Form S-3, No. 333-00398).
- 3.5 Articles of Amendment to the Articles of Incorporation of Abraxas dated as of August 12, 2000. (Filed as Exhibit 3.5 to our Annual Report on Form 10-K filed on April 2, 2001).
- 3.6 Certificate of Correction dated February 24, 2011 (Filed as Exhibit 3.6 to our Annual Report on Form 10-K filed on March 15, 2012).
- 3.7

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Amended and Restated Bylaws of Abraxas. (Filed as Exhibit 3.1 to our Current Report on Form 8-K filed on November 17, 2008).

4.1 Specimen Common Stock Certificate of Abraxas. (Filed as Exhibit 4.1 to the S-4 Registration Statement).

4.2 Specimen Preferred Stock Certificate of Abraxas. (Filed as Exhibit 4.2 to our Annual Report on Form 10-K filed on March 31, 1995).

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- \*10.1 Abraxas Petroleum Corporation 401(k) Profit Sharing Plan. (Filed as Exhibit 10.4 to our Registration Statement on Form S-4, No. 333-18673 filed on December 24, 1996).
- \*10.2 Form of Indemnity Agreement between Abraxas and each of its directors and officers. (Filed as Exhibit 10.4 to our Annual Report on Form 10-K filed March 14, 2007).
- \*10.3 Employment Agreement between Abraxas and Robert L. G. Watson. (Filed as Exhibit 10.19 to the Registration Statement on Form S-1, No. 333-95281 filed on January 24, 2000 (the “2000 S-1 Registration Statement”).)
- \*10.4 Employment Agreement between Abraxas and Stephen T. Wendel. (Filed as Exhibit 10.26 to the Registration Statement on Form S-3, No. 333-127480 filed on September 16, 2005 (the “S-3 Registration Statement”).)
- \*10.5 Employment Agreement between Abraxas and William H. Wallace. (Filed as Exhibit 10.27 to the S-3 Registration Statement).
- \*10.6 Employment Agreement between Abraxas and G. William Krog, Jr. (Filed as Exhibit 10.9 to our Annual Report on Form 10-K filed March 15, 2012).
- \*10.7 Employment Agreement between Abraxas and Geoffrey R. King (Filed as Exhibit 10.9 to our Annual Report on Form 10-K filed March 18, 2013).
- \*10.8 Amended and Restated Abraxas Petroleum Corporation Non-Employee Directors Long-Term Equity Incentive Plan. (Filed as Appendix B to our Proxy Statement filed on April 2, 2015).  
  
Form of Stock Option Agreement under the Abraxas Petroleum Corporation Amended and Restated 2005 Non-Employee Directors Long-Term Equity Incentive Plan. (Filed as Exhibit 10.2 to our Current Report on Form 8-K filed June 6, 2005).
- \*10.9  
  
\*10.10 Abraxas Petroleum Corporation Senior Management Incentive Bonus Plan 2006. (Filed as Exhibit 10.17 to our Annual Report on Form 10-K filed March 23, 2006).
- \*10.11 Amended and Restated Abraxas Petroleum Corporation 2005 Employee Long-Term Equity Incentive Plan. (Filed as Appendix A to our Proxy Statement filed on April 6, 2016).  
  
Form of Employee Stock Option Agreement under the Amended and Restated Abraxas Petroleum Corporation 2005 Employee Long-Term Equity Incentive Plan. (Filed as Exhibit 10.2 to our Current Report on Form 8-K filed August 26, 2006).
- \*10.12  
  
Form of Restricted Stock Agreement under the Amended and Restated Abraxas Petroleum Corporation 2005 Employee Long-Term Equity Incentive Plan (Filed as Exhibit 10.1 to our Annual Report on Form 10-K filed on March 13, 2015).
- \*10.13  
  
Third Amended and Restated Credit Agreement dated as of June 11, 2014 among Abraxas Petroleum, as Borrower, the lenders party thereto and Société Générale, as Administrative Agent and as Issuing Lender. (Filed as Exhibit 10.1 to our Current Report on Form 8-K/A filed on June 13, 2014).
- \*10.14  
  
Promissory Note dated November 13, 2008 by Abraxas Properties Incorporated and Abraxas Petroleum Corporation, payable to the order of Plains Capital Bank, as Lender. (Filed as Exhibit 10.1 to our Current Report on Form 8-K filed on August 8, 2014.)
- \*10.15



Second Modification, Renewal and Extension of Promissory Note and Deed of Trust Liens by and between  
10.16 Plains Capital Bank, Abraxas Properties Corporation and Abraxas Petroleum Corporation effective March 13,  
2013. (Previously filed as Exhibit 10.2 to our Current Report on Form 8-K filed on August 8, 2014).

Third Modification, Renewal and Extension of Promissory Note and Deed of Trust Liens by and between Plains  
10.17 Capital Bank, Abraxas Properties Incorporated and Abraxas Petroleum Corporation effective as of July 13,  
2013. (Previously filed as Exhibit 10.3 to our Current Report on Form 8-K filed on August 8, 2014).

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Amendment No. 2 to Third Amended and Restated Credit Agreement dated as of April 20, 2016 among Abraxas Petroleum, as Borrower, the lenders party thereto and Société Générale, as Administrative Agent and as Issuing Lender (Previously filed as Exhibit 10.1 to our Current Report on Form 8-K filed on April 20, 2016).

14.1 Abraxas Petroleum Corporation Code of Business Conduct and Ethics. (Filed as Exhibit 14.1 to our Annual Report on Form 10-K filed March 22, 2006).

21.1 Subsidiaries of Abraxas. (Previously filed as Exhibit 21.1 to our Annual Report on Form 10-K filed on March 15, 2016).

23.1 Consent of BDO USA, LLP. (Filed herewith).

23.2 Consent of DeGolyer and MacNaughton. (Filed herewith).

31.1 Certification – Chief Executive Officer. (Filed herewith).

31.2 Certification – Chief Financial Officer. (Filed herewith).

32.1 Certification by Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. (Filed herewith).

32.2 Certification by Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. (Filed herewith).

99.1 Report of DeGolyer and MacNaughton with respect to oil and reserves of Abraxas Petroleum. (Filed herewith).

\*Management Compensatory Plan or Agreement.

Item 16. 10-K Summary

None

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All schedules are omitted because they are not required, are not applicable or the information required is included in the Consolidated Financial Statements or the related notes thereto.

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Report of Independent Registered Public Accounting Firm

Board of Directors and Stockholders  
Abraxas Petroleum Corporation  
San Antonio, Texas

We have audited the accompanying consolidated balance sheets of Abraxas Petroleum Corporation as of December 31, 2015 and 2016 and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity (deficit), and cash flows for each of the three years in the period ended December 31, 2016. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Abraxas Petroleum Corporation at December 31, 2015 and 2016, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2016, in conformity with accounting principles generally accepted in the United States of America.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Abraxas Petroleum Corporation's internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) and our report dated March 16, 2017 expressed an unqualified opinion thereon.

/s/ BDO USA, LLP

San Antonio, Texas  
March 16, 2017

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Report of Independent Registered Public Accounting Firm

Board of Directors and Stockholders

Abraxas Petroleum Corporation

San Antonio, Texas

We have audited Abraxas Petroleum Corporation's internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). Abraxas Petroleum Corporation's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Item 9A, "Management's Annual Report on Internal Control Over Financial Reporting". Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

In our opinion, Abraxas Petroleum Corporation maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Abraxas Petroleum Corporation as of December 31, 2015 and 2016, and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity (deficit), and cash flows for each of the three years in the period ended December 31, 2016 and our report dated March 16, 2017 expressed an unqualified opinion thereon.

/s/ BDO USA, LLP

San Antonio, Texas  
March 16, 2017

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## ABRAXAS PETROLEUM CORPORATION

## CONSOLIDATED BALANCE SHEETS

## ASSETS

	December 31,	
	2015	2016
	(In thousands)	
Current assets:		
Cash and cash equivalents	\$3,540	\$—
Accounts receivable:		
Joint owners - net	1,552	677
Oil and gas production sales	6,713	11,595
Other	1,241	1,252
	9,506	13,524
Derivative assets	18,902	54
Assets held for sale	—	9,685
Other current assets	726	676
Total current assets	32,674	23,939
Property and equipment:		
Oil and gas properties, full cost method of accounting:		
Proved	787,683	794,634
Other property and equipment	41,444	38,569
Total	829,127	833,203
Less accumulated depreciation, depletion, amortization and impairment	(604,289 )	(696,892 )
Total property and equipment, net	224,838	136,311
Deferred financing fees, net	1,642	818
Derivative asset	8,463	—
Other assets	255	580
Total assets	\$267,872	\$161,648

See accompanying notes to consolidated financial statements

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## ABRAXAS PETROLEUM CORPORATION

## CONSOLIDATED BALANCE SHEETS (CONTINUED)

## LIABILITIES AND STOCKHOLDERS' EQUITY

	December 31,	
	2015	2016
	(In thousands, except per share and share data)	
Current liabilities:		
Accounts payable	\$24,825	\$18,397
Joint interest oil and gas production payable	7,177	8,937
Accrued interest	115	44
Other accrued expenses	622	571
Derivative liability	—	2,382
Current maturities of long-term debt	2,330	786
Total current liabilities	35,069	31,117
Long-term debt – less current maturities	138,402	96,616
Derivative liability	—	6,630
Other liabilities	257	157
Future site restoration	9,679	8,623
Total liabilities	183,407	143,143
Commitments and contingencies (Note 7)		
Stockholders' Equity:		
Preferred stock, par value \$.01 per share – authorized 1,000,000 shares; -0- shares issued and outstanding	—	—
Common stock, par value \$.01 per share – authorized 200,000,000 shares; issued and outstanding 106,346,678 and 135,094,017, respectively	1,063	1,351
Additional paid-in capital	313,852	343,982
Accumulated deficit	(230,450 )	(326,828 )
Total stockholders' equity	84,465	18,505
Total liabilities and stockholders' equity	\$267,872	\$161,648

See accompanying notes to consolidated financial statements



Table of ContentsABRAXAS PETROLEUM CORPORATION  
CONSOLIDATED STATEMENTS OF OPERATIONS

	Years Ended December 31,		
	2014	2015	2016
	(In thousands, except per share data)		
Revenues:			
Oil and gas production revenues	\$ 133,701	\$ 67,002	\$ 56,493
Other	75	28	62
	133,776	67,030	56,555
Operating costs and expenses:			
Lease operating	25,875	23,074	18,205
Production taxes	11,462	6,679	5,454
Rig expense	—	—	664
Depreciation, depletion, and amortization	43,139	38,721	24,431
Proved property impairment	—	128,573	67,626
General and administrative (including stock-based compensation of \$2,703, \$3,912 and \$3,194, respectively)	13,378	11,788	13,562
	93,854	208,835	129,942
Operating income (loss)	39,922	(141,805 )	(73,387 )
Other (income) expense:			
Interest income	(2 )	(2 )	(1 )
Interest expense	2,570	3,906	4,319
Amortization of deferred financing fees	934	643	1,019
(Gain) on sale of properties	—	—	(374 )
(Gain) loss on derivative contracts	(25,237 )	(19,301 )	18,028
Other	(7 )	318	—
	(21,742 )	(14,436 )	22,991
Income (loss) from continuing operations before income tax	61,664	(127,369 )	(96,378 )
Income tax benefit	287	279	—
Net income (loss) from continuing operations	61,951	(127,090 )	(96,378 )
Net income (loss) from discontinued operations - net of tax	1,318	(20 )	—
	\$ 63,269	\$ (127,110)	\$ (96,378)
Net income (loss) per common share - basic			
Continuing operations	\$ 0.63	\$ (1.21 )	\$ (0.79 )
Discontinued operations	0.01	—	—
	\$ 0.64	\$ (1.21 )	\$ (0.79 )
Net income (loss) per common share - diluted			
Continuing operations	\$ 0.61	\$ (1.21 )	\$ (0.79 )
Discontinued operations	0.01	—	—
	\$ 0.62	\$ (1.21 )	\$ (0.79 )
Weighted average shares outstanding:			
Basic	98,835	104,605	122,132
Diluted	101,468	104,605	122,132

See accompanying notes to consolidated financial statements



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ABRAXAS PETROLEUM CORPORATION

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

	Years Ended December 31,		
	2014	2015	2016
	(In thousands)		
Net income (loss)	\$63,269	\$(127,110)	\$(96,378)
Other comprehensive income (loss):			
Foreign currency translation adjustment	607	—	—
Other comprehensive income (loss)	607	—	—
Comprehensive income (loss)	\$63,876	\$(127,110)	\$(96,378)

See accompanying notes to consolidated financial statements

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ABRAXAS PETROLEUM CORPORATION  
 CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)  
 (In thousands except number of shares)

	Common Stock					
	Shares	Amount	Additional Paid in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total
Balance at December 31, 2013	92,906,049	\$ 929	\$253,193	\$ (166,609 )	\$ (607 )	\$86,906
Net income	—	—	—	63,269	—	63,269
Foreign currency translation adjustment	—	—	—	—	607	607
Stock issuance	11,500,000	115	53,640	—	—	53,755
Stock-based compensation	—	—	2,703	—	—	2,703
Stock options exercised	238,157	3	252	—	—	255
Restricted stock issued, net of forfeitures	1,542,472	15	(15 )	—	—	—
Balance at December 31, 2014	106,186,678	1,062	309,773	(103,340 )	—	207,495
Net loss	—	—	—	(127,110 )	—	(127,110)
Stock-based compensation	—	—	3,912	—	—	3,912
Stock options exercised	164,400	1	167	—	—	168
Restricted stock issued, net of forfeitures	(5,077 )	—	—	—	—	—
Balance at December 31, 2015	106,346,001	1,063	313,852	(230,450 )	—	84,465
Net loss	—	—	—	(96,378 )	—	(96,378 )
Stock issuance	28,750,000	287	26,848	—	—	27,135
Stock-based compensation	—	—	3,194	—	—	3,194
Stock issued for compensation	41,102	—	40	—	—	40
Stock options exercised	55,716	1	48	—	—	49
Restricted stock forfeitures	(98,802 )	—	—	—	—	—
Balance at December 31, 2016	135,094,017	\$ 1,351	\$343,982	\$ (326,828 )	\$ —	\$18,505

See accompanying notes to consolidated financial statements

Table of ContentsABRAXAS PETROLEUM CORPORATION  
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Years Ended December 31,		
	2014	2015	2016
	(In thousands)		
<b>Operating Activities</b>			
Net income (loss)	\$63,269	\$(127,110)	\$(96,378)
Income (loss) from discontinued operations	1,318	(20)	—
Income (loss) from continuing operations	61,951	(127,090)	(96,378)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Gain on sale of properties	—	—	(374)
Net (gain) loss on derivative contracts	(25,237)	(19,301)	18,028
Derivative contract settlements	361	9,495	1,790
Monetization of derivative contracts	152	4,610	14,370
Depreciation, depletion, and amortization	43,139	38,721	24,431
Proved property impairment	—	128,573	67,626
Accretion of future site restoration	559	565	491
Amortization of deferred financing fees	934	643	1,019
Stock-based compensation	2,703	3,912	3,194
Non-cash compensation	—	—	40
Changes in operating assets and liabilities:			
Accounts receivable - net of allowance	11,881	12,097	(4,018)
Other assets and liabilities	(2,717)	1,466	627
Accounts payable	1,596	(45,970)	(3,535)
Accrued expenses	(860)	(722)	(439)
Net cash provided by continuing operations	94,462	6,999	26,872
Net cash provided by (used in) discontinued operations	1,741	(20)	—
Net cash provided by operating activities	96,203	6,979	26,872
<b>Investing Activities</b>			
Capital expenditures, including purchases and development of properties	(192,799)	(69,391)	(31,663)
Proceeds from the sale of oil and gas properties	5,999	138	13,570
Proceeds from the sale of non-oil and gas properties	—	—	4,022
Net cash used in continuing operations	(186,800)	(69,253)	(14,071)
Net cash provided by discontinued operations	332	—	—
Net cash used in investing activities	(186,468)	(69,253)	(14,071)
<b>Financing Activities</b>			
Proceeds from exercise of stock options	255	168	49
Proceeds from issuance of common stock, net of offering costs	53,755	—	27,135
Proceeds from long-term borrowings	82,000	68,007	22,000
Payments on long-term borrowings	(47,143)	(6,064)	(65,330)
Deferred financing fees	(1,010)	(69)	(195)
Net cash provided by (used in) continuing operations	87,857	62,042	(16,341)
Net cash provided by discontinued operations	975	—	—
Net cash provided by (used in) financing activities	88,832	62,042	(16,341)

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	Years Ended December 31,		
	2014	2015	2016
	(In thousands)		
Decrease in cash	(1,433 )	(232 )	(3,540 )
Cash and cash equivalents at beginning of year	5,205	3,772	3,540
Cash and cash equivalents at end of year	\$3,772	\$3,540	\$—
Supplemental disclosures of cash flow information:			
Interest paid	\$1,970	\$3,298	\$3,899
Income taxes paid	\$—	\$—	\$—
Non-cash investing activities:			
Asset retirement obligation cost and liabilities	\$198	\$30	\$285
Properties classified as held for sale	\$—	\$—	\$9,685
Asset retirement obligations associated with property acquisitions and dispositions	\$(406 )	\$410	\$(1,832)

See accompanying notes to consolidated financial statements

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ABRAXAS PETROLEUM CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Organization and Significant Accounting Policies

Nature of Operations

We are an independent energy company primarily engaged in the acquisition, exploitation, development and production of oil and gas in the United States. Our oil and gas assets are located in three operating regions in the United States, the Rocky Mountain, Permian Basin and South Texas.

The terms “Abraxas,” “Abraxas Petroleum,” “we,” “us,” “our” or the “Company” refer to Abraxas Petroleum Corporation and of its subsidiaries, including Raven Drilling LLC (“Raven Drilling”).

Rig Accounting

In accordance with SEC Regulation S-X, no income is recognized in connection with contractual drilling services performed in connection with properties in which the Company or its affiliates holds an ownership, or other economic interest. Any income not recognized as a result of this limitation is credited to the full cost pool and recognized through lower amortization as reserves are produced.

Use of Estimates

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

The process of estimating oil and gas reserves in accordance with SEC requirements is complex and involves decisions and assumptions in evaluating the available geological, geophysical, engineering and economic data. Accordingly, these estimates are imprecise. Actual future production, oil and gas prices, revenues, taxes, capital expenditures, operating expenses and quantities of recoverable oil and gas reserves most likely will vary from those estimated. Any significant variance could materially affect the estimated quantities and present value of our reserves. In addition, we may adjust estimates of proved reserves to reflect production history, results of exploration and development, prevailing oil and gas prices and other factors, many of which are beyond our control.

The most significant estimates pertain to proved oil, natural gas and NGLs reserves and related cash flow estimates used in impairment tests of oil and gas properties, the fair value of assets and liabilities acquired in business combinations, derivative contracts, asset retirement obligations, accrued oil and gas revenues and expenses, as well as estimates of expenses related to depreciation, depletion, amortization and accretion. Actual results could differ from those estimates.

Concentration of Credit Risk

Financial instruments which potentially expose the Company to credit risk consist principally of trade receivables and derivative contracts. Accounts receivable are generally from companies with significant oil and gas marketing



activities. The Company performs ongoing credit evaluations and, generally, requires no collateral from its customers. The counterparties to our derivative contracts are the same financial institutions from which we have outstanding debt; accordingly, we believe our exposure to credit risk to these counterparties is currently mitigated in part by this, as well as the current overall financial condition of the counterparties.

The Company maintains any cash and cash equivalents in excess of federally insured limits in prominent financial institutions considered by the Company to be of high credit quality.

#### Cash and Equivalents

Cash and cash equivalents include cash on hand, demand deposits and short-term investments with original maturities of three months or less.

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### Accounts Receivable

Accounts receivable are reported net of an allowance for doubtful accounts of approximately \$296,000 and \$228,000 at December 31, 2015 and 2016, respectively. The allowance for doubtful accounts is determined based on the Company's historical losses, as well as a review of certain accounts. Accounts are charged off when collection efforts have failed and the account is deemed uncollectible.

### Industry Segment and Geographic Information

The Company operates in one industry segment, which is the exploration, development and production of oil and gas with all of the Company's operational activities having been conducted in the U.S. The Company's current operational activities and the Company's consolidated revenues are generated from markets exclusively in the U.S., and the Company has no long lived assets located outside the U.S.

### Oil and Gas Properties

The Company follows the full cost method of accounting for oil and gas properties. Under this method, all direct costs and certain indirect costs associated with acquisition of properties and successful as well as unsuccessful exploration and development activities are capitalized. Depreciation, depletion, and amortization of capitalized oil and gas properties and estimated future development costs, excluding unproved properties, are based on the unit-of-production method based on proved reserves. Net capitalized costs of oil and gas properties, less related deferred taxes, are limited by country, to the lower of unamortized cost or the cost ceiling, defined as the sum of the present value of estimated future net revenues from proved reserves based on unescalated prices discounted at 10%, plus the cost of properties not being amortized, if any, plus the lower of cost or estimated fair value of unproved properties included in the costs being amortized, if any, less related income taxes. Costs in excess of the present value of estimated future net revenues are charged to proved property impairment expense. No gain or loss is recognized upon sale or disposition of oil and gas properties for full cost accounting companies with proceeds accounted for as an adjustment of capitalized cost. An exception to this rule occurs when the adjustment to the full cost pool results in a significant alteration of the relationship between capitalized cost and proved reserves. The Company applies the full cost ceiling test on a quarterly basis on the date of the latest balance sheet presented. For the year ended December 31, 2015, our capitalized cost of oil and gas properties exceeded the present value of our estimated proved reserves by \$128.6 million, resulting in the recognition of a proved property impairment of \$128.6 million. As of December 31, 2016, our capitalized cost of oil and gas properties did not exceed the present value of our estimated proved reserves. However, we incurred proved property impairments in each of the first three quarters of 2016 in the amount of \$67.6 million. The impairment calculations did not consider the impact of our commodity derivative positions as generally accepted accounting principles only allow the inclusion of derivatives designated as cash flow hedges.

### Other Property and Equipment

Other property and equipment are recorded on the basis of cost. Depreciation of other property and equipment is provided over the estimated useful lives using the straight-line method. Major renewals and improvements are recorded as additions to the property and equipment accounts. Repairs that do not improve or extend the useful lives of assets are expensed.

### Assets Held for Sale

The Company entered into an agreement to sell certain non-core assets in late 2016 that are presented separately as "Assets held for sale" in the consolidated balance sheet at December 31, 2016. Assets held for sale were measured at the lower of its carrying amount or estimated fair value less costs to sell. The amount allocated to assets held for sale

were recorded as a reduction to the full cost pool. The transaction closed and proceeds were received on January 3, 2017. See Note 14. Subsequent Events.

#### Estimates of Proved Oil and Gas Reserves

Estimates of our proved reserves included in this report are prepared in accordance with GAAP and SEC guidelines. The accuracy of a reserve estimate is a function of:

- the quality and quantity of available data;
- the interpretation of that data;
- the accuracy of various mandated economic assumptions; and
- the judgment of the persons preparing the estimate.

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Our proved reserve information included in this report was based on studies performed by our independent petroleum engineers assisted by the engineering and operations departments of Abraxas. Estimates prepared by other third parties may be higher or lower than those included herein. Because these estimates depend on many assumptions, all of which may substantially differ from future actual results, reserve estimates will be different from the quantities of oil and gas that are ultimately recovered. In addition, results of drilling, testing and production after the date of an estimate may cause material revisions to the estimate.

In accordance with SEC requirements, we based the estimated discounted future net cash flows from proved reserves on the average of oil and gas prices based on the unweighted average 12 month first-day-of-month pricing. Future prices and costs may be materially higher or lower than these prices and costs which would impact the estimated value of our reserves.

The estimates of proved reserves materially impact depreciation, depletion and amortization, or DD&A expense. If the estimates of proved reserves decline, the rate at which we record DD&A expense will increase, reducing future net income. Such a decline may result from lower commodity prices, which may make it uneconomic to drill for and produce higher cost fields.

### Derivative Instruments and Hedging Activities

The Company enters into agreements to hedge the risk of future oil and gas price fluctuations. Such agreements are in the form of fixed price swaps and three way collars, which limit the impact of price fluctuations with respect to the Company's sale of oil and gas. While it is never management's intention to hold or issue derivative instruments for speculative trading purposes, conditions could arise where actual production is less than estimated which could, result in overhedged volumes.

All derivative instruments are recorded on the Consolidated Balance Sheets at fair value as either short-term or long-term assets or liabilities based on their anticipated settlement date. The derivative instruments the Company utilizes are based on index prices that may and often do differ from the actual oil and gas prices realized in its operations. These variations often result in a lack of adequate correlation to enable these derivative instruments to qualify for hedge accounting rules as prescribed by Accounting Standards Codification ("ASC") 815. Accordingly, the Company does not account for its derivative instruments as cash flow hedges for financial reporting purposes. Therefore, changes in fair value of these derivative instruments are recognized in earnings and included in net gains (losses) on commodity derivative contracts in the Consolidated Statements of Operations.

### Fair Value of Financial Instruments

The Company includes fair value information in the notes to consolidated financial statements when the fair value of its financial instruments is materially different from the carrying value. The carrying value of those financial instruments that are classified as current approximates fair value because of the short maturity of these instruments. For noncurrent financial instruments, the Company uses quoted market prices or, to the extent that there are no available quoted market prices, market prices for similar instruments.

### Share-Based Payments

Options granted are valued at the date of grant and expense is recognized over the vesting period. The Company currently utilizes a standard option pricing model (Black-Scholes) to measure the fair value of stock options granted to employees and directors. Restricted stock awards are awards of common stock that are subject to restrictions on transfer and to a risk of forfeiture if the awardee terminates employment with the Company prior to the lapse of the

restrictions. The value of such restricted stock is determined using the market price on the grant date and expense is recorded over the vesting period. For the years ended December 31, 2014, 2015 and 2016, stock-based compensation was approximately \$2.7 million, \$3.9 million and \$3.2 million, respectively.

#### Restoration, Removal and Environmental Liabilities

The Company is subject to extensive federal, state and local environmental laws and regulations. These laws regulate the discharge of materials into the environment and may require the Company to remove or mitigate the environmental effects of the disposal or release of petroleum substances at various sites. Environmental expenditures are expensed or capitalized depending on their future economic benefit. Expenditures that relate to an existing condition caused by past operations and that have no future economic benefit are expensed.

Liabilities for expenditures of a noncapital nature are recorded when environmental assessments and/or remediation is probable, and the costs can be reasonably estimated. Such liabilities are generally undiscounted unless the timing of cash payments for the liability or component are fixed or reliably determinable.

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The fair value of a liability for an asset's retirement obligation is recorded in the period in which it is incurred and the corresponding cost capitalized by increasing the carrying amount of the related long-lived asset. The liability is accreted to its then present value each period and the capitalized cost is depreciated over the estimated useful life of the related asset. For all periods presented, we have included estimated future costs of abandonment and dismantlement in our full cost amortization base and we amortize these costs as a component of our depletion expense in the accompanying consolidated financial statements. Each year, the Company reviews, and to the extent necessary, revises its asset retirement obligation estimates.

The following table summarizes the Company's asset retirement obligations during the two years ended December 31:

	2015	2016
	(in thousands)	
Beginning asset retirement obligation	\$9,495	\$9,679
New wells placed on production and other	307	119
Deletions related to property disposals and plugging costs	(793 )	(1,832 )
Accretion expense	565	491
Revisions	105	166
Ending asset retirement obligation	\$9,679	\$8,623

## Revenue Recognition and Major Purchasers

The Company recognizes oil and gas revenue from its interest in producing wells as oil and gas is sold from those wells, net of royalties. The Company utilizes the sales method to account for gas production imbalances. Under this method, income is recorded based on the Company's net revenue interest in production taken for delivery. The Company had no material gas imbalances at December 31, 2015 and 2016.

During 2014, two purchasers accounted for 62% of oil and gas revenues. During 2015, one purchaser accounted for 54% of oil and gas revenues. During 2016, two purchasers accounted for 71% of our oil and gas revenues.

## Deferred Financing Fees

Deferred financing fees are being amortized on the effective yield basis over the term of the related debt arrangements.

## Income Taxes

Deferred tax assets and liabilities are recognized for future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to be in effect with respect to taxable income in the years in which those temporary differences are expected to be recovered or settled. Uncertainties exist as to the future utilization of the operating loss carryforwards. Therefore, we have established a valuation allowance of \$137.8 million for deferred tax assets at December 31, 2016.

## Accounting for Uncertainty in Income Taxes

Evaluation of a tax position is a two-step process. The first step is to determine whether it is more-likely-than-not that a tax position will be sustained upon examination, including the resolution of any related appeals or litigation based on the technical merits of that position. The second step is to measure a tax position that meets the more-likely-than-not threshold to determine the amount of benefit to be recognized in the financial statements. A tax position is measured at the largest amount of benefit that is greater than 50% likely of being realized upon ultimate settlement.

Tax positions that previously failed to meet the more-likely-than-not recognition threshold should be recognized in the first subsequent period in which the threshold is met. Previously recognized tax positions that no longer meet the more-likely-than-not criteria should be de-recognized in the first subsequent reporting period in which the threshold is no longer met. Penalties and interest are classified as income tax expense. The Company had no uncertain income tax positions as of December 31, 2016.

New Accounting Standards and Disclosures

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In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update No. 2014-09, Revenue from Contracts with Customers ("ASU 2014-09"). The objective of ASU 2014-09 is greater consistency and comparability across industries by using a five-step model to recognize revenue from customer contracts. ASU 2014-09 also contains some new disclosure requirements under GAAP. In August 2015, the FASB issued Accounting Standards Update No. 2015-14, Deferral of the Effective Date ("ASU 2015-14"). ASU 2015-14 defers the effective date of the new revenue standard by one year, making it effective for annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period. In 2016, the FASB issued additional accounting standards updates to clarify the implementation guidance of ASU 2014-09. We are currently evaluating the impact, if any, of the standard by comparing historical accounting policies and practices to the new standard and will evaluate guidance from accounting regulatory agencies as it becomes available.

The FASB issued ASU 2015-03, Interest – Imputation of Interest (Topic 835): Simplifying the Presentation of Debt Issuance Costs and ASU 2015-15, Interest – Imputation of Interest (Topic 835): Presentation and Subsequent Measurement of Debt Issuance Costs Associated with Line-of-Credit Arrangements. These ASUs require debt issuance costs related to a recognized debt liability, except for those related to revolving credit facilities, to be presented on the balance sheet as a direct deduction from the carrying amount of that debt liability rather than as an asset. These ASUs are effective beginning January 1, 2016 and have been applied using the retrospective approach. These ASUs did not have a material impact on Abraxas's consolidated financial statements and related disclosures.

In August 2015, the FASB issued ASU 2015-15, "Presentation and Subsequent Measurement of Debt Issuance Costs Associated with Line-of-Credit Arrangements", codifies an SEC staff announcement that entities are permitted to defer and present debt issuance costs related to line-of-credit arrangements as assets. The ASU clarifies that the SEC staff would not object to an entity deferring and presenting debt issuance costs as an asset and subsequently amortizing the deferred debt issuance costs ratably over the term of the line-of-credit arrangement, regardless of whether there are any outstanding borrowings on the line-of-credit arrangement. The ASU is effective immediately for both public business entities and non-public entities. Abraxas has elected to follow this presentation guidance.

The FASB issued ASU 2015-17, Balance Sheet Classification of Deferred Taxes. This ASU requires that all deferred tax assets and liabilities, along with any related valuation allowance, be classified as noncurrent on the balance sheet. This ASU is effective for annual and interim periods beginning in 2017 and can be applied prospectively or retrospectively, with early adoption permitted. We have adopted and applied this standard using the retrospective approach. This ASU did not have an impact on our consolidated financial statements and related disclosures.

In September 2015, the FASB issued ASU No. 2015-16, Business Combinations (Topic 805): Simplifying the Accounting for Measurement-Period Adjustments ("ASU No. 2015-16") to simplify the accounting for adjustments made to provisional amounts recognized in a business combination by eliminating the requirement to retrospectively account for those adjustments. The amendments under ASU No. 2015-16 require that an acquirer recognize adjustments to provisional amounts that are identified during the measurement period in the reporting period in which the adjustment is effective.

In February 2016, the FASB issued ASU 2016-02 "Leases," which supersedes ASC 840 "Leases" and creates a new topic, ASC 842 "Leases." This update requires lessees to recognize a lease liability and a lease asset for all leases, including operating leases, with a term greater than 12 months on its balance sheet. The update also expands the required quantitative and qualitative disclosures surrounding leases. This update is effective for fiscal years beginning after December 15, 2018 and interim periods within those fiscal years, with earlier application permitted. This update will be applied using a modified retrospective transition approach for leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements. We are currently evaluating the effect of this update on our consolidated financial statements and related disclosures.



In March 2016, the FASB issued ASU No. 2016-09, Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting, which includes provisions intended to simplify various aspects related to how share-based compensation payments are accounted for and presented in the financial statements. This amendment will be effective prospectively for reporting periods beginning on or after December 15, 2016, and early adoption is permitted. The Company is currently assessing the impact of the ASU on the Company's consolidated financial statements.

In August 2016, FASB issued amended guidance to address diversity in how certain cash receipts and cash payments are presented and classified in the statement of cash flows. The amendments provide guidance on the following eight specific cash flow issues: Debt prepayment or debt extinguishment costs; settlement of zero-coupon debt instruments or other debt instruments with coupon interest rates that are insignificant in relation to the effective interest rate of the borrowing; contingent consideration payments made after a business combination; proceeds from the settlement of insurance claims; proceeds from the settlement of corporate-owned life insurance policies; distributions received from equity method investees; beneficial interests in securitization transactions; and separately identifiable cash flows and application of the predominance principle.

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In August 2014, the FASB issued updated guidance related to determining whether substantial doubt exists about an entity's ability to continue as a going concern. The amendment provides guidance for determining whether conditions or events give rise to substantial doubt that an entity has the ability to continue as a going concern within one year following issuance of the financial statements, and requires specific disclosures regarding the conditions or events leading to substantial doubt. The updated guidance is effective for annual reporting periods ending after December 15, 2016, and to annual and interim periods thereafter. Earlier adoption is permitted. The Company has adopted this guidance as of December 31, 2016 and there is no impact on its consolidated financial statements.

## 2. Divestiture of Properties

Beginning in the third quarter of 2012 and continuing through the present, the Company's business plan has been to divest various properties considered non-core, and primarily non-operated to focus on its core basins in the Eagle Ford, Bakken and Permian Basin. In total the Company divested a number of non-core assets for total net proceeds of \$169.9 million from 2012-2016. The net proceeds were used to repay outstanding indebtedness under the Company's credit facility, for capital expenditures and general corporate purposes.

## 3. Long-Term Debt

The following is a description of the Company's debt as of December 31, 2015 and 2016, respectively:

	December 31, 2015	December 31, 2016
	(In thousands)	
Senior secured credit facility	\$ 134,000	\$ 93,000
Rig loan agreement	2,620	535
Real estate lien note	4,112	3,867
	140,732	97,402
Less current maturities	(2,330 )	(786 )
	\$ 138,402	\$ 96,616

Maturities of long-term debt are as follows:

Year ending December 31, (In thousands)

2017	\$786
2018	93,261
2019	273
2020	285
2021	297
Thereafter	2,500
	\$97,402

## Credit Facility

We have a senior secured credit facility with Société Générale, as administrative agent and issuing lender, and certain other lenders, which we refer to as the credit facility. As of December 31, 2016, \$93.0 million was outstanding under the credit facility.

The credit facility has a maximum commitment of \$300.0 million and availability is subject to a borrowing base. At December 31, 2016, we had a borrowing base of \$115.0 million. The borrowing base is determined semi-annually by the lenders based upon our reserve reports, one of which must be prepared by our independent petroleum engineers and one of which may be prepared internally. The amount of the borrowing base is calculated by the lenders based upon their valuation of our proved reserves securing the facility utilizing these reserve reports and their own internal decisions. In addition, the lenders, in their sole discretion, are able to make one additional borrowing base redetermination during any six-month period between scheduled redeterminations and we are able to request one redetermination during any six-month period between scheduled redeterminations. The next redetermination will be effective on April 1, 2017. Outstanding borrowings in excess of the borrowing base must be repaid

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immediately or we must pledge additional oil and gas properties or other assets as collateral. We do not currently have any substantial unpledged assets and we may not have the financial resources to make any mandatory principal payments. In addition, a reduction of the borrowing base could also cause us to fail to be in compliance with the financial covenants described below. The borrowing base will be automatically reduced in connection with any sales of producing properties with a market value of 5% or more of our then-current borrowing base and in connection with any hedge termination which could reduce the collateral value by 5% or more. Our borrowing base can never exceed the \$300.0 million maximum commitment amount. Outstanding amounts under the credit facility bear interest at (a) the greater of (1) the reference rate announced from time to time by Société Générale, (2) the Federal Funds Rate plus 0.5%, and (3) a rate determined by Société Générale as the daily one-month LIBOR plus, in each case, (b) 0.75%—1.75%, depending on the utilization of the borrowing base, or, if we elect LIBOR plus 1.75%—2.75%, depending on the utilization of the borrowing base. At December 31, 2016, the interest rate on the credit facility was 3.27% based on 1-month LIBOR borrowings and level of utilization.

Subject to earlier termination rights and events of default, the stated maturity date of the credit facility is June 30, 2018. Interest is payable quarterly on reference rate advances and not less than quarterly on LIBOR advances. We are permitted to terminate the credit facility and are able, from time to time, to permanently reduce the lenders' aggregate commitment under the credit facility in compliance with certain notice and dollar increment requirements.

Each of our subsidiaries has guaranteed our obligations under the credit facility on a senior secured basis. Obligations under the credit facility are secured by a first priority perfected security interest, subject to certain permitted encumbrances, in all of our and our subsidiary guarantors' material property and assets. The collateral is required to include properties comprising of least 90% of the PV-10 of our proven reserves. We have also granted our lenders a security interest in our headquarters building and a ranch that we own in West Texas.

Under the credit facility, we are subject to customary covenants, including certain financial covenants and reporting requirements. We are required to maintain a current ratio, as of the last day of each quarter of not less than 1.00 to 1.00 and an interest coverage ratio of not less than 2.50 to 1.00. We are also required as of the last day of each quarter to maintain a total debt to EBITDAX ratio of not more than 4.00 to 1.00. The current ratio is defined as the ratio of consolidated current assets to consolidated current liabilities. For the purposes of this calculation, current assets include the portion of the borrowing base which is undrawn but excludes any cash deposited with a counter-party to a hedging arrangement and any assets representing a valuation account arising from the application of ASC 815, Derivatives and Hedging, and ASC 410-20 Asset Retirement Obligations, and current liabilities exclude the current portion of long-term debt and any liabilities representing a valuation account arising from the application of ASC 815 and ASC 410-20. The interest coverage ratio is defined as the ratio of consolidated EBITDAX to consolidated interest expense for the four fiscal quarters ended on the calculation date. For the purposes of this calculation, EBITDAX is defined as the sum of consolidated net income plus interest expense, oil and gas exploration expenses, income, franchise or margin taxes, depreciation, amortization, depletion and other non-cash charges including non-cash charges resulting from the application of ASC 718, ASC 815 and ASC 410-20 plus all realized net cash proceeds arising from the settlement or monetization of any hedge contracts plus expenses incurred in connection with the negotiation, execution, delivery and performance of the Credit Facility plus expenses incurred in connection with any acquisition permitted under the Credit Facility plus expenses incurred in connection with any offering of senior unsecured notes, subordinated debt or equity plus up to \$1.0 million of extraordinary expenses in any 12-month period plus extraordinary losses minus all non-cash items of income which were included in determining consolidated net income, including all non-cash items resulting from the application of ASC 815 and ASC 410-20. Interest expense includes total interest, letter of credit fees and other fees and expenses incurred in connection with any debt. The total debt to EBITDAX ratio is defined as the ratio of total debt to consolidated EBITDAX for the four fiscal quarters ended on the calculation date. For the purposes of this calculation, total debt is the outstanding principal amount of debt, excluding debt associated with the office building and obligations with respect to surety bonds and derivative contracts.

At December 31, 2016 we were in compliance with all of our debt covenants. As of December 31, 2016, the interest coverage ratio was 10.49 to 1.00, the total debt to EBITDAX ratio was 2.32 to 1.00, and our current ratio was 1.64 to 1.00.

The credit facility contains a number of other covenants that, among other things, restrict our ability to:

• incur or guarantee additional indebtedness;

• transfer or sell assets;

• create liens on assets;

• engage in transactions with affiliates other than on an “arm’s length” basis;

• make any change in the principal nature of our business; and

• permit a change of control.

The credit facility also contains certain additional covenants including:

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100% of the net proceeds from any terminations of derivative contracts must be used to repay amounts outstanding under the credit facility; and

If the sum of our cash on hand plus liquid investments exceeds \$10.0 million, then the amount in excess of \$10.0 million must be used to pay amounts outstanding under the credit facility.

The credit facility also contains customary events of default, including nonpayment of principal or interest, violations of covenants, cross default and cross acceleration to certain other indebtedness, bankruptcy and material judgments and liabilities. As of December 31, 2016 we were in compliance with all of these conditions.

**Rig Loan Agreement**

On September 19, 2011, Raven Drilling entered into a rig loan agreement, secured by our Oilwell 2000 HP diesel electric drilling rig (the "Collateral"). The original principal amount of the note was \$7.0 million and bears interest at 4.26%. The note is payable in monthly interest and principal payments in the amount of \$179,695. As of December 31, 2015 and 2016, \$2.6 million and \$0.5 million, respectively, were outstanding under the rig loan agreement. This loan was paid in full in March 2017.

**Real Estate Lien Note**

We have a real estate lien note secured by a first lien deed of trust on the property and improvements which serves as our corporate headquarters. The note bears interest for five years at a fixed rate of 4.25% and is payable in monthly installments of \$34,354. Beginning August 20, 2018, the interest rate will adjust to the current bank prime rate plus 1.00% with a maximum rate of 7.25%. The maturity date of the note is July 20, 2023. As of December 31, 2015 and 2016, \$4.1 million and \$3.9 million, respectively, were outstanding on the note.

**4. Property and Equipment**

The major components of property and equipment, at cost, are as follows:

	Estimated Useful Life	December 31,	
	Years	2015	2016
		(In thousands)	
Oil and gas properties	—	\$787,683	\$794,634
Equipment and other	3-39	18,866	15,227
Drilling rig	15	22,578	23,342
		829,127	833,203
Accumulated depreciation, depletion, amortization and impairment		(604,289 )	(696,892 )
Net Property and Equipment		\$224,838	\$136,311

**5. Stock-Based Compensation and Option Plans**

The Company's Amended and Restated 2005 Employee Long-Term Equity Incentive Plan reserves 10.6 million shares of Abraxas common stock, subject to adjustment following certain events. Awards may be in options or shares of restricted stock. Options have a term not to exceed 10 years. Options issued under this plan vest according to a vesting schedule as determined by the compensation committee of the Company's board of directors. Vesting may occur upon (1) the attainment of one or more performance goals or targets established by the committee, (2) the optionee's continued employment or service for a specified period of time, (3) the occurrence of any event or the satisfaction of any other condition specified by the committee, or (4) a combination of any of the foregoing.

## Stock Options

The Company utilizes a standard option pricing model (Black-Scholes) to measure the fair value of stock options granted to employees and directors. The fair value for these options was estimated at the date of grant using the following weighted average assumptions for 2014, 2015 and 2016:

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	2014	2015	2016	
Weighted average value per option granted during the period	\$2.44	\$2.37	\$0.68	
Assumptions:				
Forfeiture rate (1)	4.2	% 4.5	% 4.2	%
Expected dividend yield (2)	—	% —	% —	%
Volatility (3)	80.7	% 81.1	% 71.1	%
Risk free interest rate (4)	2.05	% 1.92	% 1.72	%
Expected life (years) (5)	6.6	7.0	7.0	
Fair value of options granted (in thousands)	\$2,666	\$3,792	\$2,307	

(1) The estimated future forfeiture rate is based on the Company's historical forfeiture rate.

(2) The dividend yield is based on the fact the Company does not pay any dividends.

(3) The volatility is based on the historical volatility of our stock for a period approximating the expected life.

(4) The risk-free interest rate is based on the observed U.S. Treasury yield curve in effect at the time the options were granted.

(5) The expected life was derived based on a weighting between (a) the Company's historical exercise and forfeiture activity and (b) the average midpoint between vesting and the contractual term.

The Company grants options to its officers, directors, and other employees under various stock option and incentive plans.

The following table is a summary of the Company's stock option activity for the three years ended December 31:

	Options (000s)	Weighted average exercise price	Weighted average remaining life	Intrinsic value per share
Options outstanding December 31, 2013	5,400	\$ 2.77		
Granted	1,091	3.38		
Exercised	(410 )	2.71		
Forfeited/Expired	(196 )	3.08		
Options outstanding December 31, 2014	5,885	\$ 2.88		
Granted	1,601	3.22		
Exercised	(164 )	1.03		
Forfeited/Expired	(514 )	4.36		
Options outstanding December 31, 2015	6,808	\$ 2.89		
Granted	2,265	1.02		
Exercised	(83 )	1.40		
Forfeited/Expired	(836 )	2.84		
Options outstanding December 31, 2016	8,154	\$ 2.39	6.39	1.70
Exercisable at end of year	4,808		4.90	1.93

Other information pertaining to the Company's stock option activity for the three years ended December 31:

	2014	2015	2016
Weighted average grant date fair value of stock options granted (per share)	\$2.44	\$2.37	\$0.68



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Total fair value of options vested (000's)	\$1,718	\$2,035	\$2,776
Total intrinsic value of options exercised (000's)	\$932	\$124	\$39

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As of December 31, 2016, the total compensation cost related to non-vested awards not yet recognized was approximately \$2.9 million, which will be recognized in 2017 through 2020. For the years ended December 31, 2014, 2015 and 2016, we recognized \$1.8 million, \$2.4 million and \$2.0 million, respectively, in stock-based compensation expense relating to options.

The following table represents the range of stock option prices and the weighted average remaining life of outstanding options as of December 31, 2016:

	Options outstanding		Exercisable	
	Number outstanding	Weighted average remaining life	Number exercisable	Weighted average remaining life
		price		price
0.97 - 1.99	3,462,042	6.7	1,595,042	3.8
2.00 - 2.99	1,240,350	5.2	1,102,063	5.0
3.00 - 3.99	2,765,633	7.0	1,438,408	6.3
4.00 - 4.99	585,750	3.6	574,750	3.6
5.00 - 5.99	99,000	7.4	97,500	7.4
6.00 - 6.28	1,000	7.5	500	7.5
	8,153,775		4,808,263	

## Restricted Stock Awards

Restricted stock awards are awards of common stock that are subject to restrictions on transfer and to a risk of forfeiture if the awardee terminates employment with the Company prior to the lapse of the restrictions. The value of such stock is determined using the market price on the grant date. Compensation expense is recorded over the applicable restricted stock vesting periods. As of December 31, 2016, the total compensation cost related to non-vested awards not yet recognized was approximately \$1.9 million, which will be recognized in 2017 through 2020. For the years ended December 31, 2014, 2015 and 2016, we recognized \$0.9 million, \$1.5 million and \$1.2 million, respectively, in stock-based compensation expense related to restricted stock awards.

The following table is a summary of the Company's restricted stock activity for the three years ended December 31, 2016:

	Number of Shares	Weighted average grant date fair value
Unvested December 31, 2013	355,240	\$ 3.24
Granted	1,582,000	3.49
Vested/Released	(121,622 )	3.64
Forfeited	(39,528 )	3.44
Unvested December 31, 2014	1,776,090	\$ 3.43
Granted	—	—
Vested/Released	(127,729 )	3.38
Forfeited	(5,077 )	2.56
Unvested December 31, 2015	1,643,284	\$ 3.44
Granted	—	—
Vested/Released	(52,017 )	2.40
Forfeited	(98,802 )	3.63
Unvested December 31, 2016	1,492,465	\$ 3.47

Director Stock Awards

The 2005 Directors Plan (as amended and restated) reserves 1.9 million shares of Abraxas common stock, subject to adjustment following certain events. The 2005 Directors Plan provides that each year, at the first regular meeting of the board of directors immediately following Abraxas' annual stockholder's meeting, each non-employee director shall be granted or issued awards of 25,000 shares of Abraxas common stock, for participation in board and committee meetings during the previous calendar year. The maximum annual award for any one person is 100,000 shares of Abraxas common stock or options for common stock. If

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options, as opposed to shares, are awarded, the exercise price shall be no less than 100% of the fair market value on the date of the award while the option terms and vesting schedules are at the discretion of the committee. In 2014 and 2015 directors were paid a retainer fee of \$40,000. Beginning in 2016, the retainer fee was reduced by 20% and paid one half in cash and one half in Abraxas common stock. The retainer fee for 2016 was \$32,000.

At December 31, 2016, the Company had approximately 9.0 million shares reserved for future issuance for conversion of its stock options, and incentive plans for the Company's directors, employees and consultants.

## 6. Income Taxes

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company's deferred tax liabilities and assets are as follows:

	Years Ended December 31,		
	2014	2015	2016
	(In thousands)		
Deferred tax liabilities:			
Hedge contracts	\$8,114	\$9,578	\$ —
Assets held for sale	—	—	3,390
Other	4,458	4,042	4,431
Total deferred tax liabilities	12,572	13,620	7,821
Deferred tax assets:			
U.S. full cost pool	3,352	35,689	48,436
Capital loss carryforward	12,325	7,767	7,361
Depletion carryforward	4,936	5,558	5,216
U.S. net operating loss carryforward	50,941	67,531	80,670
Alternative minimum tax credit	1,104	757	757
Hedge contracts	—	—	3,135
Total deferred tax assets	72,658	117,302	145,575
Valuation allowance for deferred tax assets	(60,086)	(103,682)	(137,754)
Net deferred tax assets	12,572	13,620	7,821
Net deferred tax	\$—	\$—	\$ —

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

	Years ended		
	December 31,		
	2014	2015	2016
	(In thousands)		
Current:			
Federal	\$(276)	\$(242)	\$ —
State	(11 )	(37 )	—
	\$(287)	\$(279)	\$ —
Deferred:			
Federal	\$—	\$—	\$ —
	\$—	\$—	\$ —

At December 31, 2016, the Company had, subject to the limitation discussed below, \$230.5 million of net operating loss carryforwards for U.S. tax purposes. The U.S. federal loss carryforward will expire in varying amounts from

2022 through 2036, if not utilized.

The use of our net operating loss carryforwards will be limited if there is an "ownership change" in our common stock, generally a cumulative ownership change exceeding 50% during a three year period, as determined under Section 382 of the Internal Revenue Code. As of December 31, 2016, we have not had an ownership change as defined by Section 382. In addition

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to any Section 382 limitations, uncertainties exist as to the future utilization of the operating loss carryforwards. Therefore, the Company has established a valuation allowance of \$60.1 million at December 31, 2014, \$103.7 million at December 31, 2015 and \$137.8 million at December 31, 2016.

The reconciliation of income tax computed at the U.S. federal statutory tax rates to income tax expense is:

	Years ended December 31,		
	2014	2015	2016
	(In thousands)		
Tax (expense) benefit at U.S. statutory rates (35%)	\$(22,044)	\$44,586	\$33,732
(Increase) decrease in deferred tax asset valuation allowance	15,480	(43,596 )	(34,072 )
Alternative minimum tax	—	568	—
Rate differential for non US income	(39 )	—	—
State income taxes	—	—	—
Accrual of prior year federal taxes (2009 and 2013)	287	37	—
Permanent differences	(950 )	(1,371 )	(1,133 )
Return to provision estimate revision	4,562	—	1,473
Tax benefit related to the sale of Canadian subsidiary	3,501	—	—
Increase in asset for partnership distribution	—	—	—
Other	(510 )	55	—
	\$287	\$279	\$—

During 2016, the Company increased deferred tax assets by \$28.3 million primarily related to increases in the full cost pool assets and net operating loss carryforward. The deferred tax assets were fully offset by a valuation allowance which was reduced at the same time.

As of December 31, 2016, 2015 and 2014, the Company did not have any accrued interest or penalties related to uncertain tax positions. The tax years 2012 through 2016 remain open to examination by the tax jurisdictions to which the Company is subject.

## 7. Commitments and Contingencies

### Operating Leases

The Company leases office space in Dickinson, North Dakota, Lusk, Wyoming and Denver, Colorado. During 2014, 2015 and 2016, rent expense incurred for the Dickinson, North Dakota office was \$26,265, \$27,165, and \$27,840, respectively. The lease expires on October 31, 2018. Rent expense incurred for the Lusk, Wyoming office for 2014, 2015 and 2016 was \$9,000 for each year. The lease expires on December 31, 2018. Rent expense for the Denver Colorado office for 2014, 2015 and 2016 was \$14,554, \$15,601 and \$15,766, respectively. The lease expires on December 31, 2017.

### Litigation and Contingencies

From time to time, the Company is involved in litigation relating to claims arising out of its operations in the normal course of business. At December 31, 2016, the Company was not engaged in any legal proceedings that are expected, individually or in the aggregate, to have a material adverse effect on the Company.

## 8. Earnings per Share

The following table sets forth the computation of basic and diluted earnings per share:

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	Years ended December 31:		
	2014	2015	2016
	(In thousands, except per share data)		
Numerator:			
Net income (loss) from continuing operations	\$61,951	\$(127,090)	\$(96,378)
Net income (loss) from discontinued operations	1,318	(20)	—
	\$63,269	\$(127,110)	\$(96,378)
Denominator:			
Denominator for basic earnings per share – weighted-average common shares outstanding	98,835	104,605	122,132
Effect of dilutive securities:			
Stock options and restricted shares	2,633	—	—
Denominator for diluted earnings per share – adjusted weighted-average shares and assumed exercise of options and restricted shares	101,468	104,605	122,132
Net income (loss) per common share - basic			
Continuing operations	\$0.63	\$(1.21)	\$(0.79)
Discontinued operations	0.01	—	—
	\$0.64	\$(1.21)	\$(0.79)
Net income (loss) per common share - diluted			
Continuing operations	\$0.61	\$(1.21)	\$(0.79)
Discontinued operations	0.01	—	—
	\$0.62	\$(1.21)	\$(0.79)

Basic earnings per share, excluding any dilutive effects of stock options and unvested restricted stock, is computed by dividing net income (loss) available to common stockholders by the weighted average number of common shares outstanding for the period. Diluted income (loss) per share is computed similar to basic; however diluted income (loss) per share reflects the assumed conversion of all potentially dilutive securities. For the year ended December 31, 2015 and 2016, 624 and 1,635, respectively, of potential shares relating to stock options and unvested restricted shares were excluded from the calculation of diluted income (loss) per share since their inclusion would have been anti-dilutive due to the loss incurred in the period. None of the dilutive shares were excluded for the year ended December 31, 2014.

9. Quarterly Results of Operations (Unaudited)

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Selected results of operations for each of the fiscal quarters during the years ended December 31, 2015 and 2016 are as follows:

	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter
	(In thousands, except per share data)			
Year Ended December 31, 2015				
Net revenue	\$18,661	\$18,944	\$16,077	\$13,348
Operating loss	\$(4,535)	\$(1,531)	\$(63,438)	\$(72,301)
Net loss	\$(718)	\$(6,601)	\$(52,372)	\$(67,419)
Net loss per common share – basic	\$(0.01)	\$(0.06)	\$(0.50)	\$(0.64)
Net loss per common share – diluted	\$(0.01)	\$(0.06)	\$(0.50)	\$(0.64)
Year Ended December 31, 2016				
Net revenue	\$9,564	\$11,008	\$13,976	\$22,007
Operating (loss) income	\$(40,143)	\$(31,898)	\$(4,952)	\$3,606
Net loss	\$(40,880)	\$(46,937)	\$(3,260)	\$(5,301)
Net loss per common share – basic	\$(0.39)	\$(0.40)	\$(0.02)	\$(0.04)
Net loss per common share – diluted	\$(0.39)	\$(0.40)	\$(0.02)	\$(0.04)

## 10. Benefit Plans

The Company has a defined contribution plan (401(k) plan) covering all eligible employees. In 2014, 2015 and 2016, in accordance with the safe harbor provisions of the plan, the Company contributed \$313,899, \$347,632 and \$256,309, respectively, to the plan. The Company adopted the safe harbor provisions for its 401(k) plan which requires us to contribute a fixed match to each participating employee's contribution to the plan. The fixed match is set at the rate of dollar for dollar on the first 1% of eligible pay contributed, then 50 cents on the dollar for each additional percentage point of eligible pay contributed, up to 5%. Each employee's eligible pay with respect to calculating the fixed match is limited by IRS regulations. In addition, the Board of Directors, at its sole discretion, may authorize the Company to make additional contributions to each participating employee's plan. The employee contribution limit for 2014 was \$17,500 for employees under the age of 50 and \$23,000 for employees 50 years of age or older. The 2015 and 2016 employee contribution limit was \$18,000 for employees under the age of 50 and \$24,000 for employees 50 years of age or older.

## 11. Hedging Program and Derivatives

The derivative instruments we utilize are based on index prices that may and often do differ from the actual oil and gas prices realized in our operations. Our derivative contracts do not qualify for hedge accounting as prescribed by ASC 815; therefore, fluctuations in the market value of the derivative contracts are recognized in earnings during the current period. There are no netting agreements relating to these derivative contracts and there is no policy to offset.

The following table sets forth the summary position of our derivative contracts as of December 31, 2016:

Contract Periods	Oil - WTI	Swap
	Daily Volume (Bbl)	Price (per Bbl)



Fixed Swaps

2017	2,401	\$54.53
2018	1,796	\$47.48
2019	1,200	\$54.54

Basis Swap

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2017 500 \$0.65

Collar contracts:

Contract Periods	Gas	
	Daily Floor	Ceiling
	Volume (Mcf)	Long (Short Call)
2017	5,000	\$ 3.00 \$ 3.90

The following table illustrates the impact of derivative contracts on the Company's balance sheet:

Fair Value of Derivative Instruments as of December 31, 2015

Derivatives not designated as hedging instruments	Asset Derivatives		Liability Derivatives	
	Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value
Commodity price derivatives	Derivatives – current	\$ 18,902	Derivatives – current	\$ —
Commodity price derivatives	Derivatives – long-term	8,463	Derivatives – long-term	—
		\$ 27,365		\$ —

Fair Value of Derivative Instruments as of December 31, 2016

Derivatives not designated as hedging instruments	Asset Derivatives		Liability Derivatives	
	Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value
Commodity price derivatives	Derivatives – current	\$ 54	Derivatives – current	\$2,382
Commodity price derivatives	Derivatives – long-term	—	Derivatives – long-term	6,630
		\$ 54		\$9,012

Gains and losses from derivative activities are reflected as “Loss (gain) on derivative contracts” in the accompanying Consolidated Statements of Operations.

## 12. Financial Instruments

There is a three-level valuation hierarchy for disclosure of fair value measurements. The valuation hierarchy categorizes assets and liabilities measured at fair value into one of three different levels depending on the observability of the inputs employed in the measurement. The three levels are defined as follows:

Level 1 – inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.

Level 2 - inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.

Level 3 - inputs to the valuation methodology are unobservable and significant to the fair value measurement.

A financial instrument's categorization within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment and considers factors specific to the asset or liability. The

Company is further required to assess the creditworthiness of the counter-party to the derivative contract. The results of the assessment of non-performance risk, based on the counter-party's credit risk, could result in an adjustment of the carrying value of the derivative instrument. The following tables sets forth information about the Company's assets and liabilities measured at fair value on a recurring basis as of December 31, 2015 and 2016, and indicate the fair value hierarchy of the valuation techniques utilized by the Company to determine such fair value (in thousands):

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	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Balance as of December 31, 2015
Assets:				
NYMEX Fixed Price Derivative contracts	\$	—\$ 21,731	\$ —	\$ 21,731
NYMEX Collars	—	—	5,634	5,634
Total Assets	\$	—\$ 21,731	\$ 5,634	\$ 27,365
Liabilities:				
NYMEX Fixed Price Derivative contracts	\$	—\$ —	\$ —	\$ —
Total Liabilities	\$	—\$ —	\$ —	\$ —

	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Balance as of December 31, 2016
Assets:				
NYMEX Fixed Price Derivative contracts	\$	—\$ 35	\$ —	\$ 35
NYMEX Collars	—	—	19	19
Total Assets	\$	—\$ 35	\$ 19	\$ 54
Liabilities:				
NYMEX Fixed Price Derivative contracts	\$	—\$ 8,759	\$ —	\$ 8,759
NYMEX Collars/basis differential swaps	\$	—\$ —	\$ 253	\$ 253
Total Liabilities	\$	—\$ 8,759	\$ 253	\$ 9,012

The Company's derivative contracts at December 31, 2016 consist of NYMEX-based fixed price commodity swaps, basis swaps and NYMEX collars. The NYMEX-based fixed price derivative contracts are indexed to NYMEX futures contracts, which are actively traded, for the underlying commodity and are commonly used in the energy industry. A number of financial institutions and large energy companies act as counter-parties to these type of derivative contracts. As the fair value of these derivative contracts is based on a number of inputs, including contractual volumes and prices stated in each derivative contract, current and future NYMEX commodity prices, and quantitative models that are based upon readily observable market parameters that are actively quoted and can be validated through external sources, we have characterized these derivative contracts as Level 2. In order to verify the third party valuation, we enter the various inputs into a model and compare our results to the third party for reasonableness. The fair value of the collar instruments and the basis swaps are based on inputs that are not as observable as the fixed price swaps. In addition to the actively quoted market price, variables such as time value, volatility and other unobservable inputs are used. Accordingly, these instruments have been classified as Level 3.

Additional information for the Company's recurring fair value measurements using significant unobservable inputs (Level 3 inputs) for the year ended December 31, 2016.

	(In thousands)
Unobservable inputs at December 31, 2015	\$ 5,634
Changes in market value	(2,385 )
Settlements during the period	(3,483 )
Unobservable inputs at December 31, 2016	\$ (234 )

Nonrecurring Fair Value Measurements

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The Company follows the provisions of ASC 820-10 for nonfinancial assets and liabilities measured at fair value on a nonrecurring basis. As it relates to the Company, ASC 820-10 applies to certain nonfinancial assets and liabilities as may be acquired in a business combination and thereby measured at fair value and the initial recognition of asset retirement obligations for which fair value is used.

The asset retirement obligation estimates are derived from historical costs as well as management's expectation of future cost environments. As there is no corroborating market activity to support the assumptions used, the Company has designated these liabilities as Level 3. A reconciliation of the beginning and ending balances of the Company's asset retirement obligation is presented in Note 1.

### Other Financial Instruments

The carrying amounts of our cash, cash equivalents, restricted cash, accounts receivable, accounts payable, and accrued liabilities approximate fair value because of the short-term maturities and/or liquid nature of these assets and liabilities. The carrying value of our debt approximates fair value as the interest rates are market rates and this debt is considered Level 2.

### 13. Discontinued Operations

On October 31, 2014, the Company closed on the sale of its Canadian subsidiary, Canadian Abraxas Petroleum, ULC ("Canadian Abraxas"). The sale was based on management's decision to discontinue Canadian operations due to continuing losses.

In 2014, the Company recognized a gain on the sale of \$1.9 million which is included in the accompanying Consolidated Statements of Operations as a component of net (loss) income from discontinued operations, net of tax.

Canadian Abraxas revenue, reported in discontinued operations for the ten months ended October 31, 2014 was \$2.0 million. Canadian Abraxas net loss, reported in discontinued operations for the ten months ended October 31, 2014 was \$0.6 million.

### 14. Subsequent Event

In January 2017, the Company closed on the sale of non-core oil and gas properties in Wyoming. Net proceeds of \$10.6 million, \$1.1 million of which was received in 2016, were used to reduce amounts outstanding under the Company's credit facility. These assets are presented as "Assets held for sale" in the consolidated balance sheet as of December 31, 2016 at the lower of its carrying amount or estimated fair value less costs to sell.

In January 2017, the Company completed the sale of 28.8 million shares of common stock. Net proceeds of approximately \$65.3 million were used to reduce amounts outstanding under the Company's credit facility.

In March 2017, the Company repaid the Rig Loan in full.

### 15. Supplemental Oil and Gas Disclosures (Unaudited)

Information in the following tables is inclusive of Canadian operations through October 2014, which are presented in the basic financial statements as discontinued operations.

The accompanying table presents information concerning the Company's oil and gas producing activities inclusive of discontinued operations "Disclosures about Oil and Gas Producing Activities." Capitalized costs relating to oil and gas

producing activities are as follows:

	Years Ended	
	December 31	
	2015	2016
	(In thousands)	
Proved oil and gas properties	\$787,683	\$794,634
Unproved properties	—	—
Total	787,683	794,634
Accumulated depreciation, depletion, amortization and impairment	(590,432 )	(680,861 )
Net capitalized costs	\$197,251	\$113,773

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Cost incurred in oil and gas property acquisition and development activities are as follows:

	Years Ended December 31		
	2014	2015	2016
	(In thousands)		
Development costs	\$189,322	\$68,631	\$18,262
Exploration costs	—	—	12,529
Property acquisition costs	—	—	—
Unproved	—	—	—
	\$189,322	\$68,631	\$30,791

The results of operations for oil and gas producing activities, inclusive of discontinued operations, for the three years ended December 31, 2014, 2015 and 2016 are as follows:

	Years Ended December 31,		
	2014	2015	2016
	(In thousands)		
Revenues	\$133,701	\$67,002	\$56,493
Production costs	(37,337 )	(29,753 )	(23,659 )
Depreciation, depletion, and amortization	(42,945 )	(38,040 )	(22,803 )
Proved property impairment	—	(128,573 )	(67,626 )
Results of operations from oil and gas producing activities (excluding corporate overhead and interest costs)	\$53,419	\$(129,364)	\$(57,595)
Depletion rate per barrel of oil equivalent	\$20.39	\$17.44	\$10.08

#### Estimated Quantities of Proved Oil and Gas Reserves

The following table presents the Company's estimate of its net proved oil and gas reserves as of December 31, 2014, 2015, and 2016. Reserve estimates are inherently imprecise and that estimates of new discoveries are more imprecise than those of producing oil and gas properties. Accordingly, the estimates are expected to change as future information becomes available. The estimates have been predominately prepared by independent petroleum reserve engineers. Proved oil and gas reserves are the estimated quantities of oil and gas that geological and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoirs under existing economic and operating conditions. Proved developed oil and gas reserves are those expected to be recovered through existing wells with existing equipment and operating methods. All of the Company's proved reserves are located in the continental United States.

Proved reserves were estimated in accordance with guidelines established by the SEC and the FASB, which require that reserve estimates be prepared under existing economic and operating conditions with no provision for price and cost escalations except by contractual arrangements; therefore, the unweighted average prior 12-month-first-day-of-the-month commodity prices and year-end costs were used in estimating reserve volumes and future net cash flows for the periods presented.

The following is a summary of the changes to the Company's proved reserves that occurred during 2016:  
Revisions to prior estimates:

An increase of 5,005 MBoe of reserves was attributed to the Company's Bakken and Three Forks proved undeveloped locations in McKenzie County, ND, due to continuing improvement in its producing well production results. Well



results improved as a result of the application of optimized completion methods. Similarly, reserves for the Company's Bakken and Three Forks producing wells increased by 1,360 MBoe of net producing reserves due to improved performance. On the other hand, projections for the Hedgehog State 16-2H producing well and its two related proved undeveloped locations in the Porcupine Field, Campbell

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County, WY, decreased by 670 MBoe of net reserves due to the under-performance of the Hedgehog State 16-2H. There was also a reduction in this category of 2,271 MBoe attributable to shortened economic life calculations at the lower commodity pricing.

Extensions, discoveries and other additions:

The Company added the Caprito 99 302H as a new Wolfcamp producing well in Ward County, TX, accounting for 449 MBoe of net producing reserves. It also added five new proved undeveloped Wolfcamp locations offsetting this new producer accounting for 805 MBoe of net undeveloped reserves. The Company also developed a new Austin Chalk producer in Atascosa County, TX, which accounted for 265 MBoe of net producing reserves. Further, the Company added eight new proved undeveloped Bakken/Three Forks locations on non-operated units in McKenzie County, ND, accounting for 18 MBoe of net undeveloped reserves. These locations were added in response to operator well proposals.

Sales:

The Company sold all its holdings in the Portilla Field in San Patricio County, TX, and in the Brooks Draw Field in Converse County, WY, during 2016. These sales accounted for 1,232 MBoe of net proved reserves.

Production:

The Company produced 2,262 MBoe of net reserves during 2016.

The following is a summary of the changes to the Company's proved reserves that occurred during 2015:

Revisions of prior estimates:

A total of 48 proved locations accounting for approximately 7.9 net MMBoe of reserves were dropped from the report in 2015 due to lack of economic viability at the lower commodity pricing applied of which 42 were in the undeveloped category. Most significant of these were 38 South Texas Eagle Ford locations representing approximately 7,717 MBoe of net reserves. There was also a reduction of 614 net MBoe attributable to shortened economic life calculations at lower commodity pricing which were partially offset by an increase of 600 net MBoe in the Company's Bakken/Three Forks undeveloped locations due to better-than-anticipated production. There were also reduction in this category of 1.8 MMBoe of net reserves attributable to shortened economic life calculations at the lower commodity pricing and 1.6 MMBoe of net reserves attributable to lower than anticipated production performance in various wells.

Extensions, discoveries and other additions:

The Company added 28 new proved undeveloped Bakken locations during 2015 on the Company's prospect acreage in McKenzie County, North Dakota, accounting for approximately 6.5 MMBoe of net reserves, 20 of which accounting for 4.9 net MMBoe, were for the Three Forks (2<sup>nd</sup> Bench) which were proved by local development activity in that reservoir during the year. There were also 8 other cases in the Bakken/Three Forks, accounting for 1.6 net MMBoe, which were added because the Company gained operational control of the Yellowstone Unit resulting in the Company developing the properties in accordance with its normal well spacing pattern.

The Company also gained proved undeveloped reserves of approximately 1.3 net MMBOE, due to the change in classification of 21 probable and possible undeveloped Bakken cases into the proved category. This change was warranted by local well development in the specific local areas during 2015.

The Company also added 6 new Montoya proved undeveloped locations on the Company's prospect acreage in Ward County, Texas, accounting for 6.5 MMBOE of net reserves. These locations were added based on the performance of existing Montoya producers on the subject acreage.

Sales:

During 2015, the Company sold properties accounting for 43 net MBoe of reserves.

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## Production:

During 2015, the Company produced 2,181 of net MBoe of reserves

	Oil (MBbl)	NGL (MBbl)	Gas (MMcf)	Oil Equivalents (MBoe)
Proved developed and undeveloped reserves:				
	(in thousands)			
Balance at December 31, 2013	20,915	2,038	48,109	30,970
Revisions of previous estimates	2,697	1,021	7,383	4,950
Extensions and discoveries	7,780	868	6,893	9,797
Sales of minerals in place	(608 )	(12 )	(3,614 )	(1,223 )
Production	(1,394 )	(207 )	(2,918 )	(2,088 )
Balance at December 31, 2014	29,390	3,708	55,853	42,406
Revisions of previous estimates	(9,485 )	(505 )	(8,002 )	(11,324 )
Extensions and discoveries	5,679	3,591	30,372	14,332
Sales of minerals in place	(13 )	—	(181 )	(43 )
Production	(1,440 )	(238 )	(3,015 )	(2,181 )
Balance at December 31, 2015	24,131	6,556	75,027	43,190
Revisions of previous estimates	1,379	2,300	(1,537 )	3,424
Extensions and discoveries	1,183	157	1,179	1,537
Sales of minerals in place	(1,112 )	(6 )	(680 )	(1,232 )
Production	(1,372 )	(363 )	(3,160 )	(2,262 )
Balance at December 31, 2016	24,209	8,644	70,829	44,657

	Total			
	Oil (MBbl)	NGL (MBbl)	Gas (MMcf)	Oil Equivalents (MBoe)
	(In thousands)			
Proved Developed Reserves:				
December 31, 2014	10,162	2,006	34,677	17,948
December 31, 2015	10,022	1,956	31,298	17,194
December 31, 2016	7,818	2,568	27,792	15,018
Proved Undeveloped Reserves:				
December 31, 2014	19,228	1,702	21,176	24,459
December 31, 2015	14,109	4,599	43,729	25,996
December 31, 2016	16,391	6,076	43,037	29,639

## Standardized Measure of Discounted Future Net Cash Flows Relating to Proved Oil and Gas Reserves

The Company's proved oil and gas reserves have been estimated by the Company with the assistance of an independent petroleum engineering firm (DeGolyer & MacNaughton) as of December 31, 2014, 2015 and 2016.

The following information has been prepared in accordance with SEC rules and accounting standards based on the 12-month first-day-of-the-month unweighted average prices in accordance with provisions of the FASB's Accounting Standards Update No. 2010-03, "Extractive Activities—Oil and Gas (Topic 932)." Future cash inflows were reduced by estimated future production and development costs based on year-end costs to determine pre-tax cash inflows. Future

net cash flows have not been

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adjusted for commodity derivative contracts outstanding at the end of each year. Future income taxes were computed by applying the statutory tax rate to the excess of pre-tax cash inflows over the tax basis and net operating losses associated with the properties. Since prices used in the calculation are average prices for 2016, the standardized measure could vary significantly from year to year based on the market conditions that occurred during a given year.

The technical personnel responsible for preparing the reserve estimates at DeGolyer and MacNaughton meet the requirements regarding qualifications, independence, objectivity, and confidentiality set forth in the Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information promulgated by the Society of Petroleum Engineers. DeGolyer and MacNaughton is an independent firm of petroleum engineers, geologists, geophysicists, and petrophysicists; they do not own an interest in our properties and are not employed on a contingent fee basis. All reports by DeGolyer and MacNaughton were developed utilizing studies performed by DeGolyer and MacNaughton and assisted by the Engineering and Operations departments of Abraxas. Reserves are estimated by independent petroleum engineers. The report of DeGolyer and MacNaughton dated February 13, 2017, which contains further discussions of the reserve estimates and evaluations prepared by DeGolyer and MacNaughton as well as the qualifications of DeGolyer and MacNaughton's technical personnel responsible for overseeing such estimates and evaluations is attached as Exhibit 99.1 to this report.

Estimates of proved reserves at December 31, 2014, 2015 and 2016 were based on studies performed by our independent petroleum engineers assisted by the Engineering and Operations departments of Abraxas. The Engineering department is directly responsible for Abraxas' reserve evaluation process. The Vice President of Engineering is the manager of this department and is the primary technical person responsible for this process. The Vice President of Engineering holds a Bachelor of Science degree in Petroleum Engineering and has 38 years of experience in reserve evaluations. The Vice President of Engineering is a Registered Professional Engineer in the State of Texas. The operations department of Abraxas assisted in the process.

The projections should not be viewed as realistic estimates of future cash flows, nor should the "standardized measure" be interpreted to represent the fair market value of the Company's proved oil and gas reserves. An estimate of fair market value would also take into account, among other factors, the recovery of reserves not classified as proved, anticipated future changes in prices and costs, and a discount factor more representative of the time value of money and the risks inherent in reserve estimates.

Future net cash inflows after income taxes were discounted using a 10% annual discount rate to arrive at the Standardized Measure. The table below sets forth the Standardized Measure of our proved oil and gas reserves for the three years ended December 31, 2014, 2015 and 2016:

	Years Ended December 31,		
	2014	2015	2016
	(In thousands)		
Future cash inflows	\$2,988,464	\$1,241,334	\$999,716
Future production costs	(921,977 )	(438,784 )	(357,917 )
Future development costs	(557,782 )	(338,316 )	(267,836 )
Future income tax expense	(373,095 )	—	—
Future net cash flows	1,135,610	464,234	373,963
Discount	(623,053 )	(266,983 )	(213,363 )
Standardized Measure of discounted future net cash relating to proved reserves	\$512,557	\$197,251	\$160,600

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## Changes in Standardized Measure of Discounted Future Net Cash Flows Relating to Proved Oil and Gas Reserves

The following is an analysis of the changes in the Standardized Measure:

	Year Ended December 31,		
	2014	2015	2016
	(In thousands)		
Standardized Measure, beginning of year	\$340,985	\$512,557	\$197,251
Sales and transfers of oil and gas produced, net of production costs	(96,364 )	(37,249 )	(32,834 )
Net change in prices and development and production costs from prior year	150,504	(488,160 )	(58,425 )
Extensions, discoveries, and improved recovery, less related costs	147,275	63,341	5,531
Sales of minerals in place	(15,042 )	(197 )	(4,433 )
Revisions of previous quantity estimates	74,390	(49,602 )	12,317
Change in timing and other	(82,653 )	20,419	21,468
Change in future income tax expense	(40,636 )	124,886	—
Accretion of discount	34,098	51,256	19,725
Standardized Measure, end of year	\$512,557	\$197,251	\$160,600

The standardized measure is based on the following oil and gas prices over the life of the properties as of the following dates:

	Year Ended December 31,		
	2014	2015	2016
Oil (per Bbl) (1)	\$95.28	\$50.12	\$42.74
Gas (per MMBtu) (2)	\$4.35	\$2.63	\$2.50
Oil (per Bbl) (3)	\$87.11	\$41.25	\$35.54
Gas (per MMBtu) (4)	\$5.15	\$2.36	\$1.41
NGL's (per Bbl) (5)	\$37.92	\$10.52	\$5.17

The quoted oil price for the year ended December 31 of each year, 2014, 2015 and 2016 is the 12-month (1) unweighted average first-day-of-the-month West Texas Intermediate spot price for each month of 2014, 2015 and 2016.

(2) The quoted gas price for the year ended December 31, 2014, 2015 and 2016 is the 12-month unweighted average first-day-of-the-month Henry Hub spot price for each month of 2014, 2015 and 2016.

(3) The oil price is the realized price at the wellhead as of December 31 of each year after the appropriate differentials have been applied.

(4) The gas price is the realized price at the wellhead as of December 31 of each year after the appropriate differentials have been applied.

(5) The NGL price is the realized price as of December 31 of each year after the appropriate differentials have been applied.

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Exhibit Index

23.1 Consent of BDO USA, LLP. (Filed herewith).

23.2 Consent of DeGolyer & MacNaughton. (Filed herewith).

31.1 Certification – Chief Executive Officer. (Filed herewith).

31.2 Certification – Chief Financial Officer. (Filed herewith).

32.1 Certification by Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. (Filed herewith).

32.2 Certification by Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. (Filed herewith).

99.1 Report of DeGolyer and MacNaughton with respect to oil and reserves of Abraxas Petroleum. (Filed herewith).

SIGNATURES

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

ABRAXAS PETROLEUM CORPORATION

By: /s/ Robert L.G. Watson  
President and Principal  
Executive Officer

By: /s/ Geoffrey R. King  
Vice President and Chief Financial Officer  
Principal Financial Officer

By: /s/ G. William Krog, Jr.  
Principal Accounting  
Officer

DATED: March 16, 2017

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

Signature	Name and Title	Date
/s/ Robert L.G. Watson Robert L.G. Watson	Chairman of the Board, President (Principal Executive Officer) and Director	March 16, 2017
/s/ Geoffrey R. King Geoffrey R. King	Vice President, CFO (Principal Financial Officer)	March 16, 2017
/s/ G. William Krog, Jr. G. William Krog, Jr.	Chief Accounting Officer (Principal Accounting Officer)	March 16, 2017
/s/ Harold D. Carter Harold D. Carter	Director	March 16, 2017
/s/ Ralph F. Cox Ralph F. Cox	Director	March 16, 2017
/s/ W. Dean Karrash W. Dean Karrash	Director	March 16, 2017
/s/ Jerry J. Langdon Jerry J. Langdon	Director	March 16, 2017
/s/ Dennis E. Logue Dennis E. Logue	Director	March 16, 2017
/s/ Brian L. Melton Brian L. Melton	Director	March 16, 2017
/s/ Paul A. Powell, Jr. Paul A. Powell, Jr.	Director	March 16, 2017
/s/ Edward P. Russell Edward P. Russell	Director	March 16, 2017