

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 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, 2018
OR
☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission File No. 001-36550

PAR PACIFIC HOLDINGS, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

84-1060803
(I.R.S. Employer
Identification No.)

825 Town & Country Lane, Suite 1500

Houston, Texas
(Address of principal executive offices)

77024
(Zip Code)

Registrant's telephone number, including area code: (281) 899-4800
Securities registered under Section 12(b) of the Act:

Title of each class
Common stock, par value \$0.01 per share

Name of Exchange on which registered
The New York Stock Exchange

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 Act. Yes ☐ No ☒
Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐
Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted 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 such files). Yes ☒ No ☐
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

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

Large accelerated filer ☐
Non-accelerated filer ☐

Accelerated filer ☒
Smaller reporting company ☐
Emerging growth company ☐

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

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

The aggregate market value of voting and non-voting common equity held by non-affiliates of the registrant was approximately \$559,047,131 based on the closing sales price of the common stock on the New York Stock Exchange as of June 29, 2018. As of March 4, 2019, 49,539,919 shares of the registrant's Common Stock, \$0.01 par value, were issued and outstanding.

Documents Incorporated By Reference

Certain information required to be disclosed in Part III of this report is incorporated by reference from the registrant's definitive proxy statement or an amendment to this report, which will be filed with the SEC not later than 120 days after the end of the fiscal year covered by this report.

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Glossary of Selected Industry Terms

Unless otherwise noted or indicated by context, the following terms used in this Annual Report on Form 10-K have the following meanings:

barrel or bbl	A common unit of measure in the oil industry, which equates to 42 gallons.
blendstocks	Various compounds that are combined with gasoline or diesel from the crude oil refining process to make finished gasoline and diesel; these may include natural gasoline, FCC unit gasoline, ethanol, reformate, or butane, among others.
Brent	A light, sweet North Sea crude oil, characterized by an API gravity of 38 degrees and a sulfur content of approximately 0.4% by weight that is used as a benchmark for other crude oils.
cardlock	Automated unattended fueling sites that are open all day and are designed for commercial fleet vehicles.
catalyst	A substance that alters, accelerates, or instigates chemical changes, but is not produced as a product of the refining process.
CO₂	Carbon dioxide.
condensate	Light hydrocarbons which are in gas form underground, but are a liquid at normal temperatures and pressure.
crack spread	A simplified calculation that measures the difference between the price for light products and crude oil. For example, we reference the 4-1-2-1 crack spread, which is a general industry standard that approximates the per barrel refining margin resulting from processing four barrels of crude oil to produce one barrel of gasoline, two barrels of distillate (jet fuel and diesel), and one barrel of fuel oil.
distillates	Refers primarily to diesel, heating oil, kerosene, and jet fuel.
ethanol	A clear, colorless, flammable oxygenated liquid. Ethanol is typically produced chemically from ethylene or biologically from fermentation of various sugars from carbohydrates found in agricultural crops and cellulosic residues from crops or wood. It is used in the United States as a gasoline octane enhancer and oxygenate.
feedstocks	Crude oil or partially refined petroleum products that are processed or blended into refined products.
jobber	A petroleum marketer.
LSFO	Low sulfur fuel oil.
Mbbls	Thousand barrels of crude oil or other liquid hydrocarbons.
Mbpd	Thousand barrels per day.
MMbbls	Million barrels of crude oil or other liquid hydrocarbons
MMcf	Million cubic feet, a unit of measurement for natural gas.
MMcfd	Million cubic feet per day.
MMcfe	Million cubic feet equivalent which is determined by using the ratio of six Mcf of natural gas to one Bbl of crude oil.
MMbtu	Million British thermal units.
MW	Megawatt.
Nelson Complexity Index	A measure of the complexity of a given refinery compared to crude distillation, which is assigned a complexity factor of 1.0. The index number is an indication of an oil refinery's ability to process feedstocks, such as heavier and higher sulfur content crude oils, into value-added products. Generally, more complex refineries have higher index numbers.
NGL	Natural gas liquid.
NOx	Nitrogen oxides.
refined products	Petroleum products, such as gasoline, diesel, and jet fuel, that are produced by a refinery.
throughput	The volume processed through a unit or refinery.
turnaround	A periodically required standard procedure to inspect, refurbish, repair, and maintain a refinery. This process involves the shutdown and inspection of major processing units and typically occurs every three to five years.
single-point mooring	Also known as a single buoy mooring, refers to a loading buoy that is anchored offshore and serves as an interconnect for tankers loading or offloading crude oil and refined products.
SO₂	Sulfur dioxide.
WTI	West Texas Intermediate crude oil, a light, sweet crude oil, typically characterized by an API gravity between 38 degrees and 40 degrees and a sulfur content of approximately 0.3% by weight that is used as a benchmark for other crude oils.
yield	The percentage of refined products that is produced from crude oil and other feedstocks, net of fuel used as energy.

PART I

Item 1. BUSINESS

OVERVIEW

Par Pacific Holdings, Inc., headquartered in Houston, Texas, owns and operates market-leading energy and infrastructure businesses. Our strategy is to acquire and develop energy and infrastructure businesses in logistically-complex markets.

Our business is organized into three primary operating segments:

1) **Refining** - We own and operate three refineries with total throughput capacity of over 200 Mbpd. Our refinery in Kapolei, Hawaii, produces ultra-low sulfur diesel (“ULSD”), gasoline, jet fuel, marine fuel, low sulfur fuel oil (“LSFO”), and other associated refined products primarily for consumption in Hawaii. Our refinery in Newcastle, Wyoming, produces gasoline, ULSD, jet fuel, and other associated refined products that are primarily marketed in Wyoming and South Dakota. Our refinery in Tacoma, Washington, produces distillate, gasoline, asphalt, and other associated refined products that are primarily marketed in the Pacific Northwest.

2) **Retail** - We operate 124 retail outlets in Hawaii, Washington, and Idaho. Our retail outlets in Hawaii sell gasoline, diesel, and retail merchandise throughout the islands of Oahu, Maui, Hawaii, and Kauai. Our Hawaii retail network includes Hele® and 76® branded retail sites, company-operated convenience stores, 7-Eleven operated convenience stores, other sites operated by third parties, and unattended cardlock stations. During 2018, we completed the rebranding of 24 of our 34 company-operated convenience stores in Hawaii to “nomnom,” a new proprietary brand. Our retail outlets in Washington and Idaho sell gasoline, diesel, and retail merchandise and operate under the “Cenex®” and “Zip Trip®” brand names.

3) **Logistics** - We operate an extensive, multimodal logistics network spanning the Pacific, the Northwest, and the Rockies. We own and operate terminals, pipelines, a single-point mooring (“SPM”), and trucking operations to distribute refined products throughout the islands of Oahu, Maui, Hawaii, Molokai, and Kauai. We also own and operate a crude oil pipeline gathering system, a refined products pipeline, storage facilities, and loading racks in Wyoming and a jet fuel storage facility and pipeline that serve Ellsworth Air Force Base in South Dakota. In Washington, we own and operate a marine terminal, a unit train-capable rail loading terminal, storage facilities, a truck rack, and a proprietary pipeline that serves McChord Air Force Base.

We also own a 46.0% equity investment in Laramie Energy, LLC (“Laramie Energy”), a joint venture entity focused on producing natural gas in Garfield, Mesa, and Rio Blanco Counties, Colorado.

On January 9, 2018, we entered into an Asset Purchase Agreement with CHS Inc. to acquire twenty-one (21) owned retail gasoline, convenience store facilities and twelve (12) leased retail gasoline, convenience store facilities, all at various locations in Washington and Idaho (collectively, “Northwest Retail”). On March 23, 2018, we completed the acquisition for cash consideration of approximately \$74.5 million (the “Northwest Retail Acquisition”). The results of operations of Northwest Retail are included in our retail segment commencing March 23, 2018.

On August 29, 2018, following the announcement by IES Downstream, LLC (“IES”) that it was ceasing refining operations in Hawaii, we entered into a Topping Unit Purchase Agreement with IES to purchase certain of IES’s refining units and related assets in addition to certain hydrocarbon and non-hydrocarbon inventory (collectively, the “Hawaii Refinery Expansion”). On December 19, 2018, we completed the asset purchase for approximately \$66.9 million, net of a \$4.3 million receivable related to net working capital adjustments. The purchase price consisted of \$47.6 million in cash and approximately 1.1 million shares of our common stock with a fair value of \$19.3 million. The results of operations of the acquired assets are included in our refining segment commencing December 19, 2018.

On November 26, 2018, we entered into a Purchase and Sale Agreement to acquire U.S. Oil & Refining Co. and certain affiliated entities (collectively, “U.S. Oil”), a privately-held downstream business, for \$358 million including working capital acquired (the “Washington Refinery Acquisition”). The Washington Refinery Acquisition includes a 42 Mbpd refinery, a marine terminal, a unit train-capable rail loading terminal, and 2.9 MMbbls of refined product and crude oil storage. The refinery and associated logistics network are located in Tacoma, Washington, and currently serve the Pacific Northwest market. On January 11, 2019, we completed the Washington Refinery Acquisition for a total purchase price of \$326.7 million, including acquired net working capital, consisting of cash consideration of \$289.7 million and approximately 2.4 million shares of our common stock issued to the seller of U.S. Oil. The Washington refinery's results of operations are included in our refining and logistics segments commencing January 11, 2019.

Our Corporate and Other reportable segment primarily includes general and administrative costs. Please read Note 20—Segment Information to our consolidated financial statements under Item 8 of this Form 10-K for detailed information on our operating results by segment.

Corporate Information

Our common stock is listed and trades on the New York Stock Exchange (the "NYSE") under the ticker symbol "PARR." Our principal executive office is located at 825 Town and Country Lane, Suite 1500, Houston, Texas 77024 and our telephone number is (281) 899-4800. Throughout this Annual Report on Form 10-K, the terms "Par," "the Company," "we," "our," and "us" refer to Par Pacific Holdings, Inc. and its consolidated subsidiaries unless the context suggests otherwise.

Available Information

Our website address is www.parpacific.com. Information contained on our website is not part of this Annual Report on Form 10-K. Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any other materials filed with (or furnished to) the U.S. Securities and Exchange Commission ("SEC") by us are available on our website (under "Investors") free of charge, as soon as reasonably practicable after such reports are filed with, or furnished to, the SEC. Alternatively, you may access these reports at the SEC's website at www.sec.gov.

OPERATING SEGMENTS

Refining

Our refining segment buys and refines crude oil and other feedstocks into petroleum products (such as gasoline and distillates) at our Hawaii, Wyoming, and Washington refineries.

Hawaii Refinery

Our Hawaii refinery is located in Kapolei, Hawaii, on the island of Oahu and is rated at 148 Mbpd throughput capacity with a Nelson Complexity Index of 4.0. The Hawaii refinery's major processing units include crude distillation, vacuum distillation, visbreaking, hydrocracking, naphtha hydrotreating, and reforming units, which produce ULSD, gasoline, jet fuel, marine fuel, LSFO, and other associated refined products. We believe the configuration of our Hawaii refinery uniquely fits the demands of the Hawaii market. The co-located refinery has two facility locations that are approximately two miles from one another:

- 1) Par East - Our legacy refinery assets, which we have owned and operated since the acquisition in 2013 from Tesoro Corporation ("Tesoro," which changed its name to Andeavor Corporation prior to being purchased by Marathon Petroleum Company in October 2018).
- 2) Par West - The recently-acquired assets from IES.

We source our crude oil for the Hawaii refinery from North America, Asia, Latin America, Africa, the Middle East, and other sources. Crude oil is transported to Hawaii in tankers then discharged through our SPM or third-party logistics networks. Our three underwater pipelines from the SPM allow crude oil and refined products to be transferred to and from the Hawaii refinery.

Crude oil is received into the Hawaii refinery tank farm, which includes 2.4 MMbbls of total owned crude oil storage, and/or third-party crude oil storage. We process the crude oil through various refining units into products and store them in the Hawaii refinery's owned 2.5 MMbbls of refined and additional third-party product storage. This storage capacity allows us to manage the various product requirements of our customers in the state of Hawaii.

We finance our Hawaii refinery hydrocarbon inventories through our Supply and Offtake Agreements with J. Aron & Company LLC ("J. Aron"). Under the Supply and Offtake Agreements, J. Aron holds title to all crude oil and refined product stored in tankage at the Hawaii refinery. We purchase crude oil from J. Aron on a daily basis at market prices and sell refined products to J. Aron as they are produced. We repurchase these refined products from J. Aron prior to selling them to third parties.

Set forth below are summaries of the capacity of our Hawaii refinery as of December 31, 2018 :

Hawaii Refining Unit	Capacity (Mbpd)
Crude Units	148
Vacuum Distillation Units	75
Hydrocracker	19
Catalytic Reformer	13
Visbreaker	11
Naphtha Hydrotreater	13

Hawaii Refining Unit	Capacity
Hydrogen Plant (MMcfd)	18
Co-generation Turbine Unit (MW)	32

The Hawaii refinery operated at an average throughput of 74.9 Mbpd, or 78% utilization, to meet local demand for the year ended December 31, 2018 . Below is a summary of our Hawaii refinery's throughput percentage by type of crude oil and the product yield percentages for the years ended December 31, 2018 , 2017 , and 2016 :

	Year Ended December 31,		
	2018	2017	2016
Feedstocks throughput (Mbpd)	74.9	73.7	70.2
Source of crude oil:			
North America	35.0%	23.8%	41.7%
Asia	20.6%	23.1%	30.0%
Africa	32.4%	24.9%	13.7%
Latin America	1.0%	0.1%	3.9%
Middle East	11.0%	28.1%	10.7%
Total	100.0%	100.0%	100.0%
Yield (% of total throughput):			
Gasoline and gasoline blendstocks	27.1%	27.8%	26.8%
Distillates	47.4%	48.2%	44.7%
Fuel oils	17.8%	15.7%	20.1%
Other products	4.5%	5.0%	4.8%
Total yield	96.8%	96.7%	96.4%

Our Hawaii refining business transports refined products through our logistics network and sells to wholesale and bulk customers and to our retail business in Hawaii. Wholesale customers include jobbers and other non-end users, as well as 33 fueling stations where operations and consumer pricing are controlled by third parties. Bulk customers include utilities, military bases, marine vessels, industrial end-users, and exports.

The profitability of our Hawaii refining business is heavily influenced by crack spreads in the Singapore market. This market reflects the closest liquid market alternative to source refined products for Hawaii. We believe the Singapore 4-1-2-1 crack spread (or four barrels of Brent crude oil converted into one barrel of gasoline, two barrels of distillate (diesel and jet fuel) and one barrel of fuel oil) best reflects a market indicator for our Hawaii refinery operations. During the course of 2018 , the index exhibited high volatility with lows observed during the first quarter. The Singapore 4-1-2-1 crack spread averaged \$7.22 per barrel during 2018 with a low of \$6.38 per barrel average in the first quarter and a high of \$8.23 per barrel average in the fourth quarter.

Below is a summary of average crack spreads for the years ended December 31, 2018 , 2017 , and 2016 :

	Year Ended December 31,		
	2018	2017	2016
4-1-2-1 Singapore Crack Spread	\$ 7.22	\$ 7.18	\$ 3.74

We are building a new 10 Mbpd Diesel Hydrotreater ("DHT") unit for an estimated cost of \$27 million and we estimate project completion and startup to occur during the third quarter of 2019. The new unit is expected to allow us to convert an additional six to eight thousand barrels per day of intermediate products into jet fuel and/or ULSD and help position us for new regulations regarding marine fuels to be implemented in 2020 by the International Maritime Organization ("IMO 2020").

Wyoming Refinery

Our Wyoming refinery is located in Newcastle, Wyoming, on approximately 121 fee-owned acres, and is rated at 18 Mbpd throughput capacity with a Nelson Complexity Index of 10.9. The Wyoming refinery's major processing units include crude distillation, catalytic cracker, naphtha hydrotreating, and reforming units, which produce gasoline, ULSD, jet fuel, and other associated refined products.

We source our crude oil for the Wyoming refinery from local producers in the Petroleum Administration for Defense District IV Rocky Mountain ("PADD IV") region of the United States as well as other North American sources. Most of the crude oil is delivered to the refinery via our owned pipeline network and the rest is delivered by truck.

Crude oil is received into the refinery tank farm and crude oil terminals, which include 256 Mbbls of total crude oil storage. We process the crude oil through various refining units into products and store them in the Wyoming refinery's 451 Mbbls of refined product tankage. The Wyoming refinery's storage capacity allows us to manage the various product requirements of our customers in the states of Wyoming and South Dakota and other targeted market destinations.

Set forth below is a summary of the capacity of our Wyoming refinery as of December 31, 2018 :

Wyoming Refining Unit	Capacity (Mbpd)
Crude Unit	18
Residual Fluid Catalytic Cracker	7
Catalytic Reformer	3
Naphtha Hydrotreater	3
Diesel Hydrotreater	6
Isomerization	5

The Wyoming refinery operated at an average throughput of 16.4 Mbpd, or 91% utilization, for the year ended December 31, 2018 . Below is a summary of the Wyoming refinery's product yield percentages for the years ended December 31, 2018 and 2017 , and for the period from July 14, 2016 (the date of acquisition) to December 31, 2016:

	Year Ended December 31, 2018	Year Ended December 31, 2017	July 14, 2016 to December 31, 2016
Feedstocks Throughput (Mbpd)	16.4	15.5	15.8
Yield (% of total throughput):			
Gasoline and gasoline blendstocks	49.5%	51.9%	56.0%
Distillate	45.8%	42.8%	39.3%
Fuel oil	1.6%	2.2%	1.9%
Other products	0.8%	0.8%	1.0%
Total yield	97.7%	97.7%	98.2%

Our Wyoming refining business sells refined products through our logistics network to wholesale, bulk, and retail customers primarily in the Rapid City, South Dakota, area. Products are also distributed by rail from our refinery to markets beyond our logistics network.

The profitability of our Wyoming refinery is heavily influenced by crack spreads in nearby markets. We believe our Wyoming refining operations are best captured by the Wyoming 3-2-1 Index, or three barrels of WTI converted into two barrels of gasoline and one barrel of distillate (jet fuel and diesel). We believe the Wyoming 3-2-1 crack spread, a 50%/50% blend of Rapid City 3-2-1 and Denver 3-2-1 (WTI based) crack spreads, best reflects a market indicator for our Wyoming refining and fuel distribution operations. The Wyoming 3-2-1 Index averaged \$22.69 per barrel during 2018 with a low of \$15.65 per barrel average in the first quarter and a high of \$26.25 per barrel average in the third quarter.

Below is a summary of average crack spreads for the years ended December 31, 2018 and 2017, and for the period from July 14, 2016 (the date of acquisition) to December 31, 2016:

	Year Ended December 31, 2018	Year Ended December 31, 2017	July 14, 2016 to December 31, 2016
Wyoming 3-2-1 Index	\$ 22.69	\$ 21.80	\$ 16.27

Washington Refinery

Our Washington refinery is located in Tacoma, Washington, on approximately 139 fee-owned acres, and is rated at 42 Mbpd throughput capacity with a Nelson Complexity Index of 5.4. The Washington refinery's major processing units include crude distillation, vacuum unit, jet treater, diesel hydrotreater, isomerization, and reforming units, which produce distillate, gasoline, asphalt, and other associated refined products that are primarily marketed in the Pacific Northwest.

We source our crude oil for the Washington refinery primarily from Canadian and Bakken producers as well as other North American sources. Most of the crude oil is delivered to the refinery via our owned unit train facility and the rest is delivered by barge.

Crude oil is received into the refinery tank farm, which includes 1.4 MMbbls of total crude oil storage. We process the crude oil through various refining units into products and store them in the refinery's 1.5 MMbbls of refined product tankage. This storage capacity allows us to manage the various product requirements of our customers in the state of Washington and other targeted market destinations.

Set forth below is a summary of the capacity of our Washington refinery as of December 31, 2018 :

Washington Refining Unit	Capacity (Mbpd)
Crude Unit	42
Vacuum Unit	19
Naptha Hydrotreaters	10
Catalytic Reformers	6
Diesel Hydrotreater	8
Isomerization	4

Competition

All facets of the energy industry are highly competitive. Our competitors include major integrated, national, and independent energy companies. Many of these competitors have greater financial and technical resources and staff which may allow them to better withstand and react to changing and adverse market conditions.

Our refining business sources and obtains all of our crude oil from third-party sources and competes globally for crude oil and feedstocks. Our Hawaii refinery, through our facility with J. Aron, has access to a large variety of markets for crude oil imports and product exports. Please read “ Item 7. — Management’s Discussion and Analysis of Financial Condition and Results of Operations — Commitments and Contingencies — Supply and Offtake Agreements ” of this Form 10-K for further information. Our Wyoming refinery sources its crude oil and feedstocks primarily from the PADD IV region of the United States. Our Washington refinery utilizes an intermediation arrangement with Merrill Lynch and sources its crude oil and feedstocks primarily from North Dakota and Canada.

Our Hawaii refinery product slate is tailored to meet local on-island demand. Outside the Hawaii market, our refined product sales from our Hawaii refinery typically target the Eastern Asia and U.S. West Coast markets. Our Wyoming refinery

primarily sells refined products locally in the PADD IV region. Our Washington refinery primarily sells refined products in the Pacific Northwest region.

Retail

The retail segment includes 91 locations in Hawaii and 33 locations in Washington and Idaho where we set the price to the retail consumer. Of these, 34 of the Hawaii locations and all 33 Washington and Idaho locations are outlets operated by our personnel and include various sizes of kiosks, snack shops, or convenience stores. The remaining 57 Hawaii locations are cardlock s or sites operated by third parties where we retain ownership of the fuel and set retail pricing.

We hold exclusive licenses within the state of Hawaii to utilize the “76” brand for retail locations. Since 2016, we have completed the rebranding of 39 out of our 91 fueling stations in Hawaii to Hele, a new proprietary brand. All of the manned Hawaii locations and one cardlock are currently operated under one of those brands (see table below). The “76” license agreement expires September 24, 2024, unless extended by mutual agreement. During 2018, we completed the rebranding of 24 of our 34 company-operated convenience stores in Hawaii to “nomnom,” a new proprietary brand. Our retail outlets in Washington and Idaho operate under the “Cenex®” and “Zip Trip®” brand names.

As part of the Northwest Retail Acquisition, Par and CHS, Inc. entered into a multi-year branded petroleum marketing agreement for the continued supply of Cenex® -branded refined products to the 33 acquired Cenex® Zip Trip convenience stores.

The following table shows our owned and leased retail outlets by location and type:

Location and Channel of Trade	“76” Brand	Hele Brand	Cenex ® Zip Trip Brand	Unbranded	Total
Oahu					
Company operated	2	18	—	—	20
7-Eleven alliance	22	7	—	—	29
Fee operated	5	3	—	—	8
Cardlock	—	1	—	3	4
Oahu total	29	29	—	3	61
Big Island					
Company operated	3	6	—	—	9
Fee operated	3	—	—	—	3
Big Island total	6	6	—	—	12
Maui					
Company operated	1	4	—	—	5
Fee operated	2	—	—	—	2
Maui total	3	4	—	—	7
Kauai					
Fee operated	3	—	—	—	3
Cardlock	—	—	—	8	8
Kauai total	3	—	—	8	11
Total for Hawaii locations	41	39	—	11	91
Washington					
Company operated	—	—	25	—	25
Washington total	—	—	25	—	25
Idaho					
Company operated	—	—	8	—	8
Idaho total	—	—	8	—	8
Total for Washington and Idaho locations	—	—	33	—	33
Total for Retail segment	41	39	33	11	124

Competition

Competitive factors that affect our retail performance include product price, station appearance, location, customer service, and brand awareness. Our Hawaii competitors include the Shell, Texaco, Costco, Safeway, and Sam's Club national brands, regional brand Aloha, and other local retailers. Competitors of our Northwest Retail assets include the Chevron, Exxon, Conoco, Safeway, and Costco national brands, regional brands such as Maverik, Holiday, and Fred Meyer, and other local retailers.

Logistics

Our logistics segment generates revenues by charging fees for transporting crude oil to our refineries, delivering refined products to wholesale and bulk customers and to our retail business, and storing crude oil and refined products. Substantially all of our revenues from our logistics segment represent intercompany transactions that are eliminated in consolidation.

Hawaii Logistics

Our logistics network extends throughout the state of Hawaii. On Oahu, the system begins with our SPM located 1.7 miles offshore of our Hawaii refinery. This SPM allows for the safe, reliable, and efficient receipt of crude oil shipments to the Hawaii refinery, as well as both the receipt and export of finished products. Connecting the SPM to the Hawaii refinery are three undersea pipelines: a 30-inch line for crude oil, a 20-inch line, and a 16-inch line, both for the import or export of refined products. From the Hawaii refinery gate, we distribute refined products through our logistics network throughout the islands of Oahu, Maui, Hawaii, Molokai, and Kauai and for export to the U.S. West Coast and Asia.

The Oahu logistics network includes a 27-mile wholly owned and operated pipeline network that transports refined products from our Hawaii refinery to delivery locations (the "Honolulu Products Pipeline"). The majority of our Oahu refined product volumes are distributed through the Honolulu Products Pipeline to (i) our leased and operated Sand Island terminal, (ii) the Honolulu International Airport, (iii) interconnections to Navy and Air Force fuel facilities, and (iv) a third-party terminal in Honolulu Harbor. In addition to the Honolulu Products Pipeline, we own four proprietary pipelines connecting our Hawaii refinery to Kalaeloa Barbers Point Harbor, approximately three miles from the Hawaii refinery. The four pipelines deliver refined products to barges for distribution to the neighboring islands or export, the local utility pipeline and storage network, and another third-party terminal on the west side of Oahu. The Oahu pipeline network is generally configured to be bidirectional, allowing for both delivery and receipt of products.

In connection with the Hawaii Refinery Expansion, we entered into a long-term agreement with IES for storage and throughput at the Par West location. The agreement provides for the right to utilize 2 MMbbls barrels of dedicated crude and refined product storage, as well as certain IES logistics assets, including its off-shore mooring and Honolulu pipeline system.

Crude oil is presently transferred to the Par West facility via the IES off-shore mooring and a 30-inch undersea pipeline. We have agreed to construct an on-shore pipeline manifold that will connect the IES pipeline into our owned SPM pipeline (the "Tie-In"). The Tie-In is expected to allow crude to be transferred from our SPM to the Par East facility and the Par West facility, the two locations of our co-located Hawaii refinery. The Tie-In provides operational flexibility and redundancy in the event of maintenance on the off-shore pipelines. It also allows us to avoid throughput charges for use of the IES off-shore mooring. The Tie-In is expected to be completed in mid-2019.

Our terminal facilities on Oahu include our Sand Island facility that comprises two tanks with a total capacity of 30 Mbbls, as well as contractual rights to utilize strategically located third-party facilities both near the Hawaii refinery and at Honolulu Harbor near downtown.

We also operate a proprietary trucking business on Oahu to distribute gasoline and road diesel to the final point of sale.

Our logistics network for the islands neighboring Oahu consists of leased barge equipment and refined product tankage and proprietary trucking operations on the islands of Maui, Hawaii, Molokai, and Kauai. Specifically, we charter two barges to serve our neighbor island markets. This includes the Nale with 86 Mbbls of capacity and the Ne'ena with 52 Mbbls of capacity. In addition to neighbor island deliveries, the Ne'ena is utilized to service our bunker fuel customers, such as passenger cruise ships and container vessels. We also lease the barge Capella primarily for the import of ethanol from the U.S. West Coast with periodic backhauls of refined products for sale in the Pacific Northwest.

The barges deliver to, and product is dispensed from, a neighbor island network of seven petroleum terminals with total storage capacity of 301 Mbbls.

Wyoming Logistics

Our Wyoming logistics network includes a 140-mile crude oil pipeline gathering system that provides us access to crude oil from the Powder River Basin. This network also includes a 40-mile refined products pipeline that transports product from our Wyoming refinery to a common carrier with access to Rapid City, South Dakota.

The logistics network in Wyoming includes storage, loading racks, and a rail siding at the refinery site. Our crude oil and refined product tanks at the Wyoming refinery have a total capacity of 470 Mbbls. We also own and operate a jet fuel storage facility and pipeline that serve Ellsworth Air Force Base in South Dakota.

Washington Logistics

Our Washington logistics network includes 2.9 MMbbls of storage capacity, a proprietary 14-mile jet fuel pipeline, a marine terminal with 15 acres of waterfront property, a unit train-capable rail loading terminal with 107 unloading spots, and a truck rack with six truck lanes and 10 loading arms. These assets provide connectivity to Bakken, Canadian, and Alaskan crude oil and the Pacific, West Coast, Pacific Northwest, and Rockies product markets.

Hawaii Market

The Hawaii State Department of Business, Economic Development, and Tourism (“DBEDT”) projected Hawaii’s economic growth at 1% for 2018, continuing the trend of positive but slower growth. Hawaii’s economic growth rate is expected to increase to 1.8% in 2019.

With tourism as the principal engine behind Hawaii’s economy, the state registered a record 9.9 million visitor arrivals in 2018, a 6% increase over 2017, and continuing a seven year trend of growth. The corresponding nominal visitor expenditures increased nearly 7%. Total number of air seats on scheduled flights to Hawaii, a leading indicator of the tourism industry, increased 8% during 2018. According to available airline schedules, scheduled air seats to Hawaii during the first nine months of 2019 are expected to increase by 0.3%, leading to an expected arrival growth of approximately 1.8% in 2019. Demand for jet fuel is somewhat higher in Hawaii during the winter months than during the summer months as tourism increases during the winter months. Refining margins remain volatile and our results of operations may not reflect these historical seasonal trends.

Pacific Northwest and Rockies Markets

Spokane, Washington, and Northwest Idaho are the primary regions of our Pacific Northwest retail operations and the U.S. Census Bureau projected that the population increased 1.5% in Washington and 2.1% in Idaho from 2017 to 2018. Spokane is a regional hub in eastern Washington, with a population of over a half million and a variety of employers in the health care, retail, and other industries. According to the U.S. Bureau of Economic Analysis, personal income for the Spokane metro area grew by 3.3% between 2016 and 2017, continuing the trend of positive growth since the 2008-2009 recession. Additionally, Amazon is constructing a new fulfillment center near the Spokane International Airport that is anticipated to open in late 2019, and future regional growth and increased traffic is expected.

The primary market for our Wyoming refined products is the Black Hills Region in South Dakota, driven largely by Pennington, Lawrence, and Meade Counties, which represents nearly half of the state’s taxable tourism sales. According to the U.S. Census Bureau, the population in Pennington County, the state’s second largest county, increased by 1.1% from 2016 to 2017. According to the U.S. Bureau of Economic Analysis, personal income in South Dakota grew by 4.9% between the fourth quarter of 2017 and the first quarter of 2018. Unemployment in South Dakota continues to remain below the national average unemployment rate at 3%.

Demand for gasoline is highly seasonal, with a large increase in demand during the summer driving season. The South Dakota economy is anchored by tourism, including visitors to Mount Rushmore and the Black Hills, as well as government and health care spending. The South Dakota tourism industry has grown for the ninth consecutive year. Visitor spending in South Dakota was approximately \$4.0 billion in 2018, an increase of 2.5% over 2017, and there were approximately 14.1 million visitors, a 1.4% increase as compared to 2017. In 2018, \$920 million, or 23%, of tourism dollars were spent on transportation services. We also distribute refined products to customers in central and northeastern Wyoming. The economy in Wyoming is sensitive to demand for Powder River Basin coal and other locally-produced commodities. Coal mine production in the Powder River Basin increased 18.9% in the third quarter as compared to the second quarter of 2018, however production still declined year-over-year.

OTHER OPERATIONS

Laramie Energy

As of December 31, 2018, we own a 46.0% equity investment in Laramie Energy, a joint venture entity focused on producing natural gas in Garfield, Mesa, and Rio Blanco Counties, Colorado.

On March 1, 2016, Laramie Energy acquired certain properties in the Piceance Basin for \$152.1 million. The acquired properties consisted of approximately 249 billion cubic feet equivalent of proved developed producing reserves as of December 31, 2016, more than 53 thousand net operated acres, and more than 18 thousand net non-operated acres. On February 28, 2018, Laramie Energy closed on a purchase and contribution agreement with an unaffiliated third party that contributed all of its oil and gas properties located in the Piceance Basin to Laramie Energy, consisting of approximately 24 billion cubic feet equivalent of proved developed producing reserves. The acquired and existing properties produce primarily from the Mesaverde Formation and, to a lesser extent, the Mancos Formation. The majority of the acquired acreage is adjacent to Laramie Energy's existing assets.

As of December 31, 2018, the estimated proved reserves we own indirectly through Laramie Energy are as follows:

	Gas (MMcf)	Oil (Mbbls)	NGLs (Mbbls)	Total (MMcfe)
Company's share of Laramie Energy				
Proved developed	256,363	1,420	8,868	318,091
Proved undeveloped	81,428	325	3,715	105,668
Total	337,791	1,745	12,583	423,759

For more information regarding our proved undeveloped reserves, please read "Item 2. — Properties — Reserves — Proved Undeveloped Reserves" of this Form 10-K.

The following table presents the estimated future net cash flows related to proved developed producing, proved developed non-producing, and proved undeveloped reserves that we own indirectly through Laramie Energy as of December 31, 2018 (in thousands):

	Proved Developed Producing	Proved Developed Non-producing	Proved Undeveloped	Total (1)
Estimated future undiscounted net cash flows	\$ 469,132	\$ —	\$ 138,100	\$ 607,232
Standardized measure of discounted future net cash flows	268,436	—	50,666	319,102

(1) Prices are based on the historical first-day-of-the-month twelve-month average posted price depending on the area. These prices are adjusted for quality, energy content, regional price differentials, and transportation fees. All prices are held constant throughout the lives of the properties. The average adjusted prices are \$61.44 per barrel of crude oil, \$22.40 per barrel of natural gas liquids, and \$2.65 per Mcf of natural gas.

Reconciliation of Standardized Measure to PV-10

PV-10 is the estimated present value of the future net revenues calculated based on our estimated proved 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. This measure should not be considered a substitute for, or superior to, measures prepared in accordance with U.S. generally accepted accounting principles ("GAAP"). We believe that PV-10 is an important measure that can be used to evaluate the relative significance of our natural gas and oil properties to other companies 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. PV-10 is computed on the same basis as the standardized measure of discounted future net cash flows but without deducting income taxes.

The following table provides a reconciliation of our share of Laramie Energy's standardized measure of discounted future net cash flows to PV-10 at December 31, 2018 (in thousands):

Standardized measure of discounted future net cash flows	\$	319,102
Present value of future income taxes discounted at 10% (1)		—
PV-10	\$	319,102

(1) There is no present value of future income taxes as we believe we have sufficient net operating loss carryforwards to offset any income. Please read Note 19—Income Taxes to our consolidated financial statements under Item 8 of this Form 10-K for further information.

For more information on our natural gas and oil operations, please read “Item 2. — Properties” of this Form 10-K.

Competition

The natural gas and oil business is highly competitive. The principal markets for natural gas and oil are refineries and transmission companies that have facilities near Laramie Energy's producing properties. Natural gas and oil produced from Laramie Energy's wells are normally sold to various purchasers. Natural gas wells are connected to pipelines generally owned by the natural gas purchasers. A variety of pipeline transportation charges are usually included in the calculation of the price paid for the natural gas. Crude oil is picked up and transported by the purchaser from the wellhead. In some instances, Laramie Energy is charged a fee for the cost of transporting the crude oil, which is deducted from or accounted for in the price paid for the crude oil.

BANKRUPTCY AND PLAN OF REORGANIZATION

Background and General Recovery Trust

In 2011 and 2012, our predecessor, Delta Petroleum Corporation (“Delta”) and its subsidiaries (collectively “Debtors”) filed voluntary petitions under Chapter 11 of the U.S. Bankruptcy Code in the U.S. Bankruptcy Court for the District of Delaware (“Bankruptcy Court”). In March 2012, the Debtors obtained approval from the Bankruptcy Court to proceed with Laramie as the sponsor of a plan of reorganization (“Plan”). Delta emerged from bankruptcy, amended and restated its certificate of incorporation and bylaws, changed its name to Par Petroleum Corporation, and contributed the majority of its natural gas and oil properties to Laramie Energy on August 31, 2012 (the “Emergence Date”). The reorganization converted approximately \$265 million of unsecured debt to equity and allowed us to preserve significant tax attributes. On the Emergence Date, the Delta Petroleum General Recovery Trust (“General Trust”) was formed to pursue certain litigation against third parties or causes of action under the U.S. Bankruptcy Code and other claims and potential claims that the Debtors hold against third parties. The General Trust was funded with \$1.0 million pursuant to the Plan. The General Trust is pursuing all bankruptcy causes of action, claim objections, and resolutions and is responsible for winding up the bankruptcy. Upon liquidation of the various claims and causes of action held by the General Trust, the proceeds, less certain administrative reserves and expenses, will be transferred to us. It is unknown at this time what proceeds, if any, we will realize from the General Trust's litigation efforts. Through December 31, 2013, the General Trust released approximately \$5.2 million to us, which was available for our general use, due to a negotiated reduction in certain fees and claims associated with the bankruptcy, as well as a favorable variance in actual expenses versus budgeted expenses. No funds were released during the year ended December 31, 2018.

Shares Reserved for Unsecured Claims

The Plan provides that certain allowed general unsecured claims be paid with shares of our common stock. Pursuant to the Plan, allowed claims are settled at a ratio of 54.4 shares per \$1,000 of claim. As of December 31, 2018, two related claims totaling approximately \$22.4 million remained to be resolved by the Recovery Trustee. One of the two remaining claims was filed by the U.S. Government for approximately \$22.4 million relating to ongoing litigation concerning a plugging and abandonment obligation in Pacific Outer Continental Shelf Lease OCS-P 0320, comprising part of the Sword Unit in the Santa Barbara Channel, California. The second unliquidated claim, which is related to the same plugging and abandonment obligation, was filed by Noble Energy Inc., the operator and majority interest owner of the Sword Unit. We believe the probability of issuing shares to satisfy the full claim amount is remote, as the obligations upon which such proof of claim is asserted are joint and several among all working interest owners and Delta, our predecessor, owned an approximate 3.4% aggregate working interest in the unit.

The settlement of claims is subject to ongoing litigation and we are unable to predict with certainty how many shares will be required to satisfy all claims. We have accrued approximately \$0.5 million representing the estimated value of claims remaining to be settled which are deemed probable and estimable at December 31, 2018. Please read “Item 7. – Management's Discussion

and Analysis of Financial Condition and Results of Operations – Liquidity and Capital Resources – Commitments and Contingencies – Bankruptcy Matters” of this Form 10-K for further information.

Closing of the Bankruptcy Cases

On February 27, 2018, the Bankruptcy Court entered its final decree closing the Chapter 11 bankruptcy cases of Delta and the other Debtors, discharging the Recovery Trustee, and finding that all assets of the General Trust were resolved, abandoned, or liquidated and have been distributed in accordance with the requirements of the Plan. In addition, the final decree required the Company or the General Trust, as applicable, to maintain the current reserves owed on account of the remaining claims of the U.S. Government and Noble Energy, Inc.

ENVIRONMENTAL REGULATIONS

General

Our activities are subject to existing federal, state, and local laws and regulations governing environmental quality and pollution control. Although no assurances can be made, we believe that, absent the occurrence of an extraordinary event, compliance with existing federal, state, and local laws, regulations, and rules regulating the release of materials in the environment or otherwise relating to the protection of human health, safety, and the environment will not have a material effect upon our capital expenditures, earnings, or competitive position with respect to our existing assets and operations. We cannot predict what effect additional regulation or legislation, enforcement policies, and claims for damages to property, employees, other persons, and the environment resulting from our operations could have on our activities.

Periodically, we receive communications from various federal, state, and local governmental authorities asserting violations of environmental laws and/or regulations. These governmental entities may also propose or assess fines or require corrective actions for these asserted violations. We intend to respond in a timely manner to all such communications and to take appropriate corrective action. We do not anticipate that any such matters currently asserted will have a material impact on our financial condition, results of operations, or cash flows.

Refining activities

Like other petroleum refiners, our operations are subject to extensive and periodically changing federal and state environmental regulations governing air emissions, wastewater discharges, and solid and hazardous waste management activities. Many of these regulations are becoming increasingly stringent and the cost of compliance can be expected to increase over time. Our policy is to accrue environmental and clean-up related costs of a non-capital nature when it is probable that a liability has been incurred and the amount can be reasonably estimated. Such estimates may be subject to revision in the future as regulations and other conditions change.

Natural gas and oil production

Our activities with respect to exploration and production of natural gas and oil, including the drilling of wells and the operation and construction of pipelines, plants, and other facilities for extracting, transporting, processing, treating, or storing natural gas, crude oil, and other petroleum products, are subject to stringent environmental regulation by state and federal authorities, including the U.S. Environmental Protection Agency (“EPA”). Such regulation can increase the costs of planning, designing, installing, and operating such facilities. Although we believe that compliance with environmental regulations will not have a material adverse effect on us, risks of substantial costs and liabilities are inherent in natural gas and oil production, transport, and storage operations and there can be no assurance that significant costs and liabilities will not be incurred. Moreover, it is possible that other developments, such as spills or other unanticipated releases, stricter environmental laws and regulations, and claims for damages to property or persons resulting from oil and gas production, transport, or storage would result in substantial costs and liabilities to us.

Climate Change and Regulation of Greenhouse Gases

According to certain scientific studies, emissions of CO₂, methane, nitrous oxide, and other gases commonly known as greenhouse gases (“GHGs”) may be contributing to global warming of the earth’s atmosphere and to global climate change. In response to the scientific studies, legislative and regulatory initiatives have been underway to limit GHG emissions. The U.S. Supreme Court determined that GHG emissions fall within the federal Clean Air Act (“CAA”) definition of an “air pollutant.” In response, the EPA promulgated an endangerment finding, paving the way for regulation of GHG emissions under the CAA. The EPA has now begun regulating GHG under the CAA. New construction or material expansions that meet certain GHG emissions thresholds will likely require that, among other things, a GHG permit be issued in accordance with the CAA regulations and we

will be required in connection with such permitting to undertake a technology review to determine appropriate controls to be implemented with the project in order to reduce GHG emissions. Based on current company operations, however, our natural gas and oil exploration and production activities and our existing refining activities are not subject to current federal GHG permitting requirements.

Furthermore, the EPA is developing refinery-specific GHG regulations and performance standards that are expected to impose GHG emission limits and/or technology requirements. These control requirements may affect a wide range of refinery operations. Any such controls could result in material increased compliance costs, additional operating restrictions for our business, and an increase in cost of the products we produce, which could have a material adverse effect on our financial position, results of operations, and liquidity. We believe it is unlikely that such additional GHG requirements will be finalized in the near term.

The EPA has also promulgated rules requiring large sources to report their GHG emissions. Reports are being made in connection with our refining business. Sources subject to these reporting requirements also include on and offshore petroleum and natural gas production and onshore natural gas processing and distribution facilities that emit 25,000 metric tons or more of CO₂ equivalent per year in aggregate emissions from all site sources. To date, our natural gas and oil exploration and production activities are not subject to GHG reporting requirements.

In 2007, the State of Hawaii passed Act 234, which required that GHG emissions be rolled back on a statewide basis to 1990 levels by the year 2020. Although delayed, the Hawaii Department of Health (“DOH”) has issued regulations that would require each major facility to reduce CO₂ emissions by 16% by 2020 relative to a calendar year 2010 baseline (the first year in which GHG emissions were reported to the EPA under 40 CFR Part 98). The GHG rules include an alternative for facilities to demonstrate that further GHG reductions are not economically viable and an additional provision that authorized the DOH to issue a waiver if GHGs are being effectively controlled as a consequence of other state initiatives and regulations such as the Renewable Portfolio Standard. The capacity of our co-located refinery in Hawaii to further reduce fuel use and GHG emissions is limited. Since Hawaii’s GHG emissions have already been reduced below 2010 levels and are projected to be less than the 1990 levels by 2020, we anticipate our refinery in Hawaii will be able to demonstrate that no further reductions are required to meet the statewide goal. Any reductions imposed by the 16% facility-specific mandate would not be cost effective and therefore should not be required. Additionally, the regulation allows for “partnering” with other facilities (principally power plants) which have already dramatically reduced GHG emissions or are on schedule to reduce CO₂ emissions in order to comply with the state’s Renewable Portfolio Standards.

Regulation of GHG emissions is fairly new and highly controversial. Further regulatory, legislative, and judicial developments are likely to occur in the future. Such developments may affect how these GHG initiatives will impact us. They may also impact the use of and demand for petroleum products, which could impact our business. Further, apart from these developments, tort claims alleging property damage against GHG emissions sources may be asserted. Due to the uncertainties surrounding the regulation of and other risks associated with GHG emissions, we cannot predict the financial impact of related developments on us.

National Ambient Air Quality Standards

Over the past several years the EPA has adopted a number of new and more stringent National Ambient Air Quality Standards (“NAAQS”). Specifically new NO_x and SO₂ standards were set in 2010 and a new particulate matter standard was set in 2012. States are required to develop State Implementation Plans and ultimately local air districts are required to adopt rules that will (over time) improve the air quality so that it will be “In Attainment” with the existing and new NAAQS. More stringent air pollutant standards and corresponding rules have already impacted and will continue to cause many refineries to invest heavily in additional air pollution controls. Thus far, Hawaii air quality, particularly on Oahu where our Hawaii refinery is located, has met even the most recent NAAQS and the Hawaii refinery has not been required to install new controls as result of local rules. Even so, NAAQS could and, to a degree, have already forced some changes for our customer base. Power plants on the Big Island, where SO₂ levels are already elevated due to volcanic activity, are switching from LSFO to diesel fuel. On Oahu, the state’s largest utility frequently cites compliance with NAAQS as one of its justifications for moving towards a cleaner bridge fuel, potentially diesel or liquefied natural gas, before reaching its renewable goals. On October 1, 2015, the EPA adopted rules that would substantially tighten the NAAQS for ground-level ozone. This rule will cause many areas of the country to fall out of attainment and for the affected states to require additional controls and limits on combustion emissions and emissions of volatile organic compounds. We do not currently anticipate that the more stringent NAAQS will impact our Hawaii, Washington, or Wyoming operations.

Fuel Standards

In 2007, the U.S. Congress passed the Energy Independence and Security Act (“EISA”) which, among other things, set a target fuel economy standard of 35 miles per gallon for the combined fleet of cars and light trucks in the U.S. by model year 2020 and contained an expanded Renewable Fuel Standard (the “RFS2”). In August 2012, the EPA and National Highway Traffic

Safety Administration ("NHTSA") jointly adopted regulations that establish an average industry fuel economy of 54.5 miles per gallon by model year 2025. On August 8, 2018, the EPA and NHTSA jointly proposed to revise existing fuel economy standards for model years 2021-2025 and to set standards for 2026 for the first time. The agencies have not yet issued a final rule, but they are expected to do so in 2019. Although the revised fuel economy standards are expected to be less stringent than the initial standards for model years 2021-2025, it is uncertain whether the revised standards will increase year over year. Higher fuel economy standards have the potential to reduce demand for our refined transportation fuel products.

Under EISA, the RFS2 requires an increasing amount of renewable fuel to be blended into the nation's transportation fuel supply, up to 36.0 billion gallons by 2022. In the near term, the RFS2 will be satisfied primarily with fuel ethanol blended into gasoline. We, and other refiners subject to the EPA issued Renewable Fuel Standard ("RFS"), may meet the RFS requirements by blending the necessary volumes of renewable fuels produced by us or purchased from third parties. To the extent that refiners will not or cannot blend renewable fuels into the products they produce in the quantities required to satisfy their obligations under the RFS program, those refiners must purchase renewable credits, referred to as Renewable Identification Numbers ("RINs"), to maintain compliance. To the extent that we exceed the minimum volumetric requirements for blending of renewable fuels, we generate our own RINs for which we have the option of retaining the RINs for current or future RFS compliance or selling those RINs on the open market. The RFS2 may present production and logistics challenges for both the renewable fuels and petroleum refining and marketing industries in that we may have to enter into arrangements with other parties or purchase D3 waivers from the EPA to meet our obligations to use advanced biofuels, including biomass-based diesel and cellulosic biofuel, with potentially uncertain supplies of these new fuels.

In October 2010, the EPA issued a partial waiver decision under the federal CAA to allow for an increase in the amount of ethanol permitted to be blended into gasoline from 10% ("E10") to 15% ("E15") for 2007 and newer light duty motor vehicles. In January 2011, the EPA issued a second waiver for the use of E15 in vehicles model years 2001-2006. In 2019, EPA is expected to conduct a rulemaking to allow year-round sales of E15. There are numerous issues, including state and federal regulatory issues, which need to be addressed before E15 can be marketed on a large scale for use in traditional gasoline engines; however, increased renewable fuel in the nation's transportation fuel supply could reduce demand for our refined products.

In March 2014, the EPA published a final Tier 3 gasoline standard that requires, among other things, that gasoline contain no more than 10 parts per million ("ppm") sulfur on an annual average basis and no more than 80 ppm sulfur on a per-gallon basis. The standard also lowers the allowable benzene, aromatics, and olefins content of gasoline. The effective date for the new standard is January 1, 2017, however, approved small volume refineries have until January 1, 2020 to meet the standard. Our Hawaii refinery is required to comply with Tier 3 gasoline standards within 30 months of June 21, 2016, the date our Hawaii refinery was disqualified from small volume refinery status. On March 19, 2015, the EPA confirmed the small refinery status of our Wyoming refinery. The Par East facility of our Hawaii refinery, our Wyoming refinery, and our Washington refinery were all granted small refinery status by the EPA for 2017. The EPA is expected to make small refinery status determinations for 2018 in the first quarter of 2019.

Beginning on June 30, 2014, new sulfur standards for fuel oil used by marine vessels operating within 200 miles of the U.S. coastline (which includes the entire Hawaiian Island chain) was lowered from 10,000 ppm (1%) to 1,000 ppm (0.1%). The sulfur standards began at the Hawaii refinery and were phased in so that by January 1, 2015, they were to be fully aligned with the International Marine Organization ("IMO") standards and deadline. The more stringent standards apply universally to both U.S. and foreign flagged ships. Although the marine fuel regulations provided vessel operators with a few compliance options such as installation of on-board pollution controls and demonstration unavailability, many vessel operators will be forced to switch to a distillate fuel while operating within the Emission Control Area ("ECA"). Beyond the 200 mile ECA, large ocean vessels are still allowed to burn marine fuel with up to 3.5% sulfur. Our Hawaii refinery is capable of producing the 1% sulfur residual fuel oil that was previously required within the ECA. Although our Hawaii refinery remains in a position to supply vessels traveling to and through Hawaii, the market for 0.1% sulfur distillate fuel and 3.5% sulfur residual fuel is much more competitive.

In addition to U.S. fuels requirements, the IMO has also adopted newer standards that further reduce the global limit on sulfur content in maritime fuels to 0.5% beginning in 2020 ("IMO 2020"). Like the rest of the refining industry, we are focused on meeting these standards and may incur costs in producing lower-sulfur fuels.

There will be compliance costs and uncertainties regarding how we will comply with the various requirements contained in the EISA, IMO 2020, and other fuel-related regulations. We may experience a decrease in demand for refined petroleum products due to an increase in combined fleet mileage or due to refined petroleum products being replaced by renewable fuels.

Solid and Hazardous Waste

Several of our businesses generate wastes, including hazardous wastes, which are subject to regulation under the federal Resource Conservation and Recovery Act ("RCRA") and state statutes. The EPA has limited the disposal options for certain hazardous wastes and state regulation of the handling and disposal of refining and natural gas and oil exploration and production wastes and solid wastes is becoming more stringent. Furthermore, it is possible that certain wastes generated by our natural gas

and oil operations which are currently exempt from regulation as “hazardous wastes” may in the future be designated as “hazardous wastes” under RCRA or other applicable statutes and therefore be subject to more rigorous and costly disposal requirements.

Naturally Occurring Radioactive Materials (“NORM”) are radioactive materials that accumulate on production equipment or area soils during oil and natural gas extraction or processing. Primary responsibility 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 our operations are in material compliance with all applicable NORM standards.

Our natural gas and oil properties have been operated by third parties that controlled the treatment of hydrocarbons or other solid wastes and the manner in which such substances may have been disposed or released. State and federal laws applicable to refineries and to natural gas and oil wastes and properties have gradually become stricter over time. Under these laws, we could be required to remove or remediate previously disposed wastes (including wastes disposed or released by prior owners or operators) or property contamination (including groundwater contamination by prior owners or operators) or to perform remedial operations to prevent future contamination.

Superfund

The Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”), also known as the “Superfund” law, imposes liability, without regard to fault or the legality of the original conduct, on certain persons with respect to the release or threatened release of a “hazardous substance” into the environment. These persons include the current owner and operator of a site, any former owner or operator who operated the site at the time of a release, transporters, and persons that disposed or arranged for the disposal of hazardous substances at a site. CERCLA also authorizes the 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 persons the costs of such action. State statutes impose similar liability.

Under CERCLA, the term “hazardous substance” does not include “petroleum, including crude oil or any fraction thereof,” unless specifically listed or designated and the term does not include natural gas, NGLs, liquefied natural gas, or synthetic gas usable for fuel. While this “petroleum exclusion” lessens the significance of CERCLA to our exploration and production operations, we may generate wastes that may fall within CERCLA’s definition of a “hazardous substance” in the course of our ordinary refining and natural gas and oil operations. Although we and, to our knowledge, our predecessors have used operating and disposal practices that were standard in the industry at the time, “hazardous substances” may have been disposed or released on, under, or from the properties currently or historically owned or leased by us or on, under, or from other locations where these wastes have been taken for disposal. At this time, we do not believe that we have any liability associated with any Superfund site and we have not been notified of any claim, liability, or damages under CERCLA.

Oil Pollution Act

The Oil Pollution Act of 1990 (“OPA”) and regulations thereunder impose a variety of requirements on “responsible parties” related to the prevention of crude oil spills and liability for damages resulting from such spills in U.S. waters. A “responsible party” includes the owner or operator of a facility or vessel or the lessee or permittee of the area in which an offshore facility is located. While liability limits apply in some circumstances, few defenses exist to the liability imposed by the OPA.

The OPA establishes a liability limit for onshore facilities of \$633.85 million and for offshore facilities of all removal costs plus \$137.66 million, with lesser limits for some vessels depending upon their size. The regulations promulgated under OPA impose proof of financial responsibility requirements that can be satisfied through insurance, guarantee, indemnity, surety bond, letter of credit, qualification as a self-insurer, or a combination thereof. 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. Further, the U.S. Congress has considered legislation that could increase our obligations and potential liability under the OPA, including by eliminating the current cap on liability for damages and increasing minimum levels of financial responsibility. It is uncertain whether, and in what form, such legislation may ultimately be adopted. We are not aware of the occurrence 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 us.

Discharges and Marine Protection

The Clean Water Act (“CWA”) regulates the discharge of pollutants to waters of the U.S., including wetlands, and requires a permit for the discharge of pollutants, including petroleum, to such waters. Certain facilities that store or otherwise handle crude oil are required to prepare and implement Spill Prevention, Control, and Countermeasure and Facility Response Plans relating to the possible discharge of oil to surface waters. We are required to prepare and comply with such plans and to obtain and comply with discharge permits. We believe we are in substantial compliance with these requirements and that any noncompliance would

not have a material adverse effect on us. The CWA also prohibits spills of oil and hazardous substances to waters of the U.S. in excess of levels set by regulations and imposes liability in the event of a spill.

Other statutes provide protection to animal and plant species. These laws and regulations may require the acquisition of a permit or other authorization before drilling or construction related to the oil and gas industry commences and may limit or prohibit construction, drilling, and other activities on certain lands lying within wilderness or wetlands and other protected areas and impose substantial liabilities for pollution resulting from our operations. For example, the Magnuson amendment to the Marine Mammal Protection Act may limit or restrict certain new oil terminals and oil-by-rail infrastructure in the State of Washington.

State laws further regulate discharges of pollutants to surface and groundwaters, require permits that set limits on discharges to such waters, and provide civil and criminal penalties and liabilities for spills to both surface and groundwaters. Some states have imposed regulatory requirements to respond to concerns related to potential for groundwater impact from oil and gas exploration and production. For example, the Colorado Oil and Gas Conservation Commission (“COGCC”) approved rules that require sampling of groundwater for hydrocarbons and other indicator compounds both before and after drilling.

Hydraulic Fracturing

Our and Laramie Energy’s exploration and production activities may involve the use of hydraulic fracturing techniques to stimulate wells and maximize natural gas production. Some states and localities now regulate the utilization of hydraulic fracturing and other states and localities are in the process of developing, or are considering development of, such rules. A state ballot initiative was introduced in Colorado that would have required oil and gas wells to be at least 2,500 feet from homes and other occupied buildings. This initiative was rejected, but similar legislative action could subject Laramie Energy’s drilling activities to new or enhanced federal, state, and/or local regulatory requirements, including requirements that could restrict the areas in which Laramie Energy is able to operate.

Air Emissions

Our refining operations and our and Laramie Energy’s exploration and production operations are subject to local, state, and federal regulations for the control of emissions from sources of air pollution. Administrative enforcement actions for failure to comply strictly with air regulations or permits may be resolved by payment of monetary fines and correction of any identified deficiencies. Alternatively, regulatory agencies could impose civil and criminal liability for non-compliance. An agency could require us to forego construction or operation of certain air emission sources. We believe that we are in substantial compliance with air pollution control requirements and that, if a particular permit application were denied, we would have enough permitted or permittable capacity to continue our operations without a material adverse effect on any particular producing field.

Our refining business is subject to very significant state and federal air permitting and pollution control requirements, including some that are the subject of ongoing enforcement activities by the EPA as described in more detail below. The EPA continues to review and, in many cases, tighten ambient air quality standards, which standards, along with the advancement of pollution control technologies, could result in new regulatory and permit requirements that will impact our refining activities and involve additional costs.

On September 29, 2015, the EPA announced a final rule updating standards that control toxic air emissions from petroleum refineries, addressing, among other things, flaring operations, fenceline air quality monitoring, and additional emission reductions from storage tanks and delayed coking units. Affected existing sources were required to comply with the new requirements no later than 2018, with certain refiners required to comply earlier depending on the relevant provision and refinery construction date. Compliance with this rule has not had a material impact on our financial condition, results of operations, or cash flows to date.

More stringent regulation may be imposed in the future as a result of public concern about the impacts of increased oil and gas drilling activity and the availability of new information. For example, the Colorado Department of Natural Resources and the Colorado Department of Public Health and the Environment completed a study of emissions tied to oil and gas development in areas along the northern Front Range of the Rocky Mountains. It is unclear what regulatory or legislative action will be taken in response to this study and we are unable to predict the financial impact of such developments on our company going forward.

Coastal Coordination

There are various federal and state programs that regulate the conservation and development of coastal resources. The federal Coastal Zone Management Act (“CZMA”) was passed to preserve and, where possible, restore the natural resources of the coastal zone of the U.S. The CZMA provides for federal grants for state management programs that regulate land use, water use, and coastal development.

Environmental Agreement

On September 25, 2013 (the “Closing Date”), Par Petroleum, LLC (formerly known as Hawaii Pacific Energy; a wholly owned subsidiary of Par created for purposes of acquiring Par Hawaii Refining, LLC (“PHR”)), Tesoro, and PHR entered into an Environmental Agreement (“Environmental Agreement”), which allocated responsibility for known and contingent environmental liabilities related to the acquisition of PHR as follows:

Consent Decree

On July 18, 2016, PHR and subsidiaries of Tesoro entered into a consent decree with the EPA, the U.S. Department of Justice (“DOJ”), and other state governmental authorities concerning alleged violations of the federal CAA related to the ownership and operation of multiple facilities owned or formerly owned by Tesoro and its affiliates (“Consent Decree”), including the Par East facility of our Hawaii refinery. As a result of the Consent Decree, PHR expanded its previously-announced 2016 turnaround to undertake additional capital improvements to reduce emissions of air pollutants and to provide for certain NO_x and SO₂ emission controls and monitoring required by the Consent Decree. Although the turnaround was completed during the third quarter of 2016, work related to the Consent Decree is ongoing. This work subjects us to risks associated with engineering, procurement, and construction of improvements and repairs to our facilities and related penalties and fines to the extent applicable deadlines under the Consent Decree are not satisfied, as well as risks related to the performance of equipment required by, or affected by, the Consent Decree. Each of these risks could have a material adverse effect on our business, financial condition, or results of operations.

Tesoro is responsible under the Environmental Agreement for directly paying, or reimbursing PHR, for all reasonable third-party capital expenditures incurred pursuant to the Consent Decree to the extent related to acts or omissions prior to the closing date of the acquisition of PHR. Tesoro is obligated to pay all applicable fines and penalties related to the Consent Decree.

Through December 31, 2018, Tesoro has reimbursed us for \$12.2 million of our total capital expenditures incurred in connection with the Consent Decree. As of December 31, 2018, all reimbursable capital expenditures incurred pursuant to the Consent Decree were collected. Net capital expenditures and reimbursements related to the Consent Decree are presented within Capital expenditures on our consolidated statement of cash flows for the years ended December 31, 2018 and 2017. Please read Note 15—Commitments and Contingencies to our consolidated financial statements under Item 8 of this Form 10-K for more information.

Indemnification

In addition to its obligation to reimburse us for capital expenditures incurred pursuant to the Consent Decree, Tesoro agreed to indemnify us for claims and losses arising out of related breaches of Tesoro’s representations, warranties, and covenants in the Environment Agreement, certain defined “corrective actions” relating to pre-existing environmental conditions, third-party claims arising under environmental laws for personal injury or property damage arising out of, or relating to, releases of hazardous materials that occurred prior to the closing date, any fine, penalty, or other cost assessed by a governmental authority in connection with violations of environmental laws by us prior to the closing date, certain groundwater remediation work, the replacement of underground storage tanks located at certain retail assets, fines, or penalties imposed on us by the Consent Decree related to acts or omissions of Tesoro prior to the closing date and related to the Pearl City Superfund Site.

Tesoro’s indemnification obligations are subject to certain limitations as set forth in the Environmental Agreement. These limitations include a deductible of \$1 million and a cap of \$15 million for certain of Tesoro’s indemnification obligations related to certain pre-existing conditions as well as certain restrictions regarding the time limits for submitting notice and supporting documentation for remediation actions.

Other Government Regulation

Impact of Dodd-Frank Act Derivatives Regulation

The Dodd-Frank Wall Street Reform and Consumer Protection Act (“Dodd-Frank Act”), which was passed by the U.S. Congress and signed into law in July 2010, contains significant derivatives regulation, including requirements that certain transactions be cleared on exchanges and that collateral (commonly referred to as “margin”) be posted for such transactions. The Dodd-Frank Act provides for a potential exception from these clearing and collateral requirements for commercial end-users and it includes a number of defined terms used in determining how this exception applies to particular derivative transactions and the parties to those transactions. As required by the Dodd-Frank Act, the Commodities Futures and Trading Commission (“CFTC”) has promulgated numerous rules to define these terms. The CFTC has re-proposed new rules that would place limits on certain core futures and equivalent swap contracts for or linked to certain physical commodities, subject to exceptions for certain bona fide hedging transactions. As these new positions limit rules are not yet final, the impact of those provisions on us is uncertain at this time.

It is possible that the CFTC, in conjunction with prudential regulators, may mandate that financial counterparties entering into swap transactions with end-users must do so with credit support agreements in place, which could result in negotiated credit thresholds above which an end-user must post collateral. If this should occur, we intend to manage our credit relationships to minimize collateral requirements.

The CFTC's final rules may also have an impact on our hedging counterparties. For example, our bank counterparties may be required to post collateral and assume compliance burdens resulting in additional costs. We expect that much of the increased costs could be passed on to us, thereby decreasing the relative effectiveness of our hedges and our profitability. To the extent we incur increased costs or are required to post collateral, there could be a corresponding decrease in amounts available for our capital investment program.

OSHA

We are subject to the requirements of the federal Occupational Safety and Health Act ("OSHA") and comparable state statutes. The OSHA hazard communication standard, the EPA community right-to-know regulations under Title III of the federal Superfund Amendments and Reauthorization Act, and similar state statutes require us to organize and/or disclose information about hazardous materials used or produced in our operations. Certain of this information must be provided to employees, state and local governmental authorities, and local citizens.

SIGNIFICANT CUSTOMERS

We sell a variety of refined products to a diverse customer base. The majority of our refined products are primarily sold through short-term contracts or on the spot market. For the year ended December 31, 2017, we had one customer in our refining segment that accounted for 10% of our consolidated revenues. No other customers accounted for more than 10% of our consolidated revenues during the years ended December 31, 2018, 2017, and 2016.

EMPLOYEES

At December 31, 2018, we employed 1,285 people, 192 of whom are nonexempt employees at our co-located Hawaii refinery who are represented by the United Steelworkers Union ("USW"). Our previous collective bargaining agreement with the union expired in January 2019. We are currently in negotiations with the USW on a new extension of the collective bargaining agreement.

On January 13, 2016, a claim against us was brought to the United States National Labor Relations Board ("NLRB") alleging a refusal to bargain collectively and in good faith. Notwithstanding the claim, we consider our relations with our represented and non-represented employees to be satisfactory. Please read Note 15—Commitments and Contingencies to our consolidated financial statements under Item 8 of this Form 10-K for further information.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

Certain statements in this Annual Report on Form 10-K may constitute "forward-looking" statements as defined in Section 27A of the Securities Act of 1933 (the "Securities Act"), Section 21E of the Securities Exchange Act of 1934 (the "Exchange Act"), the Private Securities Litigation Reform Act of 1995 ("PSLRA"), or in releases made by the SEC, all as may be amended from time to time. Such forward-looking statements involve known and unknown risks, uncertainties, and other important factors that could cause our actual results, performance, or achievements to differ materially from any future results, performance, or achievements expressed or implied by such forward-looking statements. Statements that are not historical fact are forward-looking statements. Forward-looking statements can be identified by, among other things, the use of forward-looking language, such as the words "plan," "believe," "expect," "anticipate," "intend," "estimate," "project," "may," "will," "would," "could," "should," "seeks," or "scheduled to," or other similar words or the negative of these terms or other variations of these terms or comparable language or by discussion of strategy or intentions. These cautionary statements are being made pursuant to the Securities Act, the Exchange Act, and the PSLRA with the intention of obtaining the benefits of the "safe harbor" provisions of such laws.

The forward-looking statements contained in this Annual Report on Form 10-K are largely based on our expectations, which reflect estimates and assumptions made by our management. These estimates and assumptions reflect our best judgment based on currently known market conditions and other factors. Although we believe such estimates and assumptions to be reasonable, they are inherently uncertain and involve a number of risks and uncertainties that are beyond our control. In addition, management's assumptions about future events may prove to be inaccurate. All readers are cautioned that the forward-looking statements contained in this Annual Report on Form 10-K are not guarantees of future performance and we cannot assure any reader that such statements will be realized or that the forward-looking events and circumstances will occur. Actual results may differ materially from those

anticipated or implied in the forward-looking statements due to factors described in “ Item 1A. — Risk Factors ”, “ Item 7. — Management’s Discussion and Analysis of Financial Condition and Results of Operations ,” and elsewhere in this Annual Report on Form 10-K. All forward-looking statements speak only as of the date they are made. We do not intend to update or revise any forward-looking statements as a result of new information, future events, or otherwise. These cautionary statements qualify all forward-looking statements attributable to us or persons acting on our behalf.

Item 1A. RISK FACTORS

Our businesses involve a high degree of risk. You should consider and read carefully the risks and uncertainties described below, together with all of the other information contained in this Annual Report on Form 10-K. If any of the following risks, or any risk described elsewhere in this Annual Report on Form 10-K, actually occurs, our business, prospects, financial condition, results of operations, or cash flows could be materially adversely affected. In any such case, the trading price of our common stock could decline. The risks described below are not the only ones facing our company. Additional risks not currently known to us or that we currently deem immaterial may also adversely affect us.

OPERATING RISKS

Our operations are subject to operational hazards that could expose us to potentially significant losses.

Our operations are subject to potential operational hazards and risks inherent in refining operations, in transporting and storing crude oil and refined products, and in producing natural gas and oil. Any of these risks, such as fires, explosions, maritime disasters, security breaches, pipeline ruptures and spills, mechanical failure of equipment, and severe weather and natural disasters at our or third-party facilities could result in business interruptions or shutdowns and damage to our properties and the properties of others. A serious accident at our facilities could also result in serious injury or death to our employees or contractors and could expose us to significant liability for personal injury claims and reputational risk. Any such event or unplanned shutdown could have a material adverse effect on our business, financial condition, and results of operations.

The volatility of crude oil prices and refined product prices and changes in the demand for such products may have a material adverse effect on our cash flow and results of operations.

Earnings and cash flows from our refining segment depend on a number of factors, including to a large extent the cost of crude oil and other refinery feedstocks which has fluctuated significantly in recent years. While prices for refined products are influenced by the price of crude oil, the constantly changing margin between the price we pay for crude oil and other refinery feedstocks and the prices we receive for refined products (“crack spread”) also fluctuates significantly. The prices we pay and prices we receive depend on numerous factors beyond our control, including the global supply and demand for crude oil, gasoline, and other refined products, which are subject to, among other things:

- changes in the global economy and the level of foreign and domestic production of crude oil and refined products;
- availability of crude oil and refined products and the infrastructure to transport crude oil and refined products;
- local factors, including market conditions, the level of operations of other refineries in our markets, and the volume and price of refined products imported;
- threatened or actual terrorist incidents, acts of war, and other global political conditions;
- government regulations or mandated production curtailments or limitations; and
- weather conditions, hurricanes, or other natural disasters.

For example, our newly acquired Washington refinery sources crude from, among other locations, Western Canada, where the Alberta government recently announced that it will mandate oil production cuts in 2019. This action, or any similar actions, could result in an increase in the price we pay for crude oil, which may result in a decrease in the expected earnings and cash flows generated by the Washington refinery.

In addition, we purchase our refinery feedstocks before manufacturing and selling the refined products. Price level changes during the periods between purchasing and selling these refined products could also have a material adverse effect on our business, financial condition, and results of operations.

Instability in the global economic and political environment can lead to volatility in the cost and availability of crude oil and prices for refined products, which could adversely impact our results of operations.

Instability in the global economic and political environment can lead to volatility in the cost and availability of crude oil and in the price for refined products. This may place downward pressure on our results of operations. This is particularly true of developments in and relating to oil-producing countries, including terrorist activities, military conflicts, embargoes, internal instability, or actions or reactions of the U.S. or foreign governments in anticipation of, or in response to, such developments. Any such events may limit or disrupt markets, which could negatively impact our ability to access global crude oil commodity flows or sell our refined products.

Many of our refined products could cause serious injury or death if mishandled or misused by us or our purchasers, or if defects occur during manufacturing.

While we produce, store, transport, and deliver all of our refined products in a safe manner, many of our refined products are highly flammable or explosive and could cause significant damage to persons or property if mishandled. Defects in our products (such as gasoline or jet fuel) or misuse by us or by end purchasers could lead to fatalities or serious damage to property. We may be held liable for such occurrences which could have a material adverse effect on our business and results of operations.

Our business is impacted by increased risks of spills, discharges, or other releases of petroleum or hazardous substances in our refining and logistics operations.

The operation of refineries, pipelines, and refined products terminals is subject to increased risks of spills, discharges, or other inadvertent releases of petroleum or hazardous substances, and we operate in and around environmentally sensitive coastal waters that are closely regulated and monitored. These events could occur in connection with the operation of our refineries, pipelines, or refined products terminals. If any of these events occur, or is found to have previously occurred, we could be liable for costs and penalties associated with their remediation under federal, state, and local environmental laws or common law, and could be liable for property damage to third parties caused by contamination from releases and spills. The penalties and clean-up costs that we may have to pay for releases or the amounts that we may have to pay to third parties for damages to their property, could be significant and have a material adverse effect on our business, financial condition, or results of operations.

Our operations, including the operation of underground storage tanks, are also subject to the risk of environmental litigation and investigations which could affect our results of operations.

From time to time we may be subject to litigation or investigations with respect to environmental and related matters, the costs of which could be material. We operate, and have in the past operated, fueling stations with underground storage tanks used primarily for storing and dispensing refined fuels. In addition, some of our fueling stations have been owned by third parties whose operation of the stations was not under our control. Federal and state regulations and legislation govern the storage tanks and compliance with these requirements can be costly. The operation of underground storage tanks poses certain risks, including leaks. Leaks from underground storage tanks, which may occur at one or more of our fueling stations, may impact soil or groundwater and could result in fines or civil liability for us.

Our insurance coverage may be inadequate to protect us from the liabilities that could arise in our business.

We carry property, casualty, business interruption, and other lines of insurance, but we do not maintain insurance coverage against all potential losses. Marine vessel charter agreements do not include indemnity provisions for oil spills so we also carry marine charterer's liability insurance. We could suffer losses for uninsurable or uninsured risks or in amounts in excess of existing insurance coverage. Claims covered by insurance are subject to deductibles, the aggregate amount of which could be material. Insurance policies are also subject to compliance with certain conditions, the failure of which could lead to a denial of coverage as to a particular claim or the voiding of a particular insurance policy. There also can be no assurance that existing insurance coverage can be renewed at commercially reasonable rates or that available coverage will be adequate to cover future claims. The occurrence of an event that is not fully covered by insurance or failure by one or more insurers to honor its coverage commitments for an insured event could have a material adverse effect on our business, financial condition, and results of operations.

We are subject to interruptions of supply and increased costs as a result of our reliance on third-party transportation of crude oil and refined products to and from our refineries.

Our refineries receive and transport crude oil and refined products via tankers, barges, pipelines, and railcars. In addition to environmental risks, we could experience an interruption of supply or an increased cost to deliver refined products to market if such transportation is disrupted because of accidents, governmental regulation, or third-party action. A prolonged disruption could have a material adverse effect on our business, financial condition, and results of operations.

The financial and operating results of our refineries, including the products they refine and sell, can be seasonal.

Demand for gasoline in Wyoming and South Dakota is generally higher during the summer months than during the winter months due to seasonal increases in highway traffic. Wyoming Refining's financial and operating results for the first and fourth calendar quarters may be lower than those for the second and third calendar quarters of each year as a result of this seasonality. Demand for gasoline in Washington is also highly seasonal, with a large increase in demand during the summer driving season. Conversely, the demand for the products the co-located Hawaii refinery refines and sells, and the financial and operating results for the Hawaii refinery, are often strongest in the first and fourth calendar quarters.

We rely upon certain critical information systems for the operation of our business and the failure of any critical information system, including a cyber security breach, may result in harm to our business.

We are heavily dependent on our technology infrastructure and maintain and rely upon certain critical information systems for the effective operation of our business. These information systems include data network and telecommunications, internet access and our websites, and various computer hardware equipment and software applications, including those that are critical to the safe operation of our refineries and our pipelines and terminals. Our retail business collects certain customer data, including credit card numbers, for business purposes. The integrity and protection of our customer, employee, and company data is critical to our business.

Our information systems are subject to damage or interruption from a number of potential sources including natural disasters, software viruses or other malware, power failures, cyber attacks, and other events. To the extent that these information systems are under our control, we have implemented measures, such as virus protection software and intrusion detection systems, to address the outlined risks. However, security measures for information systems cannot be guaranteed to be failsafe. Any compromise of our data security or our inability to use or access these information systems at critical points in time could unfavorably impact the timely and efficient operation of our business and subject us to additional costs and liabilities, which could adversely affect our business, financial condition, and results of operations. Finally, federal legislation relating to cyber security threats could impose additional requirements on our operations.

Through our investment in Laramie Energy, we are subject to all of the risks of natural gas and oil exploration and production, but we lack the ability to control Laramie Energy's operations.

Through our investment in Laramie Energy, we are exposed to all of the risks inherent in natural gas and oil exploration and production, including the risks that:

- exploration and development drilling may not result in commercially productive reserves;
- the operator may act in ways contrary to our best interest;
- the marketability of our natural gas products depends mostly on the availability, proximity, and capacity of natural gas gathering systems, pipelines, and processing facilities, which are owned by third parties, as well as adequate water supplies;
- we have no long-term contracts to sell natural gas or oil;
- compliance with environmental and other governmental regulatory or legislative requirements could result in increased costs of operation or curtailment, delay, or cancellation of development and producing operations; and
- a decline in demand for natural gas and oil could adversely affect our financial condition and results of operations.

Our ability to extract value from our investment in Laramie Energy is limited.

Our 46.0% ownership interest in Laramie Energy is a significant asset. However, the ability of Laramie Energy to make distributions to its owners, including us, is currently prohibited by the terms of Laramie Energy's credit facility and the terms of its limited liability company agreement.

Information concerning our natural gas and oil reserves is uncertain.

There are numerous uncertainties inherent in estimating quantities of proved reserves and cash flows from such reserves, including factors beyond our control. Reserve engineering is a subjective process of estimating underground accumulations of natural gas and crude oil that cannot be measured in an exact manner. The accuracy of an estimate of quantities of natural gas and crude oil reserves, or of cash flows attributable to such reserves, is a function of the available data, assumptions regarding future natural gas and crude oil prices, availability and terms of financing, expenditures for future development and exploitation activities, and engineering and geological interpretation and judgment. Reserves and future cash flows may also be subject to material downward or upward revisions based upon production history, development and exploitation activities, natural gas and crude oil prices, and regulatory changes. Actual future production, revenue, taxes, development expenditures, operating expenses, quantities of recoverable reserves, and value of cash flows from those reserves may vary significantly from our assumptions and estimates. In addition, reserve engineers may make different estimates of reserves and cash flows based on the same data. These uncertainties may inhibit our ability to finance development of our reserves in the future.

The estimated quantities of proved reserves and the discounted present value of future net cash flows attributable to those reserves as of December 31, 2018, included herein, were prepared by independent reserve engineers in accordance with the rules of the SEC and are not intended to represent the fair market value of such reserves. As required by the SEC, the estimated discounted present value of future net cash flows from proved reserves is generally based on prices and costs on the date of the estimate, while actual future prices and costs may be materially higher or lower. In addition, the 10% discount factor the SEC requires to be used

to calculate discounted future net revenues for reporting purposes is not necessarily the most appropriate discount factor based on the cost of capital in effect from time to time and risks associated with our business and the natural gas and oil industry in general.

Under current SEC requirements, subject to limited exceptions, proved undeveloped reserves may only be booked if they relate to wells scheduled to be drilled and developed within five years of the date of booking. This rule may limit our potential to book additional proved undeveloped reserves we own indirectly through our equity investment in Laramie Energy as Laramie Energy pursues its drilling program. Moreover, we may be required to write down our proved undeveloped reserves we own indirectly through our equity investment in Laramie Energy, or we may be required to write down previously disclosed proved undeveloped reserves, if Laramie Energy does not drill and develop those reserves within the required five-year time frame.

REGULATORY RISK

Meeting the requirements of evolving environmental, health, and safety laws and regulations, including those related to climate change and marine protection, could adversely affect our performance.

Consistent with the experience of other U.S. refineries, environmental laws and regulations have raised operating costs and may require significant capital investments at our refineries. We may be required to address conditions that may be discovered in the future and require a response. Potentially material expenditures could be required in the future as a result of evolving environmental, health, and safety and energy laws, regulations, or requirements that may be adopted or imposed in the future, as well as work that is ongoing related to the Consent Decree. Future developments in federal and state laws and regulations governing environmental, health, and safety and energy matters are especially difficult to predict.

Currently, multiple legislative and regulatory measures to address GHG emissions (including CO₂, methane, and nitrous oxides) are in various phases of consideration, promulgation, or implementation. These include actions to develop national, statewide, or regional programs, each of which could require reductions in our GHG emissions. Requiring reductions in our GHG emissions could result in increased costs to (i) operate and maintain our facilities, (ii) install new emission controls at our facilities, and/or (iii) administer and manage any GHG emissions programs, including acquiring emission credits or allotments. Requiring reductions in our GHG emissions and increased use of renewable fuels which can be supplied by producers and marketers in other industries that supply alternative forms of energy and fuels to satisfy the requirements of our industrial, commercial, and individual customers could also decrease the demand for our refined products, and could have a material adverse impact on our business, financial condition, and results of operations.

Additionally, legislation designed to protect animal and plant species, such as the Magnuson amendment to the Marine Mammal Protection Act, may limit or restrict our ability to construct or expand new oil terminals and oil-by-rail infrastructure in the State of Washington, which could have a material impact on our business, financial condition, and results of operations.

Renewable fuels mandates may reduce demand for the petroleum fuels we produce, which could have a material adverse effect on our business results of operations and financial condition.

The EPA has issued RFS mandates, requiring refiners such as us to blend renewable fuels into the petroleum fuels we produce and sell in the U.S. On November 30, 2017, the EPA issued final volume mandates for 2018, which are generally lower than the corresponding statutory mandates for that year. During 2018, we received a \$1.8 million benefit and incurred a \$0.7 million expense for RINs for the Par East facility of our Hawaii refinery and our Wyoming refinery, respectively. On November 30, 2018, the EPA issued final volume mandates for the year 2019 and the biomass-based diesel for 2020. All but biomass-based diesel are below the statutory mandates, with biomass-based diesel significantly greater than the statutory floor of 1.0 billion gallons. We expect to incur costs of approximately \$15.2 million for RINs in 2019 for our refineries, including the newly acquired Washington refinery. In addition, as a result of the annual volume mandates, we may experience a decrease in demand for refined products due to refined products being replaced by renewable fuels.

Ongoing litigation regarding the standards for 2017, 2018, and 2019 creates some potential that the final volumes of renewable fuels that the EPA established will be revised for one or more of those years. In addition, the EPA is considering changes (not yet proposed) to the existing RFS program regulations and other regulatory initiatives under the RFS program that could impact future standards. Although uncertain, any of these events may cause the price of RINs to rise and result in additional costs in connection with RFS compliance for 2017 and 2018, costs that exceed our estimates in connection with RFS compliance for 2019 and/or increased compliance costs in future years. Such increased costs could be material and may have a material adverse impact on our business, financial condition, and results of operations. Finally, while there is no current regulatory standard that authenticates RINs that may be purchased on the open market from third parties, we believe that the RINs we purchase are from reputable sources, are valid, and serve to demonstrate compliance with applicable RFS requirements. However, if this belief proves incorrect and the RINs that we purchase are not valid or in compliance with applicable RFS requirements, our financial condition and cash flows may be adversely affected.

Several states, including Washington and Hawaii, have pursued or are considering initiatives designed to reduce the carbon intensity of the transportation sector by encouraging increased use of renewable fuels or electric vehicles or by requiring reductions in transportation fuel-related greenhouse gas emissions in the state. Since 2006, Washington has required that denatured ethanol make up at least 2% of total gasoline sold in the state and that biodiesel comprise at least 2% of total diesel sold in the state, and the Washington Department of Ecology is authorized to increase these requirements if certain conditions are met. In addition, the Washington State Legislature is currently considering adopting a clean fuels program that would limit the greenhouse gas emissions per unit of transportation fuel energy to 10 percent below 2017 levels by 2028. Compliance with this program would also be demonstrated through a credit trading program. In 2014, the State of Hawaii signed a memorandum of understanding with the U.S. Department of Energy to collaborate to produce 70% of the state's energy needs from energy-efficient and renewable sources by 2030 and 100% of the state's energy needs from energy-efficient and renewable sources by 2045. In addition, Hawaii's alternative fuels standard requires alternative fuels to provide 20% of highway fuel demand by 2020 and 30% by 2030. These state programs could increase the cost of consuming, and thereby reduce demand for our refined petroleum productions, which could have a material adverse effect on our business, results of operations, and financial condition.

Potential legislative and regulatory actions addressing climate change could increase our costs, reduce our revenue and cash flow from natural gas and oil sales, or otherwise alter the way we conduct our business.

The EPA has issued a notice of finding and determination that emissions of CO₂, methane, and other GHG present an endangerment to human health and the environment. In response, the EPA has adopted regulations under existing provisions of the federal CAA that, among other things, establish Prevention of Significant Deterioration ("PSD") construction and Title V operating permit program requiring reviews for GHG emissions from certain large stationary sources. Facilities required to obtain PSD permits for their GHG emissions will also be required to meet "best available control technology" standards, which will be established by the states or, in some instances, by the EPA on a case-by-case basis. In addition, the EPA has adopted rules requiring the monitoring and reporting of GHG emissions from specified large GHG emission sources in the U.S., including petroleum refineries and certain onshore petroleum and natural gas production activities, on an annual basis. We monitor for GHG emissions at our refineries and believe we are in substantial compliance with the applicable GHG reporting requirements. Certain of the third-party drilling and production entities in which we hold a working interest also may be subject to reporting of GHG emissions in the U.S. These EPA policies and rulemakings could adversely affect our operations and restrict or delay our ability to obtain air permits for new or modified facilities.

In addition, from time to time, the U.S. Congress has considered, and may in the future consider and adopt "cap and trade" legislation that would establish an economy-wide cap on GHG emissions in the U.S. and would require most sources of GHG emissions to obtain emission "allowances" corresponding to their annual GHG emissions. For those GHG sources that are unable to meet the required limitations, such legislation could impose substantial financial burdens. Any laws or regulations that may be adopted to restrict or reduce GHG emissions would likely require us to incur increased operating costs and could have an adverse effect on demand for our production. The adoption of any legislation or regulations that limits emissions of GHG from our or such drilling and production entities' facilities, equipment, and operations could require us or such entities to incur costs to reduce emissions of GHG associated with our or such entities' operations or could adversely affect demand for the refined petroleum products that we produce or the crude oil or natural gas that such drilling and production entities in which we hold a working interest produce.

In connection with the WRC Acquisition, we will be required to undertake significant remediation and other corrective actions with respect to certain environmental matters.

In connection with the July 14, 2016 purchase of Hermes Consolidated, LLC (d/b/a Wyoming Refining Company) and, indirectly, Wyoming Refining Company's wholly owned subsidiary, Wyoming Pipeline Company, LLC (collectively, "Wyoming Refining" or "WRC") (the "WRC Acquisition"), there are several environmental conditions that will require us to undertake significant remediation efforts and other corrective actions. The Wyoming refinery is subject to a number of consent decrees, orders, and settlement agreements involving the EPA and/or the Wyoming Department of Environmental Quality, some of which date back to the late 1970s and several of which remain in effect, requiring further actions at the Wyoming refinery.

As is typical of older small refineries like the Wyoming refinery, the largest cost component arising from these various decrees relates to the investigation, monitoring, and remediation of soil, groundwater, surface water, and sediment contamination associated with the facility's historic operations. Investigative work by Wyoming Refining and negotiations with the relevant agencies as to remedial approaches remain ongoing on a number of aspects of the contamination, meaning that investigation, monitoring, and remediation costs are not reasonably estimable for some elements of these efforts. As of December 31, 2018, we have accrued \$17.3 million for the well-understood components of these efforts based on current information, approximately one-third of which we expect to incur in the next five years and the remainder being incurred over approximately 30 years.

Additionally, we believe the Wyoming refinery will need to modify or close a series of wastewater impoundments in the next several years and to replace those impoundments with a new wastewater treatment system. Based on preliminary information, reasonable estimates we have received suggest costs of approximately \$11.6 million to design and construct a new wastewater treatment system.

Finally, among the various historic consent decrees, orders, and settlement agreements into which the Wyoming refinery has entered, there are several penalty orders associated with exceedances of permitted limits by the Wyoming refinery's wastewater discharges. Although the frequency of these exceedances appears to be declining over time, we may become subject to new penalty enforcement action in the next several years, which could involve penalties in excess of \$100,000. Moreover, in November 2016 the Pipeline and Hazardous Materials Safety Administration ("PHMSA") conducted an integrated inspection of the products pipeline that we acquired in the WRC Acquisition. As a result of compliance violations identified during the inspection, the Wyoming refinery was assessed a civil penalty of \$279 thousand in December 2017, which was paid in January 2018.

We may incur significant costs and liabilities resulting from performance of pipeline integrity programs and related repairs.

PHMSA has established a series of rules requiring pipeline operators to develop and implement integrity management programs for hazardous liquid pipelines that, in the event of a pipeline leak or rupture, could affect "high consequence areas" ("HCAs"), which are areas where a release could have the most significant adverse consequences, including high-population areas, certain drinking water sources, and unusually sensitive ecological areas. These regulations require operators of covered pipelines to:

- perform ongoing assessments of pipeline integrity;
- identify and characterize applicable threats to pipeline segments that could impact an HCA;
- improve data collection, integration, and analysis;
- repair and remediate the pipeline as necessary; and
- implement preventive and mitigating actions.

In addition, certain states have also adopted regulations similar to existing PHMSA regulations for intrastate gathering and transmission lines. These requirements could require us to install new or modified safety controls, pursue additional capital projects, or conduct maintenance programs on an accelerated basis, any or all of which tasks could result in us incurring increased operating costs that could be significant and have a material adverse effect on our financial position or results of operations.

Moreover, changes to pipeline safety laws by Congress and regulations by PHMSA that result in more stringent or costly safety standards could result in our incurring increased operating costs that could have a material adverse effect on our financial position or results of operations.

BUSINESS RISKS

The locations of our refineries and related assets in certain limited geographic areas create an exposure to localized economic risks.

Because of the locations of our refineries in Hawaii, Washington, and Wyoming, we primarily market our refined products in relatively limited geographic areas. As a result, we are more susceptible to regional economic conditions than the operations of more geographically diversified competitors and any unforeseen events or circumstances that affect our operating areas could also materially adversely affect our revenues and our business and operating results. These factors include, among other things, changes in the economy, weather conditions, demographics and population, increased supply of refined products from competitors, and reductions in the supply of crude oil.

We must make substantial capital expenditures at our refineries and related assets to maintain their reliability and efficiency. If we are unable to complete capital projects at their expected costs or in a timely manner, or if the market conditions assumed in our project economics deteriorate, our financial condition, results of operations, or cash flows could be adversely affected.

Our refineries and related assets have been in operation for many years. Equipment, even if properly maintained, may require significant capital expenditures and expenses to keep the refineries operating at optimum efficiency. These costs do not result in increases in unit capacities, but rather are focused on trying to maintain safe, reliable operations.

Delays or cost increases related to the engineering, procurement, and construction of new facilities, or improvements and repairs to our existing facilities and equipment, could have a material adverse effect on our business, financial condition, or results of operations. Such delays or cost increases may arise as a result of unpredictable factors in the marketplace, many of which are beyond our control, including:

- denial or delay in obtaining regulatory approvals and/or permits;
- difficulties in executing the capital projects;
- unplanned increases in the cost of equipment, materials, or labor;
- disruptions in transportation of equipment and materials;
- severe adverse weather conditions, natural disasters, or other events (such as equipment malfunctions, explosions, fires, or spills) affecting our facilities, or those of our vendors and suppliers;
- shortages of sufficiently skilled labor, or labor disagreements resulting in unplanned work stoppages;
- market-related increases in a project's debt or equity financing costs; and/or
- non-performance or force majeure by, or disputes with, our vendors, suppliers, contractors, or sub-contractors.

Any one or more of these occurrences noted above could have a significant impact on our business. If we are unable to make up the delays or to recover the related costs, or if market conditions change, it could materially and adversely affect our financial position, results of operations, or cash flows.

The ongoing work related to the Consent Decree subjects us to risks associated with engineering, procurement, and construction of improvements and repairs to our facilities, related penalties and fines, and the performance of equipment, all of which could have a material adverse effect on our business, financial condition, or results of operations.

On July 18, 2016, PHR and subsidiaries of Tesoro entered into the Consent Decree. As a result of the Consent Decree, PHR expanded its previously-announced 2016 Hawaii refinery turnaround to undertake additional capital improvements to reduce emissions of air pollutants and to provide for certain NO_x and SO₂ emission controls and monitoring required by the Consent Decree. Although the turnaround was completed during the third quarter of 2016, work related to the Consent Decree is ongoing. This work subjects us to risks associated with engineering, procurement, and construction of improvements and repairs to our facilities and related penalties and fines to the extent applicable deadlines under the Consent Decree are not satisfied, as well as risks related to the performance of equipment required by, or affected by, the Consent Decree. Each of these risks could have a material adverse effect on our business, financial condition, or results of operations.

The retail market is diverse and highly competitive. Aggressive competition and the development of alternative fuels could adversely impact our business.

We face strong competition in the market for the sale of retail gasoline, diesel fuel, and merchandise. Our competitors include outlets owned or operated by fully integrated major oil companies or their dealers, and other well-recognized national or regional retail outlets, often selling products at very competitive prices. We compete with a number of integrated national and international oil companies who produce crude oil, some of which is used in their refining operations. Unlike these oil companies, we must purchase all of our crude oil from unaffiliated sources. Because these oil companies benefit from increased commodity prices, have greater access to capital, and have stronger capital structures, they are able to better withstand poor and volatile market conditions, such as a lower refining margin environment, shortages of crude oil and other feedstocks, or extreme price fluctuations.

Additionally, non-traditional retailers such as supermarkets, club stores, and mass merchants are also in the retail business, and these non-traditional gasoline retailers have obtained a significant share of the transportation fuels market. These retailers may use integration of operations, greater financial resources, promotional pricing or discounts, or other advantages to withstand volatile market conditions or levels of no or low profitability. The development of alternative and competing fuels in the retail market could also adversely impact our business. Increased competition from these alternatives as a result of governmental regulations, technological advances, and consumer demand could have an impact on pricing and demand for our products and our profitability.

If we are unable to obtain crude oil supplies for our refineries without the benefit of certain intermediation agreements, the capital required to finance our crude oil supply could negatively impact our liquidity.

All of the crude oil delivered at our co-located Hawaii refinery is subject to our Supply and Offtake Agreements with J. Aron and the crude oil delivered at our Washington refinery is subject to an intermediation agreement with Merrill Lynch (the "Washington Refinery Intermediation Agreement" and, together with the Supply and Offtake Agreements, the "Intermediation Agreements"). If we are unable to obtain our crude oil supply for our refineries outside of these agreements, our exposure to crude oil pricing risks may increase as the number of days between when we pay for the crude oil and when the crude oil is delivered to us increases. Such increased exposure could negatively impact our liquidity position due to the increase in working capital used to acquire crude oil inventory for our refineries.

The Intermediation Agreements expose us to counterparty credit and performance risk.

We have Supply and Offtake Agreements with J. Aron, pursuant to which J. Aron will intermediate crude oil supplies and refined product inventories at our Hawaii refinery. J. Aron will own all of the crude oil in our tanks and substantially all of our refined product inventories prior to our sale of the inventories. Upon termination of the Supply and Offtake Agreements, which may be terminated by J. Aron as early as May 31, 2021, we are obligated to repurchase all crude oil and refined product inventories then owned by J. Aron and located at the specified storage facilities at then current market prices. This repurchase obligation could have a material adverse effect on our business, results of operations, or financial condition. We have a similar intermediation agreement with Merrill Lynch whereby our Washington refinery purchases crude oil supplies from third-party suppliers and Merrill Lynch provides credit support for such purchases in exchange for our pledge of all crude oil and refined products inventories from such refinery. An adverse change in the business, results of operations, liquidity, or financial condition of our intermediation counterparties could adversely affect the ability of such counterparties to perform their obligations, which could consequently have a material adverse effect on our business, results of operations, or liquidity and, as a result, our business and operating results.

Inadequate liquidity could materially and adversely affect our business operations in the future.

If our cash flow and capital resources are insufficient to fund our obligations, we may be forced to reduce our capital expenditures, seek additional equity or debt capital, or restructure our indebtedness. We cannot assure you that any of these remedies could, if necessary, be affected on commercially reasonable terms, or at all. Our liquidity is constrained by our need to satisfy our obligations under our debt agreements and the Intermediation Agreements. The availability of capital when the need arises will depend upon a number of factors, some of which are beyond our control. These factors include general economic and financial market conditions, the crack spread, natural gas and crude oil prices, our credit ratings, interest rates, market perceptions of us or the industries in which we operate, our market value, and our operating performance. We may be unable to execute our long-term operating strategy if we cannot obtain capital from these or other sources when the need arises.

Our ability to generate cash and repay our indebtedness or fund capital expenditures depends on many factors beyond our control and any failure to do so could harm our business, financial condition, and results of operations.

Our ability to fund future capital expenditures and repay our indebtedness when due will depend on our ability to generate sufficient cash flow from operations, borrowings under our debt agreements, and distributions from our subsidiaries. To a certain extent, this is subject to general economic, financial, competitive, legislative, and regulatory conditions and other factors that are beyond our control, including the crack spread and the prices we receive for our natural gas and crude oil production.

We cannot assure you that our businesses will generate sufficient cash flow from operations, that our subsidiaries can or will make sufficient distributions to us, or that future borrowings will be available to us in an amount sufficient to repay our indebtedness or fund our other liquidity needs. If our cash flow and capital resources are insufficient to fund our needs, we may be forced to reduce our planned capital expenditures, sell assets, seek additional equity or debt capital, or restructure our debt. We cannot assure you that any of these remedies could, if necessary, be affected on commercially reasonable terms, or at all, which could cause us to default on our obligations and could impair our liquidity.

Our substantial level of indebtedness could adversely affect our financial condition.

We have a substantial amount of indebtedness, which requires significant interest payments. As of December 31, 2018, we had \$392.6 million of indebtedness, and Interest expense and financing costs, net for the year ended December 31, 2018 was \$39.8 million. In connection with the Washington Refinery Acquisition in January 2019, we entered into a \$250 million term loan facility with Goldman Sachs Bank USA and a \$45 million term loan with Bank of Hawaii. Additionally, the Washington Refinery Intermediation Agreement was amended and remained in place at the closing of the acquisition of the Washington refinery.

Our substantial level of indebtedness could have important consequences, including the following:

- we must use a substantial portion of our cash flow from operations to pay interest and principal on our indebtedness and obligations under the Intermediation Agreements, which reduces funds available to us for other purposes, such as working capital, capital expenditures, other general corporate purposes, and potential acquisitions;
- our ability to refinance such indebtedness or to obtain additional financing for working capital, capital expenditures, acquisitions, or general corporate purposes may be impaired;
- our leverage may be greater than that of some of our competitors, which may put us at a competitive disadvantage and reduce our flexibility in responding to current and changing industry and financial market conditions;
- we may be more vulnerable to economic downturns and adverse developments in our business; and
- we may be unable to comply with financial and other restrictive covenants in our debt agreements, some of which require us to maintain specified financial ratios and limit our ability to incur additional debt and sell assets,

which could result in an event of default that, if not cured or waived, would have an adverse effect on our business and prospects and could result in bankruptcy.

Our ability to meet expenses, to remain in compliance with the covenants under our debt agreements, and to make future principal and interest payments in respect of our debt depends on, among other things, our operating performance, competitive developments, and financial market conditions, all of which are significantly affected by financial, business, economic, and other factors. We are not able to control many of these factors. If industry and economic conditions deteriorate, our cash flow may not be sufficient to allow them to pay principal and interest on our debt and meet our other obligations.

This increase in our indebtedness may reduce our flexibility to respond to changing business and economic conditions or to fund capital expenditure or working capital needs because we will require additional funds to service our outstanding indebtedness and may not be able to obtain additional financing.

Despite our current debt levels, we may still incur substantially more debt or take other actions which would intensify the risks associated with our substantial leverage.

Despite our current consolidated debt levels, we may be able to incur significant additional indebtedness in the future. Although our debt agreements contain restrictions on the incurrence of additional indebtedness and entering into certain types of other transactions, these restrictions are subject to a number of qualifications and exceptions. Additional indebtedness incurred in compliance with these restrictions could be substantial. These restrictions also do not prevent us or our subsidiaries from incurring obligations, such as trade payables, that do not constitute indebtedness as defined under our debt agreements. To the extent new debt is added to our current debt levels, the substantial leverage risks associated with our indebtedness would increase.

Our debt agreements impose significant operating and financial restrictions on us.

Our debt agreements impose, and the terms of any future debt may impose, significant operating and financial restrictions on us. These restrictions, among other things, may limit our ability to:

- pay dividends or distributions, repurchase equity, prepay junior debt, and make certain investments;
- incur additional debt or issue certain disqualified stock and preferred stock;
- sell or otherwise dispose of assets, including capital stock of subsidiaries;
- incur liens on assets;
- merge or consolidate with another company or sell all or substantially all assets;
- enter into certain transactions with affiliates; and
- enter into agreements that would restrict the ability of our subsidiaries to pay dividends or make other payments to the Issuers.

All of these covenants may adversely affect our ability to finance our operations, meet or otherwise address our capital needs, pursue business opportunities, react to market conditions, or otherwise restrict activities or business plans. A breach of any of these covenants could result in a default in respect of the related indebtedness. If a default occurs, the requisite lenders could elect to declare the indebtedness, together with accrued interest and other fees, to be immediately due and payable and proceed against any collateral securing that indebtedness. If repayment of our indebtedness is accelerated as a result of such default, we cannot assure you that they would have sufficient assets or access to credit to repay such indebtedness.

We may incur losses and incur additional costs as a result of our forward-contract activities and derivative transactions.

We enter into derivative contracts from time to time primarily to reduce our exposure to fluctuations in interest rates and in the price of crude oil and refined products. If the instruments we use to hedge our exposure are not effective, or if our counterparties are unable to satisfy their obligations to us, we may incur losses. We may also be required to incur additional costs in connection with future regulation of derivative instruments to the extent such regulation is applicable to us. Additionally, our commodity derivative activities may produce significant period-to-period earnings volatility that is not necessarily reflective of our underlying operational performance.

Our variable rate indebtedness subjects us to interest rate risk, which could cause our debt service obligations to increase significantly and otherwise impact our ability to incur indebtedness for acquisitions and working capital needs.

We are subject to interest rate risk in connection with borrowings under certain of our debt agreements, which bear interest at variable rates. Interest rate changes will not affect the market value of indebtedness incurred under such debt agreements, but could affect the amount of our interest payments and, accordingly, our future earnings and cash flows, assuming other factors are held constant. Increases in interest rates could also impact our ability to incur indebtedness to fund acquisitions and working capital needs. A significant increase in prevailing interest rates, that results in a substantial increase in the interest rates applicable to our

indebtedness, could substantially increase our interest expense and have a material adverse effect on our financial condition, results of operations, and cash flows.

If we are unable to refinance our term loan with the Bank of Hawaii before it matures, we may be unable to repay the amounts that are due thereunder.

In order to fund a portion of the cash purchase price for the acquisition of the Washington refinery, we entered into a \$45 million term loan, which matures on July 9, 2019, on which date the entire unpaid principal balance will be due and payable in full. We are considering a variety of options to refinance the term loan, including a new term loan issued by the Bank of Hawaii pursuant to a non-binding term sheet executed by us and the Bank of Hawaii, the security for which is expected to consist of certain unencumbered real estate in Hawaii owned by Mid Pac Petroleum, LLC ("Mid Pac"), a wholly owned subsidiary of Par Petroleum, to be conveyed to our wholly owned subsidiary in a sale-leaseback transaction. We cannot assure you that such refinancing will be available to us or at all. In the event that we are unable to refinance the term loan, we may not have sufficient cash to repay the term loan at its maturity, which would be an event of default under the term loan and could result in an acceleration of the payments due under our other debt agreements.

We cannot be certain that our net operating loss tax carryforwards will continue to be available to offset our tax liability.

As of December 31, 2018, we estimated that we had approximately \$1.5 billion of net operating loss tax carryforwards ("NOLs"). In order to utilize the NOLs, we must generate taxable income that can offset such carryforwards. The availability of NOLs to offset taxable income would be substantially reduced or eliminated if we were to undergo an "ownership change" within the meaning of Section 382 of the Internal Revenue Code of 1986, as amended (the "Code"). We will be treated as having had an "ownership change" if there is more than a 50% increase in stock ownership during any three year "testing period" by "5% shareholders." In order to help us preserve our NOLs, our certificate of incorporation contains stock transfer restrictions designed to reduce the risk of an ownership change for purposes of Section 382 of the Code. We expect that the restrictions will remain in place for the foreseeable future. We cannot assure you, however, that these restrictions will prevent an ownership change.

Our ability to utilize our NOLs to offset future taxable income is subject to various limitations, including that the NOLs will expire in various amounts, if not used, between 2027 through 2036. During 2018, the Internal Revenue Service ("IRS") completed an audit of our tax returns for the tax years ending 2014 through 2016, which included those returns for the years in which the losses giving rise to the NOLs were reported. Although the IRS made no challenge of the availability of our NOLs during this audit, we cannot assure you that we would prevail if the IRS were to challenge the availability of the NOLs in the event of future audits. If the IRS were successful in challenging our NOLs, all or some portion of the NOLs would not be available to offset any future consolidated income which would negatively impact our results of operations and cash flows. Certain provisions of the Tax Cuts and Jobs Act may also limit our ability to utilize our net operating tax loss carryforwards.

We may be unable to successfully identify, execute, or effectively integrate future acquisitions, which may negatively affect our results of operations.

We will continue to pursue acquisitions in the future. Although we regularly engage in discussions with, and submit proposals to, acquisition candidates, suitable acquisitions may not be available in the future on reasonable terms. If we do identify an appropriate acquisition candidate, we may be unable to successfully negotiate the terms of an acquisition, finance the acquisition, or, if the acquisition occurs, effectively integrate the acquired business into our existing businesses. Negotiations of potential acquisitions and the integration of acquired business operations may require a disproportionate amount of management's attention and our resources. Even if we complete additional acquisitions, continued acquisition financing may not be available or available on reasonable terms, any new businesses may not generate the anticipated level of revenues, the anticipated cost efficiencies, or synergies may not be realized, and these businesses may not be integrated successfully or operated profitably. Our inability to successfully identify, execute, or effectively integrate future acquisitions may negatively affect our results of operations.

Acquisitions may prove to be worth less than we paid because of uncertainties in evaluating potential liabilities.

Our recent growth is due in large part to acquisitions, such as the acquisitions of PHR, Mid Pac, Wyoming Refining, Northwest Retail, the Washington Refinery, and the assets related to the Hawaii Refinery Expansion. We expect acquisitions to be instrumental to our future growth. Successful acquisitions require an assessment of a number of factors, including estimates of potential unknown and contingent liabilities. Such assessments are inexact and their accuracy is inherently uncertain. In connection with our assessments, we perform due diligence reviews of acquired businesses and assets that we believe are generally consistent with industry practices. However, such reviews will not reveal all existing or potential problems. In addition, our reviews may not permit us to become sufficiently familiar with potential environmental problems or other contingent and unknown liabilities that may exist or arise. As a result, there may be unknown and contingent liabilities related to acquired businesses and assets of which we are unaware. We could be liable for unknown obligations relating to acquisitions for which indemnification is not available, which could materially adversely affect our business, results of operations, and cash flows.

We may fail to successfully integrate recent acquisitions with our existing business in a timely manner or fail to realize all of the expected benefits from such acquisitions, which could have a material adverse effect on our business, financial condition, results of operations, or cash flows.

Integration of Washington Refinery Acquisition and the Hawaii Refinery Expansion into our existing business will be a complex, time consuming, and costly process. A failure to complete this integration successfully and in a timely manner could have a material adverse effect on our business, financial condition, results of operations, or cash flows. Difficulties related to the integration of Washington Refinery Acquisition and the Hawaii Refinery Expansion into our existing business could include:

- operating a larger combined organization and adding operations;
- difficulties in the assimilation of the acquired assets and operations;
- the diversion of management's attention from other business concerns;
- integrating personnel from diverse business backgrounds and organizational cultures;
- potential environmental or regulatory compliance matters or liabilities; and
- coordinating and consolidating corporate and administrative functions.

If any of these risks or unanticipated liabilities or costs were to materialize, then any desired benefits of the Washington Refinery Acquisition and the Hawaii Refinery Expansion may not be fully realized, or realized at all, and our future results of operations could be negatively impacted. In addition, acquired assets and businesses may actually perform at levels below the forecasts used to evaluate such acquisitions due to actors outside of our control, which could negatively impact our results and operations and financial condition.

All of our refineries are scheduled for maintenance turnarounds in the next few years that will involve significant expenditures.

Wyoming Refining expects to perform a significant maintenance turnaround during 2020 and our refinery in Hawaii is scheduled to undergo a significant maintenance turnaround between 2019 and 2020. Additionally, our newly-acquired Washington refinery anticipates conducting a turnaround during 2020. During a turnaround, all or a portion of each refinery's production may be halted or disrupted. Any turnaround, if unsuccessful or delayed, could have a material adverse effect on our business, financial condition, or results of operations.

In addition, all of our refineries may require additional unscheduled down time for unanticipated maintenance or repairs that are more frequent than our scheduled turnarounds. Refinery operations may also be disrupted by external factors such as a suspension of feedstock deliveries or an interruption of electricity, natural gas, water treatment, or other utilities. Other potentially disruptive factors include natural disasters, severe weather conditions, workplace or environmental accidents, interruptions of supply, work stoppages, losses of permits or authorizations, or acts of terrorism. Disruptions to our refining operations could reduce our revenues and profitability during the period of time that our processing units are not operating.

A substantial portion of our refining workforce is unionized and we may face labor disruptions that would interfere with our operations.

As of December 31, 2018, we employed approximately 1,285 people, with a collective bargaining agreement covering 192 of those employees. Our previous collective bargaining agreement with the union expired in January 2019. We are currently in negotiations with the USW on a new extension of the collective bargaining agreement. On January 13, 2016, a claim against us was brought to the NLRB alleging a refusal to bargain collectively and in good faith. Accordingly, we may not be able to prevent a strike or work stoppage in the future and any such work stoppage could cause disruptions in our business and have a material adverse effect on our business, financial condition, results of operations, and cash flows.

Adverse changes in global economic conditions and the demand for transportation fuels may impact our business and financial condition in ways that we currently cannot predict.

A recession or prolonged economic downturn would adversely affect the business and economic environment in which we operate. These conditions increase the risks associated with the creditworthiness of our suppliers, customers, and business partners. The consequences of such adverse effects could include interruptions or delays in our suppliers' performance of our contracts, reductions and delays in customer purchases, delays in or the inability of customers to obtain financing to purchase our products, and bankruptcy of customers. Any of these events may adversely affect our financial condition, cash flows, and profitability.

RISKS RELATED TO OUR COMMON STOCK

Because we have no near term plans to pay cash dividends on our common stock, investors must look solely to stock appreciation for a return on their investment in us.

We have never declared or paid any cash dividends on our common stock. We currently intend to retain all available funds and any future earnings for use in the operation and expansion of our business and do not anticipate declaring or paying any cash dividends on our common stock in the near term. Any future determination as to the declaration and payment of cash dividends will be at the discretion of our board of directors and will depend on then-existing conditions, including our financial condition, results of operations, contractual restrictions, capital requirements, business prospects, and other factors that our board of directors considers relevant.

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

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

The price of our common stock historically has been volatile. This volatility may affect the price at which you could sell your common stock.

The market price for our common stock has varied between a high of \$20.81 on August 30, 2018, and a low of \$13.73 on December 24, 2018, during the year ended December 31, 2018. This volatility may affect the price at which you could sell your common stock. Our stock price is likely to continue to be volatile and subject to significant price and volume fluctuations in response to market and other factors; variations in our quarterly operating results from our expectations or those of securities analysts or investors; downward revisions in securities analysts' estimates; and announcement by us or our competitors of significant acquisitions, strategic partnerships, joint ventures, or capital commitments.

The market for our common stock has been historically illiquid, which may affect your ability to sell your shares.

The volume of trading in our common stock has historically been low. In addition, a substantial amount of our common stock is beneficially owned by three investors. The lack of substantial liquidity can adversely affect the price of our stock at a time when you might want to sell your shares. There is no guarantee that an active trading market for our common stock will develop or be maintained on the NYSE, or that the volume of trading will be sufficient to allow for timely trades. Investors may not be able to sell their shares quickly or at the latest market price if trading in our stock is not active or if trading volume is limited. In addition, if trading volume in our common stock is limited, trades of relatively small numbers of shares may have a disproportionate effect on the market price of our common stock.

Delaware law, our charter documents, and concentrated stock ownership may impede or discourage a takeover, which could reduce the market price of our common stock.

We are a Delaware corporation and the anti-takeover provisions of Delaware law impose various impediments to the ability of a third party to acquire control of us, even if a change in control would be beneficial to our existing stockholders. For example, the change in ownership limitations contained in Article 11 of our certificate of incorporation could have the effect of discouraging or impeding an unsolicited takeover proposal. In addition, our board of directors or a committee thereof has the power, without stockholder approval, to designate the terms of one or more series of preferred stock and issue shares of preferred stock. The ability of our board of directors or a committee thereof to create and issue a new series of preferred stock and certain provisions of Delaware law and our certificate of incorporation and bylaws could impede a merger, takeover, or other business combination involving us or discourage a potential acquirer from making a tender offer for our common stock, which, under certain circumstances, could reduce the market price of our common stock.

Zell Credit Opportunities Master Fund, L.P. ("ZCOF"), Blackrock, Inc., and Whitebox Advisors, LLC ("Whitebox"), together with their respective affiliates, each owned or had the right to acquire as of December 31, 2018 approximately 27.8%, 9.8%, and 7.1%, respectively, of our outstanding common stock. The level of their combined ownership of shares of our common stock could have the effect of discouraging or impeding an unsolicited acquisition proposal.

We may issue preferred stock with terms that could adversely affect the voting power or value of our common stock and any future issuances of our common stock may reduce our stock price.

Our certificate of incorporation authorizes us to issue, without the approval of our stockholders, one or more classes or series of preferred stock having such designations, preferences, limitations, and relative rights, including preferences over our common stock respecting dividends and distributions, as our board of directors may determine. The terms of one or more classes or series of preferred stock could adversely impact the voting power or value of our common stock.

Additionally, we are not restricted from issuing additional shares of common stock, or securities convertible into common stock, under a registration statement declared effective by the SEC. We cannot predict the size of future issuances of our common stock. However, one or more large issuances of our common stock, or securities convertible into our common stock, may adversely affect the prevailing market price of our common stock.

Item 1B. UNRESOLVED STAFF COMMENTS

None.

Item 2. PROPERTIES

Please read “Item 1. — Business” of this Form 10-K for the location and general character of the properties used in our refining, retail, and logistics segments. Our corporate headquarters are located at 825 Town & Country Lane, Suite 1500, Houston, Texas 77024. We believe that these properties and facilities are adequate for our operations and are maintained in a good state of repair.

Natural Gas and Oil Properties

Laramie Energy

All of the assets held by Laramie Energy are located in Garfield, Mesa, and Rio Blanco Counties, Colorado. All of the natural gas, natural gas liquids, and crude oil are produced primarily from the Mesaverde Formation and to a lesser extent the Mancos Formation and some of the acreage is contiguous. The geology of the Piceance Basin is characterized as highly consistent and predictable over large areas, which generally equates to reliable timing and cost expectations during drilling and completion activities, as well as minimal well-to-well variance in production and reserves when completed with the same methodology. Laramie Energy considers the Mesaverde Formation within Garfield, Mesa, and Rio Blanco Counties, Colorado, to be a single field. Laramie Energy and its predecessor company have drilled over 300 natural gas wells with over a 99% success rate in the Piceance Basin.

Other

We also own certain immaterial minority working interests in wells located in the various regions of the Southwest United States. Please read Note 24—Supplemental Oil and Gas Disclosures (Unaudited) to our consolidated financial statements under Item 8 of this Form 10-K for additional information.

Reserves

For a table presenting the estimated natural gas and crude oil reserves we own indirectly through Laramie Energy, please read “Item 1. — Business — Other Operations” of this Form 10-K. The natural gas and crude oil reserves we own directly are not material.

Internal Controls Over Reserve Estimates, Technical Qualifications, and Technologies Used

Our policies regarding internal controls require our reserve estimates to be prepared in compliance with the SEC definitions and guidance by an independent third-party reserve engineering firm. These reserve estimates are reviewed and approved by our reserves committee, which ensures that our reserves estimates and related disclosures are prepared in compliance with SEC definitions and guidance taking into consideration recent developments, including the impact of changes in commodity price and drilling and transportation costs, drilling and completion technological innovations, the evaluation of historical conversion rates for previous proved undeveloped reserves, and deviations from previously sanctioned development plans for such reserves.

Our reserves committee is comprised of the following members: our Chief Executive Officer, our Chief Financial Officer, our General Counsel and Secretary, our Chief Accounting Officer, our Associate General Counsel, our Assistant Controller, and

a mergers and acquisitions analyst with a background in the oil and gas industry. The reserves committee also consults with representatives from our independent reserve engineering firm. In addition, with respect to the reserves that we own indirectly through Laramie Energy, our Chief Executive Officer, our Chief Financial Officer, and our mergers and acquisitions analyst participate in Laramie Energy's board of managers meetings (which generally occur at least quarterly) as our appointees to Laramie Energy's board of managers under the Laramie Energy limited liability company agreement. Together with the other members of our reserves committee, our Chief Executive Officer and our Chief Financial Officer review Laramie Energy's development plan and related capital expenditures and meet regularly with Laramie Energy's management in connection with our review of the development and classification of such reserves to ensure that such reserves are prepared in compliance with SEC definitions and guidance. Under the Laramie Energy limited liability company agreement, Laramie Energy is required to provide to us certain reports and other information on a monthly, quarterly, and annual basis, including monthly and quarterly reports with respect to drilling and completion activities and a comparison of budgeted amounts for such month or quarter to the actual results of operations for such month or quarter (with a written explanation of any material variances). This information allows our reserves committee to monitor Laramie Energy's development activities and to evaluate any deviations from Laramie Energy's development plan to ensure compliance with SEC definitions and guidance. The reserves committee also utilizes the information received from Laramie Energy to provide feedback to Laramie Energy (through Laramie Energy's board of managers, if necessary) with respect to such development activities. The enhanced scrutiny and evaluation of Laramie Energy's development plan by our reserves committee, supported by access to information required by Laramie Energy's organizational documents and our ability to provide feedback to Laramie Energy at the highest organizational level, ensure that our reserves estimates and related disclosures are prepared in compliance with SEC definitions and guidance.

As we do not operate our interests in our natural gas and crude oil assets, we do not have an internal reserve engineering staff and do not prepare any internal reserve estimates. William Monteleone, our Chief Financial Officer and the chair of our reserves committee, reviews the independence and professional qualifications of the third-party engineering firms we engage with the other members of our reserves committee. He also supervises the submission of technical and financial data to third-party engineering firms and reviews the prepared reports with the other members of our reserves committee. Mr. Monteleone has more than ten years of experience in senior financial positions in the oil and gas industry. The reserves estimates shown herein have been independently evaluated by Netherland, Sewell & Associates, Inc. ("NSAI"), a worldwide leader of petroleum property analysis for industry and financial organizations and government agencies. NSAI was founded in 1961 and performs consulting petroleum engineering services under Texas Board of Professional Engineers Registration No. F-2699. Within NSAI, the technical persons primarily responsible for preparing the estimates set forth in the NSAI reserves report incorporated herein are Mr. Benjamin W. Johnson and Mr. John G. Hattner. Mr. Johnson, a Licensed Professional Engineer in the State of Texas (No. 124738), has been practicing consulting petroleum engineering at NSAI since 2007 and has over two years of prior industry experience. He graduated from Texas Tech University in 2005 with a Bachelor of Science Degree in Petroleum Engineering. Mr. Hattner, a Licensed Professional Geoscientist in the State of Texas, Geophysics (License No. 559), has been practicing consulting petroleum geoscience at NSAI since 1991 and has over 11 years of prior industry experience. He graduated from University of Miami, Florida, in 1976 with a Bachelor of Science Degree in Geology; from Florida State University in 1980 with a Master of Science Degree in Geological Oceanography; and from Saint Mary's College of California in 1989 with a Master of Business Administration Degree. Both technical principals meet or exceed the education, training, and experience requirements set forth in the Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information promulgated by the Society of Petroleum Engineers; both are proficient in judiciously applying industry standard practices to engineering and geoscience evaluations as well as applying SEC and other industry reserves definitions and guidelines. The professional qualifications of the individuals at NSAI who were responsible for overseeing the preparation of our reserve estimates as of December 31, 2018 have been filed as part of Exhibit 99.1 to this Annual Report on Form 10-K.

A variety of methodologies were used to determine our proved reserves estimates. The principal methodologies employed are decline curve analysis, analog type curve analysis, log analysis, and analogy. Substantially all of our proved reserves estimates are determined based on a combination of these methods.

Production Volumes, Unit Prices and Costs

All of Laramie Energy's properties are located in Garfield, Mesa, and Rio Blanco Counties, Colorado. Substantially all of Laramie Energy's total estimated proved reserves are located in the same geological formation, the Mesaverde Formation, which Laramie Energy considers to be a single field.

The following table sets forth certain information regarding volumes of production sold, average prices received, and production costs associated with our share of Laramie Energy 's production and sales of natural gas and crude oil for the years ended December 31, 2018 , 2017 , and 2016 .

	Year Ended December 31,		
	2018	2017	2016
Production volumes			
Oil (Mbbbls)	106	71	59
NGLs (Mbbbls)	712	608	552
Natural Gas (MMcfe)	25,513	18,104	15,192
Total (MMcfe)	30,421	22,178	18,858
Net average daily production			
Oil (Bbls)	290	190	160
NGLs (Bbls)	1,951	1,662	1,508
Natural Gas (Mcf)	69,899	49,460	41,509
Average sales price			
Oil (Per Bbl)	\$ 55.43	\$ 45.61	\$ 37.85
NGLs (Per Bbl)	26.26	20.02	11.61
Natural Gas (per Mcf)	2.67	2.81	2.30
Hedge gain (loss) (per Mcfe)	(0.19)	(1.25)	(1.47)
Production costs (per Mcfe) (1)	1.28	1.36	1.38

(1) Production costs (per Mcfe) exclude ad valorem and severance taxes.

The table above excludes production volumes related to our other non-operated natural gas and oil interests of 40 MMcfe , 59 MMcfe , and 66 MMcfe for the years ended December 31, 2018 , 2017 , and 2016 , respectively. Please read Note 24—Supplemental Oil and Gas Disclosures (Unaudited) to our consolidated financial statements under Item 8 of this Form 10-K for further information on our proved reserves related to our other non-operated natural gas and oil interests.

Proved Undeveloped Reserves

All of our proved undeveloped reserves at December 31, 2018 are held through our non-controlling equity ownership in Laramie Energy . The following table provides information regarding changes in our share of Laramie Energy 's proved undeveloped reserves for the year ended December 31, 2018 .

	Gas (MMcfe)	Oil (Mbbl)	NGLs (Mbbl)	Total (MMcfe)
Proved undeveloped reserves at December 31, 2017	118,578	449	2,913	138,750
Revisions of previous estimates	25,702	114	1,787	37,108
Extensions and discoveries	—	—	—	—
Acquisitions	—	—	—	—
Conversion to proved developed reserves	(62,852)	(238)	(985)	(70,190)
Proved undeveloped reserves at December 31, 2018	81,428	325	3,715	105,668

As of December 31, 2018 , our share of Laramie Energy 's proved undeveloped reserves totaled 105,668 MMcfe, an approximate 24% decrease from proved undeveloped reserves at December 31, 2017 . The decrease in our share of Laramie Energy's proved undeveloped reserves was due to the following:

- During the year ended December 31, 2018, Laramie Energy expended approximately \$60.4 million in connection with the development of its proved undeveloped reserves. Our share of Laramie Energy's proved undeveloped reserves converted to proved developed reserves during 2018 was 70,190 MMcfe. This activity represented 51% of the prior year-end proved undeveloped reserves. The total number of proved undeveloped locations converted to proved developed

reserves during 2018 was substantially consistent with Laramie Energy's original development plan. Of the 127 locations converted to proved developed locations in 2018, 112 were originally scheduled to be completed in 2018, and the remaining 15 were accelerated into 2018.

- Revisions of previous estimates of 37,108 MMcf were mainly driven by the addition of 60,679 MMcf of proved undeveloped reserves primarily located within Laramie Energy's northern acreage where adequate midstream capacity exists and development economics are more favorable due to Laramie Energy's elevated net revenue interests within these reserves. The additions were partially offset by 26,996 MMcf of proved undeveloped reserves that were removed due to Laramie Energy's primary midstream provider limiting additional volumes from the area where the reserves are located. The remaining positive revisions are related to performance improvements.

In recognition of the potential impact of recent commodity price volatility and Par's position as an equity interest owner without control of Laramie Energy's operations, Par continues to base its determination of Laramie Energy's proved undeveloped reserves at year end 2018 on a two year drilling and three year completion time horizon compared to the 5-year time horizon permitted under SEC requirements. Members of our reserves committee met regularly with Laramie Energy's management to finalize our determination of proved undeveloped reserves at year end 2018.

Laramie Energy expects to expend approximately \$66.8 million and \$66.3 million to convert approximately 61 and 53 proved undeveloped locations to proved developed reserves in 2019 and 2020, respectively. At December 31, 2018, Laramie Energy had 23 proved undeveloped locations that were drilled but not yet completed. Through March 1, 2019, Laramie Energy had already drilled 8 and completed 18 of the proved undeveloped locations included in the 2018 reserve report.

As of December 31, 2018, Laramie Energy had no proved undeveloped reserves that remain undeveloped for five years or more after booking as proved reserves.

Productive Wells and Acreage

The table below shows, as of December 31, 2018, our share of Laramie Energy's gross and net wells and developed acres. Developed acreage consists of acres spaced or assignable to productive wells.

Location	Productive Wells				Developed Acres	
	Oil		Gas (1)		Gross (2)	Net (3)
	Gross (2)	Net (3)	Gross (2)	Net (3)		
Colorado (4)	—	—	1,855	673	26,552	9,951

(1) Some of the wells classified as "gas" wells also produce minor amounts of crude oil.

(2) A "gross well" or "gross acre" is a well or acre in which a working interest is held. The number of gross wells or acres is the total number of wells or acres in which a working interest is owned.

(3) A "net well" or "net acre" is deemed to exist when the sum of fractional ownership interests in gross wells or acres equals one. The number of net wells or net acres is the sum of the fractional working interests owned in gross wells or gross acres expressed as whole numbers and fractions thereof.

(4) Net wells and net developed acres are reflected as if we owned our interest directly.

Undeveloped Acreage

At December 31, 2018 , our share of undeveloped acreage held through our ownership in Laramie Energy was as follows:

Location	Undeveloped Acres (1) (2)	
	Gross	Net
Colorado (3)	338,793	92,943

- (1) Undeveloped acreage is considered to be those lease acres on which wells have not been drilled or completed to a point that would permit the production of commercial quantities of crude oil and gas, regardless of whether such acreage contains proved reserves.
- (2) There are no material near-term lease expirations for which the carrying value at December 31, 2018 has not already been impaired in consideration of these expirations or capital budgeted to convert acreage to held by production.
- (3) Net undeveloped acres are reflected as if we owned our interest directly.

Drilling Activity

Laramie Energy is currently running one drilling rig performing multi-well pad drilling in the Mesaverde Formation. Due to the emergence and further refinement of certain technological innovations in completion techniques such as low-cost proppantless fracturing, or “sandless fracing,” Laramie Energy is utilizing enhanced frac design to reduce the overall number of wells required to drain the same proven undeveloped acreage. As a result, Laramie Energy adjusted its development well pattern from three to two column spacing per section in 2017 to account for these improvements. This drilling pattern is intended to more efficiently develop the same sections, acreage, and reserves as were targeted in prior development plans with fewer wells per section. Our current development plan is designed to take advantage of the improved efficiencies provided by this drilling pattern as well as cost reductions provided by the January 2017 renegotiation of Laramie Energy's primary gathering and processing agreement, as well as a \$17.6 million water gathering, treating, storage, and redelivery system completed by Laramie Energy in 2017 (the “water treatment facility”). During 2018, drill times averaged 4.7 days per well, or 6.5 wells per month, and the typical pad contained 13-21 wells, depending on the well spacing being utilized on the pad. At December 31, 2018, Laramie Energy had 23 gross and net proved undeveloped locations that were drilled but not completed.

The table below shows the number of development wells completed by Laramie Energy during the periods indicated. Laramie Energy drilled no exploratory productive or dry wells during 2018, 2017 or 2016.

	Year ended December 31,					
	2018		2017		2016	
	Gross (1)	Net (2)	Gross (1)	Net (2)	Gross (1)	Net (2)
Development						
Productive	140	140	74	74	56	48
Dry	—	—	—	—	—	—
Total	140	140	74	74	56	48

- (1) A “gross well” is a well in which a working interest is held. The number of gross wells is the total number of wells in which a working interest is owned.
(2) A “net well” is deemed to exist when the sum of fractional ownership interests in gross wells equals one. The number of net wells is the sum of the fractional working interests owned in gross wells expressed as whole numbers and fractions thereof.

Delivery Commitments

Laramie Energy has entered into certain gathering, processing and transportation contracts with third parties that require Laramie Energy to deliver fixed, determinable quantities of production over specified periods of time. Under these agreements, Laramie Energy is required to make deficiency payments for any shortfalls associated with minimum volume commitments. Laramie Energy expects to fulfill delivery commitments under gathering, processing and transportation agreements from proved developed and undeveloped reserves.

The table below shows Laramie Energy's minimum volume commitments under gathering, processing, and transportation contracts as of December 31, 2018 (in MMcfe).

2019	69,451
2020	28,473
2021	23,343
2022	10,186
2023	8,987
Thereafter	31,059
Total delivery commitments	171,499

Item 3. LEGAL PROCEEDINGS

Consent Decree

On July 18, 2016, PHR and subsidiaries of Tesoro entered into a consent decree with the EPA, the DOJ, and other state governmental authorities concerning alleged violations of the federal CAA related to the ownership and operation of multiple facilities owned or formerly owned by Tesoro and its affiliates, including the Par East facility of our Hawaii refinery. As a result of the Consent Decree, PHR expanded its previously-announced 2016 Hawaii refinery turnaround to undertake additional capital improvements to reduce emissions of air pollutants and to provide for certain NO_x and SO₂ emission controls and monitoring required by the Consent Decree. Although the turnaround was completed in the third quarter of 2016, work related to the Consent Decree is ongoing. Tesoro is responsible under the Environmental Agreement for directly paying, or reimbursing PHR, for all reasonable third-party capital expenditures incurred pursuant to the Consent Decree to the extent related to acts or omissions prior to the date of the closing of the PHR acquisition. Tesoro is obligated to pay all applicable fines and penalties related to the Consent Decree.

Other

From time to time, we may be involved in other litigation relating to claims arising out of our operations in the normal course of our business. As of the date of this Annual Report on Form 10-K, no legal proceedings are pending against us that we believe individually or collectively could have a materially adverse effect upon our financial condition, results of operations, or cash flows. Any litigation pending at the time we emerged from Chapter 11 was transferred to the General Trust for resolution and settlement. For more information, please read “Item 1. — Business — Bankruptcy and Plan of Reorganization – General Recovery Trust” and Note 15—Commitments and Contingencies to our consolidated financial statements under Item 8 of this Form 10-K.

Item 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

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

Market Information

On February 20, 2018, our common stock began trading on the NYSE under the symbol "PARR." Prior to that date, our common stock was traded on the NYSE American under the symbol "PARR." As of March 4, 2019, there were 171 common stockholders of record. On March 4, 2019, the closing price of our common stock was \$16.66 per share on the NYSE.

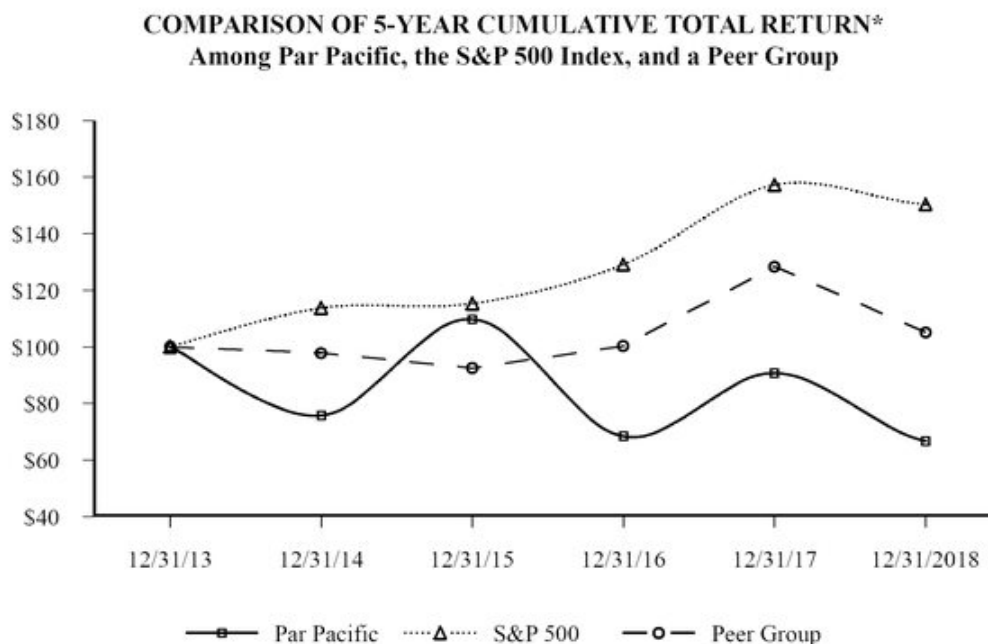
Dividends

We have not paid dividends on our common stock and we do not expect to do so in the foreseeable future.

Stock Performance Graph

The following performance graph and related information shall not be deemed "soliciting material" or "filed" with the SEC, nor shall such information be deemed to be incorporated by reference into any future filings under the Securities Act of 1933 or the Securities Exchange Act of 1934, each as amended.

This performance graph and the related textual information are based on historical data and are not indicative of future performance. The following line graph compares the cumulative total return on an investment in our common stock against the cumulative total return of the S&P 500 Composite Index and an index of peer companies (that we selected) for the five fiscal years ended December 31, 2018. The performance graph of our peer group is weighted by market value at the beginning of the period and our peer group consists of the following companies: Calumet Specialty Products Partners, L.P., Casey's General Stores, Inc., CVR Energy, Inc., Darling Ingredients Inc., Delek US Holdings, Inc., FutureFuel Corp., Green Plains Inc., Macquarie Infrastructure Corporation, Methanex Corporation, Pacific Ethanol, Inc., Renewable Energy Group, Inc., REX American Resources Corporation, SEACOR Holdings Inc., Stepan Company, and Westlake Chemical Corporation. We believe our peer group, which is made up of oil and gas refining and marketing companies, retailers, and companies that are generally similar to our operating segments, provides for meaningful comparability to our business as a whole.



*\$100 invested on December 31, 2013 in stock or index, including reinvestment of dividends.

Recent Sales of Unregistered Securities

During the year ended December 31, 2018 , we did not have any sales of securities in transactions that were not registered under the Securities Act that have not been reported on Form 8-K or Form 10-Q.

Issuer Purchases of Equity Securities

The following table sets forth certain information with respect to repurchases of our common stock during the quarter ended December 31, 2018 :

Period	Total number of shares (or units) purchased (1)	Average price paid per share (or unit)	Total number of shares (or units) purchased as part of publicly announced plans or programs	Maximum number (or approximate dollar value) of shares (or units) that may yet be purchased under the plans or programs
October 1 - October 31, 2018	—	\$ —	—	—
November 1 - November 30, 2018	—	—	—	—
December 1 - December 31, 2018	1,293	14.18	—	—
Total	1,293	\$ 14.18	—	—

(1) All shares repurchased were surrendered by employees to pay taxes withheld upon the vesting of restricted stock awards.

Item 6. SELECTED FINANCIAL DATA

The selected financial information presented below as of December 31, 2018 and 2017 and for the years ended December 31, 2018, 2017, and 2016 was derived from our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K. The selected financial information presented below as of December 31, 2016, 2015, and 2014 and for the years ended December 31, 2015 and 2014 was derived from our audited consolidated financial statements not included in this Annual Report on Form 10-K. The selected financial information should be read in conjunction with the consolidated financial statements and related notes and “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

(in thousands, except per share data)	Year Ended December 31,				
	2018 (1)	2017 (2)	2016 (2) (3)	2015 (4)	2014
Statement of Operations Data:					
Revenues	\$ 3,410,728	\$ 2,443,066	\$ 1,865,045	\$ 2,066,337	\$ 3,108,025
Depreciation, depletion and amortization	52,642	45,989	31,617	19,918	14,897
Impairment expense	—	—	—	9,639	—
Operating income (loss)	81,941	93,961	(19,649)	61,514	(37,532)
Interest expense and financing costs, net	(39,768)	(31,632)	(28,506)	(20,156)	(17,995)
Debt extinguishment and commitment costs	(4,224)	(8,633)	—	(19,669)	(1,788)
Gain on curtailment of pension obligation	—	—	3,067	—	—
Change in value of common stock warrants	1,801	(1,674)	2,962	(3,664)	4,433
Change in value of contingent consideration	(10,500)	—	10,770	(18,450)	2,849
Equity earnings (losses) from Laramie Energy, LLC	9,464	18,369	(22,381)	(55,983)	2,849
Net income (loss)	39,427	72,621	(45,835)	(39,911)	(47,041)
Income (loss) per diluted common share	0.85	1.57	(1.08)	(1.06)	(1.44)
Balance Sheet Data:					
Cash and cash equivalents	\$ 75,076	\$ 118,333	\$ 47,772	\$ 167,788	\$ 89,210
Total current assets	586,592	603,544	403,108	531,752	460,789
Total assets	1,460,734	1,347,407	1,145,433	892,261	735,236
Total current liabilities	507,201	470,952	382,765	365,040	310,806
Total long-term debt, net of current maturities	392,607	384,812	350,110	154,212	101,739
Total liabilities	948,405	899,688	776,524	551,650	443,077
Total stockholders’ equity	512,329	447,719	368,909	340,611	292,159

- (1) We completed the Northwest Retail Acquisition effective March 23, 2018, therefore the results of Northwest Retail are only included subsequent to March 23, 2018. Please read Note 4—Acquisitions to the consolidated financial statements under Item 8 of this Form 10-K for further information.
- (2) Operating income (loss) for the year ended December 31, 2016 was retrospectively recast to reflect the reclassification of the curtailment gain of \$3.1 million related to an amendment on our defined benefit pension plan from Operating expense (excluding depreciation) to a newly defined line within Total other income (expense), net, Gain on curtailment of pension obligation. For the years ended December 31, 2017 and 2016, other immaterial non-service-cost-related components of the net periodic benefit cost related to our defined benefit pension plan were reclassified from Operating expense (excluding depreciation) to Other income (expense), net. Please read Note 2—Summary of Significant Accounting Policies and Note 17—Benefit Plans to the consolidated financial statements under Item 8 of this Form 10-K for further information.
- (3) We completed the WRC Acquisition effective July 14, 2016, therefore the results of WRC are only included subsequent to July 14, 2016. Please read Note 4—Acquisitions to the consolidated financial statements under Item 8 of this Form 10-K for further information.
- (4) We completed the acquisition of Mid Pac effective April 1, 2015, therefore, the results of Mid Pac are only included subsequent to April 1, 2015.

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

Overview

We are a growth-oriented company based in Houston, Texas, that owns and operates market-leading energy and infrastructure businesses. For more information, please read "Part I — Item 1. — Business — Overview" of this Form 10-K.

Recent Events Affecting Comparability of Periods

Hawaii Refinery Expansion

On December 19, 2018, we completed the Hawaii Refinery Expansion for approximately \$66.9 million, net of a \$4.3 million receivable related to net working capital adjustments. The purchase price consisted of \$47.6 million in cash and approximately 1.1 million shares of our common stock with a fair value of \$19.3 million. The results of operations of the newly acquired assets are included in our refining segment commencing December 19, 2018.

Northwest Retail Acquisition

On January 9, 2018, we entered into an Asset Purchase Agreement with CHS, Inc. to acquire 33 retail outlets at various locations in Washington and Idaho. On March 23, 2018, we completed the Northwest Retail Acquisition for cash consideration of approximately \$74.5 million. As part of the Northwest Retail Acquisition, Par and CHS, Inc. entered into a multi-year branded petroleum marketing agreement for the continued supply of Cenex®-branded refined products to the 33 acquired Cenex® Zip Trip retail outlets. The results of operations of Northwest Retail are included in our retail segment commencing March 23, 2018. Please read Note 4—Acquisitions to our consolidated financial statements under Item 8 of this Form 10-K for more information.

Amended and Restated J. Aron Supply and Offtake Agreements

On June 27, 2018, we and J. Aron amended the Supply and Offtake Agreements to increase the amount that we may defer under the deferred payment arrangement. Prior to June 27, 2018, we had the right to defer payments owed to J. Aron up to the lesser of \$125 million or 85% of eligible accounts receivable and inventory. Effective June 27, 2018, we have the right to defer payments owed to J. Aron up to the lesser of \$165 million or 85% of eligible accounts receivable and inventory. On December 5, 2018, we amended and restated the Supply and Offtake Agreements to account for additional processing capacity provided through the Hawaii Refinery Expansion. Please read Note 11—Inventory Financing Agreements to our consolidated financial statements under Item 8 of this Form 10-K for more information.

Other Factors Affecting Comparability of Prior Periods

We completed the WRC Acquisition on July 14, 2016, for cash consideration of \$209.4 million, including a deposit of \$5.0 million paid in June 2016 and assumed debt consisting of term loans of \$58.0 million and revolving loans of \$10.1 million. The results of operations of WRC are included in our segments effective July 14, 2016. Please read Note 4—Acquisitions to our consolidated financial statements under Item 8 of this Form 10-K for more information.

Subsequent Events

On January 11, 2019, we completed the Washington Refinery Acquisition for total consideration of \$326.7 million, including acquired working capital, consisting of cash consideration of \$289.7 million and approximately 2.4 million shares of our common stock issued to the seller of U.S. Oil. The Washington refinery's results of operations will be included in our refining and logistics segments commencing January 11, 2019. Please read Note 22—Subsequent Events to our consolidated financial statements under Item 8 of this Form 10-K for more information.

Results of Operations

Year Ended December 31, 2018 Compared to Year Ended December 31, 2017

Net Income (Loss). Our net income decreased from \$72.6 million for the year ended December 31, 2017 to net income of \$39.4 million for the year ended December 31, 2018. The decrease in our net income was primarily driven by lower refining margins, a \$10.5 million charge related to the Tesoro earn-out settlement, higher acquisition and integration costs, and a decrease in our Equity earnings (losses) from Laramie Energy, partially offset by improved margins in our retail segment. Other factors impacting our results period over period include increase d interest expense and financing fees, and depreciation, depletion, and amortization ("DD&A").

Adjusted EBITDA and Adjusted Net Income (Loss). For the year ended December 31, 2018 , Adjusted EBITDA was \$132.1 million compared to \$140.8 million for the year ended December 31, 2017 . The change was primarily related to lower refining margins driven by unfavorable crude differentials, partially offset by improved margins in our retail segment and an increase in refined product sales volumes and crack spreads.

For the year ended December 31, 2018 , Adjusted Net Income (Loss) was approximately \$49.3 million compared to approximately \$63.3 million for the year ended December 31, 2017 . The change was primarily related to the same factors described above for the decrease in Adjusted EBITDA, increase d interest expense and financing fees, and DD&A.

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

Net Income (Loss). During 2017, our financial performance was primarily driven by improved crack spreads, which was reflected in a change in our net income (loss) from a net loss of \$45.8 million for the year ended December 31, 2016 to net income of \$72.6 million for the year ended December 31, 2017. Other factors impacting our results period over period include the full-year contribution provided by Wyoming Refining, which was acquired on July 14, 2016, and an improvement in our Equity earnings (losses) from Laramie Energy, LLC, partially offset by debt extinguishment and commitment costs and the change in value of the contingent consideration obligation during 2016.

Adjusted EBITDA and Adjusted Net Income (Loss). For the year ended December 31, 2017, Adjusted EBITDA was \$140.8 million compared to \$33.5 million for the year ended December 31, 2016. The change was primarily related to improved crack spreads and the full-year contribution provided by Wyoming Refining, which was acquired on July 14, 2016.

For the year ended December 31, 2017, Adjusted Net Income (Loss) was income of approximately \$63.3 million compared to a loss of \$32.4 million for the year ended December 31, 2016. The change was primarily related to improved crack spreads, the full-year contribution provided by Wyoming Refining, and an improvement in our Equity earnings (losses) from Laramie Energy excluding our share of Laramie's unrealized gain (loss) on derivatives, partially offset by an increase in Interest expense and financing costs, net.

The following table summarizes our consolidated results of operations for the years ended December 31, 2018 , 2017 , and 2016 (in thousands). The following should be read in conjunction with our consolidated financial statements under Item 8 of this Annual Report on Form 10-K.

	Year Ended December 31,		
	2018	2017	2016
Revenues	\$ 3,410,728	\$ 2,443,066	\$ 1,865,045
Cost of revenues (excluding depreciation)	3,003,116	2,054,627	1,636,339
Operating expense (excluding depreciation)	215,284	202,016	169,371
Depreciation, depletion, and amortization	52,642	45,989	31,617
General and administrative expense (excluding depreciation)	47,426	46,078	42,073
Acquisition and integration costs	10,319	395	5,294
Total operating expenses	3,328,787	2,349,105	1,884,694
Operating income (loss)	81,941	93,961	(19,649)
Other income (expense)			
Interest expense and financing costs, net	(39,768)	(31,632)	(28,506)
Debt extinguishment and commitment costs	(4,224)	(8,633)	—
Gain on curtailment of pension obligation	—	—	3,067
Other income (expense), net	1,046	911	(10)
Change in value of common stock warrants	1,801	(1,674)	2,962
Change in value of contingent consideration	(10,500)	—	10,770
Equity earnings (losses) from Laramie Energy, LLC	9,464	18,369	(22,381)
Total other expense, net	(42,181)	(22,659)	(34,098)
Income (loss) before income taxes	39,760	71,302	(53,747)
Income tax benefit (expense)	(333)	1,319	7,912
Net income (loss)	\$ 39,427	\$ 72,621	\$ (45,835)

The following tables summarize our operating income (loss) by segment for the years ended December 31, 2018 , 2017 , and 2016 (in thousands). The following should be read in conjunction with our consolidated financial statements under Item 8 of this Annual Report on Form 10-K.

Year ended December 31, 2018	Refining	Logistics (1)	Retail	Corporate, Eliminations and Other (2)	Total
Revenues	\$ 3,210,067	\$ 125,743	\$ 441,040	\$ (366,122)	\$ 3,410,728
Cost of revenues (excluding depreciation)	2,957,995	77,712	333,664	(366,255)	3,003,116
Operating expense (excluding depreciation)	146,320	7,782	61,182	—	215,284
Depreciation, depletion, and amortization	32,483	6,860	8,962	4,337	52,642
General and administrative expense (excluding depreciation)	—	—	—	47,426	47,426
Acquisition and integration costs	—	—	—	10,319	10,319
Operating income (loss)	\$ 73,269	\$ 33,389	\$ 37,232	\$ (61,949)	\$ 81,941

Year ended December 31, 2017	Refining	Logistics (1)	Retail	Corporate, Eliminations and Other (2)	Total
Revenues	\$ 2,319,638	\$ 121,470	\$ 326,076	\$ (324,118)	\$ 2,443,066
Cost of revenues (excluding depreciation)	2,062,804	66,301	249,097	(323,575)	2,054,627
Operating expense (excluding depreciation)	141,065	15,010	45,941	—	202,016
Depreciation, depletion, and amortization	29,753	6,166	6,338	3,732	45,989
General and administrative expense (excluding depreciation)	—	—	—	46,078	46,078
Acquisition and integration costs	—	—	—	395	395
Operating income (loss)	\$ 86,016	\$ 33,993	\$ 24,700	\$ (50,748)	\$ 93,961

Year ended December 31, 2016	Refining	Logistics (1)	Retail	Corporate, Eliminations and Other (2)	Total
Revenues	\$ 1,702,463	\$ 102,779	\$ 290,402	\$ (230,599)	\$ 1,865,045
Cost of revenues (excluding depreciation)	1,580,014	65,439	220,545	(229,659)	1,636,339
Operating expense (excluding depreciation)	115,818	11,239	41,291	1,023	169,371
Depreciation, depletion, and amortization	17,565	4,679	6,372	3,001	31,617
General and administrative expense (excluding depreciation)	—	—	—	42,073	42,073
Acquisition and integration costs	—	—	—	5,294	5,294
Operating income (loss)	\$ (10,934)	\$ 21,422	\$ 22,194	\$ (52,331)	\$ (19,649)

(1) Our logistics operations consist primarily of intercompany transactions which eliminate on a consolidated basis.

(2) Includes eliminations of intersegment Revenues and Cost of revenues (excluding depreciation) of \$365.5 million , \$325.2 million , and \$271.9 million for the years ended December 31, 2018 , 2017 , and 2016 , respectively.

Below is a summary of key operating statistics for the refining segment for the years ended December 31, 2018, 2017, and 2016:

	Year Ended December 31,		
	2018	2017	2016
Total Refining Segment			
Feedstocks Throughput (Mbpd) (1)	91.3	89.2	86.0
Refined product sales volume (Mbpd) (1)	100.3	90.7	90.6
Hawaii Refinery			
Feedstocks Throughput (Mbpd)	74.9	73.7	70.2
Source of Crude Oil:			
North America	35.0%	23.8%	41.7%
Latin America	1.0%	0.1%	3.9%
Africa	32.4%	24.9%	13.7%
Asia	20.6%	23.1%	30.0%
Middle East	11.0%	28.1%	10.7%
Total	100.0%	100.0%	100.0%
Yield (% of total throughput)			
Gasoline and gasoline blendstocks	27.1%	27.8%	26.8%
Distillate	47.4%	48.2%	44.7%
Fuel oils	17.8%	15.7%	20.1%
Other products	4.5%	5.0%	4.8%
Total yield	96.8%	96.7%	96.4%
Refined product sales volume (Mbpd)			
On-island sales volume	74.6	63.3	61.7
Exports sale volume	9.0	11.4	12.5
Total refined product sales volume	83.6	74.7	74.2
4-1-2-1 Singapore Crack Spread (\$ per barrel) (2)	\$ 7.22	\$ 7.18	\$ 3.74
Operating income (loss) per bbl (\$/throughput bbl)	1.46	2.13	(0.43)
Adjusted Gross Margin per bbl (\$/throughput bbl) (3)	5.37	6.43	4.49
Production costs per bbl (\$/throughput bbl) (4)	3.65	3.60	3.72
DD&A per bbl (\$/throughput bbl)	0.66	0.64	0.45

	Year Ended December 31,		July 14, 2016 to December 31,
	2018	2017	2016
Wyoming Refinery			
Feedstocks Throughput (Mbpd) (1)	16.4	15.5	15.8
Yield (% of total throughput)			
Gasoline and gasoline blendstocks	49.5%	51.9%	56.0%
Distillate	45.8%	42.8%	39.3%
Fuel oil	1.6%	2.2%	1.9%
Other products	0.8%	0.8%	1.0%
Total yield	97.7%	97.7%	98.2%
Refined product sales volume (Mbpd) (1)	16.7	16.0	16.4
Wyoming 3-2-1 Index (\$ per barrel) (5)	\$ 22.69	\$ 21.80	\$ 16.27
Operating income per bbl (\$/throughput bbl) (6)	5.57	5.09	0.05
Adjusted Gross Margin per bbl (\$/throughput bbl) (3)	15.29	14.46	8.78
Production costs per bbl (\$/throughput bbl) (4) (6)	7.06	7.18	6.08
DD&A per bbl (\$/throughput bbl)	2.39	2.19	2.25

- (1) Feedstocks throughput and sales volumes per day for the Wyoming refinery for 2016 are calculated based on the 171 day period for which we owned Wyoming Refining in 2016. As such, the amounts for the total refining segment represent the sum of the Hawaii refinery's throughput or sales volumes averaged over the year plus the Wyoming refinery's throughput or sales volumes averaged over the period from July 14, 2016 to December 31, 2016. The 2017 and 2018 amounts for the total refining segment represent the sum of the Hawaii and Wyoming refineries' throughput or sales volumes averaged over the years ended December 31, 2017 and 2018.
- (2) The profitability of our Hawaii business is heavily influenced by crack spreads in the Singapore market. This market reflects the closest liquid market alternative to source refined products for Hawaii. We believe the 4-1-2-1 Singapore crack spread (or four barrels of Brent crude converted into one barrel of gasoline, two barrels of distillate (diesel and jet fuel), and one barrel of fuel oil) best reflects a market indicator for our Hawaii refinery operations. The previously reported 4-1-2-1 Mid Pacific crack spread was calculated using a ratio of 80% Singapore and 20% San Francisco indexes. We have revised key operating statistics for the years ended December 31, 2017 and 2016 to conform to the current period presentation. Beginning in the fourth quarter of 2018, we have also excluded the Mid Pacific Crude Oil Differential from our key operating statistics as we believe this metric no longer provides a consistent and reasonable market indicator for crude purchases differentials given the unique geographical locations of our Hawaii business and the variability of our crude slate.
- (3) Please see discussion of Adjusted Gross Margin below. We calculate Adjusted Gross Margin per barrel by dividing Adjusted Gross Margin by total refining throughput.
- (4) Management uses production costs per barrel to evaluate performance and compare efficiency to other companies in the industry. There are a variety of ways to calculate production costs per barrel; different companies within the industry calculate it in different ways. We calculate production costs per barrel by dividing all direct production costs, which include the costs to run the refineries including personnel costs, repair and maintenance costs, insurance, utilities, and other miscellaneous costs, by total refining throughput. Our production costs are included in Operating expense (excluding depreciation) on our consolidated statement of operations, which also includes costs related to our bulk marketing operations.
- (5) The profitability of our Wyoming refinery is heavily influenced by crack spreads in nearby markets. We believe the Wyoming 3-2-1 Index is the best market indicator for our operations in Wyoming. The Wyoming 3-2-1 Index is computed by taking two parts gasoline and one part distillate (ULSD) as created from three barrels of WTI. Pricing is based 50% on applicable product pricing in Rapid City, South Dakota, and 50% on applicable product pricing in Denver, Colorado.
- (6) Operating income per bbl and Production costs per bbl for the Wyoming refinery for the year ended December 31, 2016 were retrospectively recast to reflect the reclassification of the curtailment gain of \$3.1 million related to an amendment of our defined benefit pension plan from Operating expense (excluding depreciation) to a newly-defined line within Total other income (expense), net, Gain on curtailment of pension obligation. Please read Note 2—Summary of Significant Accounting

Policies and Note 17—Benefit Plans to the consolidated financial statements under Item 8 of this Form 10-K for further information.

Below is a summary of key operating statistics for the retail and logistics segments for the years ended December 31, 2018, 2017, and 2016:

	Year Ended December 31,		
	2018	2017	2016
Retail Segment			
Retail sales volumes (thousands of gallons) (1)	116,715	92,739	90,941
Logistics Segment			
Pipeline throughput (Mbpd) (2)			
Crude oil pipelines	86.2	85.0	87.3
Refined product pipelines	84.6	87.4	85.8
Total pipeline throughput	170.8	172.4	173.1

- (1) Retail sales volumes for the year ended December 31, 2018, includes 284 days of retail sales volumes from Northwest Retail since its acquisition on March 23, 2018.
- (2) The 2016 amounts for the total logistics segment represent the sum of the pipeline throughput in Hawaii averaged over the year plus the pipeline throughput in Wyoming averaged over the period from July 14, 2016 to December 31, 2016. The 2017 and 2018 amounts for the total logistics segment represent the sum of the Hawaii and Wyoming pipelines' throughput averaged over the years ended December 31, 2017 and 2018, respectively.

Non-GAAP Performance Measures

Management uses certain financial measures to evaluate our operating performance that are considered non-GAAP financial measures. These measures should not be considered a substitute for, or superior to, measures of financial performance prepared in accordance with GAAP and our calculations thereof may not be comparable to similarly titled measures reported by other companies.

Adjusted Gross Margin. Adjusted Gross Margin is defined as (i) operating income (loss) plus operating expense (excluding depreciation), impairment expense, inventory valuation adjustments (which adjusts for timing differences to reflect the economics of our inventory financing agreements, including lower of cost or net realizable value adjustments, the impact of the embedded derivative repurchase obligation, and purchase price allocation adjustments), DD&A, RINs loss in excess of net obligation (see definition below), and unrealized losses (gains) on derivatives or (ii) revenues less cost of revenues (excluding depreciation) plus inventory valuation adjustments and unrealized losses (gains) on derivatives. We define cost of revenues (excluding depreciation) as the hydrocarbon-related costs of inventory sold, transportation costs of delivering product to customers, crude oil consumed in the refining process, costs to satisfy our RINs obligations, and certain hydrocarbon fees and taxes. Cost of revenues (excluding depreciation) also includes certain direct operating expenses related to our logistics segment, unrealized gains (losses) on derivatives and inventory valuation adjustments that we exclude from Adjusted Gross Margin.

Beginning in 2018, Adjusted Net Income (loss) excludes RINs losses recorded in excess of our net RINs obligation ("RINs loss in excess of net obligation"). Our RINs obligations to comply with RFS are recorded as liabilities and measured at fair value as of the end of the reporting period. Our RINs assets, which include RINs purchased in on the open market and RINs generated by blending biofuels as part of our refining process, are stated at the lower of cost or net realizable value ("NRV") as of the end of the reporting period. During periods of rising RINs market prices, we recognize unrealized losses associated with the increase in the fair value of our RINs liabilities. We do not adjust the carrying value of our RINs assets because such assets are stated at the lower of cost or NRV under GAAP. This adjustment represents the income statement effect of reflecting our RINs liability on a net basis, as the settlement of any open obligation would first be offset by RINs assets rather than purchasing such RINs obligations at market prices. We have recast the non-GAAP information for the years ended December 31, 2017 and 2016 to conform to the current period presentation.

Management believes Adjusted Gross Margin is an important measure of operating performance and uses Adjusted Gross Margin per barrel to evaluate operating performance and compare profitability to other companies in the industry and to industry benchmarks. Management believes Adjusted Gross Margin provides useful information to investors because it eliminates the gross impact of volatile commodity prices and adjusts for certain non-cash items and timing differences created by our inventory financing.

agreement and lower of cost or net realizable value adjustments to demonstrate the earnings potential of the business before other fixed and variable costs, which are reported separately in Operating expense (excluding depreciation) and Depreciation, depletion, and amortization .

Adjusted Gross Margin should not be considered an alternative to operating income (loss), net cash flows from operating activities, or any other measure of financial performance or liquidity presented in accordance with GAAP. Adjusted Gross Margin presented by other companies may not be comparable to our presentation since each company may define this term differently as they may include other manufacturing costs and depreciation expense in cost of revenues.

The following tables present a reconciliation of Adjusted Gross Margin to the most directly comparable GAAP financial measure, operating income (loss), on a historical basis, for selected segments, for the periods indicated (in thousands):

Year ended December 31, 2018	Refining	Logistics	Retail
Operating income	\$ 73,269	\$ 33,389	\$ 37,232
Operating expense (excluding depreciation)	146,320	7,782	61,182
Depreciation, depletion, and amortization	32,483	6,860	8,962
Inventory valuation adjustment	(16,875)	—	—
RINs loss on excess of net obligation	4,544	—	—
Unrealized gain on derivatives	(1,497)	—	—
Adjusted Gross Margin (1)	\$ 238,244	\$ 48,031	\$ 107,376

Year ended December 31, 2017	Refining	Logistics	Retail
Operating income (2)	\$ 86,016	\$ 33,993	\$ 24,700
Operating expense (excluding depreciation)	141,065	15,010	45,941
Depreciation, depletion, and amortization	29,753	6,166	6,338
Inventory valuation adjustment	(1,461)	—	—
Unrealized gain on derivatives	(623)	—	—
Adjusted Gross Margin (1)	\$ 254,750	\$ 55,169	\$ 76,979

Year ended December 31, 2016	Refining	Logistics	Retail
Operating income (loss) (2)	\$ (10,934)	\$ 21,422	\$ 22,194
Operating expense (excluding depreciation)	115,818	11,239	41,291
Depreciation, depletion, and amortization	17,565	4,679	6,372
Inventory valuation adjustment	29,056	—	—
Unrealized loss on derivatives	(12,438)	—	—
Adjusted Gross Margin (1)	\$ 139,067	\$ 37,340	\$ 69,857

(1) For the years ended December 31, 2018 , 2017 , and 2016 , there was no impairment expense. For the years ended December 31, 2017 , and 2016 , there was no RINs loss in excess of net obligation.

(2) Operating income (loss) and Operating expense (excluding depreciation) for the year ended December 31, 2016 were retrospectively recast to reflect the reclassification of the curtailment gain of \$3.1 million from Operating expense (excluding depreciation) to a newly defined line within Total other income (expense), net, Gain on curtailment of pension obligation . For the years ended December 31, 2017 and 2016, other immaterial non-service-cost-related components of the net periodic benefit cost related to our defined benefit pension plan were reclassified from Operating expense (excluding depreciation) to Other income (expense), net. Please read Note 2—Summary of Significant Accounting Policies and Note 17—Benefit Plans to the consolidated financial statements under Item 8 of this Form 10-K for further information.

Adjusted Net Income (Loss) and Adjusted EBITDA. Adjusted Net Income (Loss) is defined as net income (loss) excluding changes in the value of contingent consideration and common stock warrants, acquisition and integration costs, unrealized (gains) losses on derivatives, debt extinguishment and commitment costs, release of tax valuation allowance, inventory valuation adjustment, severance costs, impairment expense, and (gain) loss on sale of assets. Beginning in 2018, Adjusted Net Income (Loss) also excludes Par's share of Laramie Energy's unrealized loss (gain) on derivatives and RINs loss in excess of net obligation (as defined in the Adjusted Gross Margin section above). The exclusion of Par's share of Laramie Energy's unrealized loss (gain) on derivatives from Adjusted Net Income (Loss) is consistent with our treatment of Par's unrealized (gains) losses on derivatives, which are also excluded from Adjusted Net Income (Loss).

Adjusted EBITDA is Adjusted Net Income (Loss) excluding interest expense and financing costs, taxes, DD&A, and, beginning in 2018, equity losses (earnings) from Laramie Energy, excluding Par's share of unrealized loss (gain) on derivatives. We have recast the non-GAAP information for the years ended December 31, 2017 and 2016 to conform with the current period presentation.

We believe Adjusted Net Income (Loss) and Adjusted EBITDA are useful supplemental financial measures that allow investors to assess:

- The financial performance of our assets without regard to financing methods, capital structure, or historical cost basis;
- The ability of our assets to generate cash to pay interest on our indebtedness; and
- Our operating performance and return on invested capital as compared to other companies without regard to financing methods and capital structure.

Adjusted Net Income (Loss) and Adjusted EBITDA should not be considered in isolation or as a substitute for operating income (loss), net income (loss), cash flows provided by operating, investing, and financing activities, or other income or cash flow statement data prepared in accordance with GAAP. Adjusted Net Income (Loss) and Adjusted EBITDA presented by other companies may not be comparable to our presentation as other companies may define these terms differently.

The following table presents a reconciliation of Adjusted Net Income (Loss) and Adjusted EBITDA to the most directly comparable GAAP financial measure, net income (loss), on a historical basis for the periods indicated (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Net income (loss)	\$ 39,427	\$ 72,621	\$ (45,835)
Inventory valuation adjustment	(16,875)	(1,461)	25,101
RINs loss in excess of net obligation	4,544	—	—
Unrealized loss (gain) on derivatives	(1,497)	(623)	(12,034)
Acquisition and integration costs	10,319	395	5,294
Debt extinguishment and commitment costs	4,224	8,633	—
Release of tax valuation allowance (1)	(660)	—	(8,573)
Change in value of common stock warrants	(1,801)	1,674	(2,962)
Change in value of contingent consideration	10,500	—	(10,770)
Severance costs	—	1,595	105
Par's share of Laramie Energy's unrealized loss (gain) on derivatives (2)	1,158	(19,568)	17,278
Adjusted Net Income (Loss) (3)	49,339	63,266	(32,396)
Depreciation, depletion, and amortization	52,642	45,989	31,617
Interest expense and financing costs, net	39,768	31,632	28,506
Equity losses (earnings) from Laramie Energy, LLC, excluding Par's share of unrealized loss (gain) on derivatives	(10,622)	1,199	5,103
Income tax expense (benefit)	993	(1,319)	661
Adjusted EBITDA	<u>\$ 132,120</u>	<u>\$ 140,767</u>	<u>\$ 33,491</u>

(1) Included in Income tax expense (benefit) on our consolidated statements of operations.

(2) Included in Equity earnings (losses) from Laramie Energy, LLC on our consolidated statements of operations.

(3) For the years ended December 31, 2018, 2017, and 2016, there was no impairment expense or (gain) loss on sale of assets.

Discussion of Operating Income by Segment

Year Ended December 31, 2018 Compared to Year Ended December 31, 2017

Refining. Operating income for our refining segment was \$73.3 million for the year ended December 31, 2018, a decrease of \$12.7 million compared to operating income of \$86.0 million for the year ended December 31, 2017. The decrease in profitability was primarily due to lower refining margins in Hawaii partially offset by improved crack spreads. Feedstock costs at the Hawaii refinery increased approximately 29% due to unfavorable crude differentials and increased refined product purchases to meet higher on-island demand and contractual obligations. The decrease was partially offset by a 12% increase in Hawaii refinery sales volumes and improved crack spreads in Hawaii and Wyoming. The Singapore crack spread increased 1% from \$7.18 per barrel for the year ended December 31, 2017 to \$7.22 per barrel for the year ended December 31, 2018. The Wyoming Index increased 4% from \$21.80 per barrel for the year ended December 31, 2017 to \$22.69 per barrel for the year ended December 31, 2018. Another contributing factor was a decrease in RINs expense of approximately \$18.5 million due primarily to our refineries obtaining a small refinery exemption for 2017 during the first quarter of 2018.

Logistics. Operating income for our logistics segment was \$33.4 million for the year ended December 31, 2018, which is relatively consistent with operating income of \$34.0 million for the year ended December 31, 2017.

Retail. Operating income for our retail segment was \$37.2 million for the year ended December 31, 2018, an increase of \$12.5 million compared to operating income of \$24.7 million for the year ended December 31, 2017. The increase in profitability was primarily due to an increase in sales prices of 14% and an increase in sales volumes of 26%, primarily due to the acquisition of Northwest Retail.

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

Refining. Operating income for our refining segment was \$86.0 million for the year ended December 31, 2017, an increase of \$96.9 million compared to an operating loss of \$10.9 million for the year ended December 31, 2016. The increase in profitability was primarily driven by higher crack spreads and the full year contribution of Wyoming Refining. The Singapore crack spread increased 92% from \$3.74 per barrel for the year ended December 31, 2016 to \$7.18 per barrel for the year ended December 31, 2017. Wyoming Refining contributed operating income of approximately \$28.8 million to the refining segment for the year ended December 31, 2017 as compared to approximately \$0.1 million for the year ended December 31, 2016.

Logistics. Operating income for our logistics segment was \$34.0 million for the year ended December 31, 2017, an increase of \$12.6 million compared to operating income of \$21.4 million for the year ended December 31, 2016. The increase in profitability was primarily due to the full year contribution of Wyoming Refining and higher transportation and logistics services revenue. Wyoming Refining contributed operating income of approximately \$6.0 million to the logistics segment for the year ended December 31, 2017 as compared to approximately \$0.8 million for the year ended December 31, 2016.

Retail. Operating income for our retail segment was \$24.7 million for the year ended December 31, 2017, an increase of \$2.5 million compared to operating income of \$22.2 million for the year ended December 31, 2016. The increase in profitability was primarily due to an increase in sales prices of 12% and an increase in sales volumes of 2%, partially offset by a 11% increase in fuel costs and higher operating expenses.

Discussion of Adjusted Gross Margin by Segment

Year Ended December 31, 2018 Compared to Year Ended December 31, 2017

Refining . For the year ended December 31, 2018 , our refining Adjusted Gross Margin was approximately \$238.2 million , a decrease of \$16.6 million compared to \$254.8 million for the year ended December 31, 2017 . The decrease in profitability was primarily due to lower refining margins in Hawaii partially offset by improved crack spreads. Feedstock costs at the Hawaii refinery increased approximately 29% due to unfavorable crude differentials and increased refined product purchases to meet higher on-island demand and contractual obligations. The decrease was partially offset by a 12% increase in Hawaii refinery sales volumes and improved crack spreads in Hawaii and Wyoming. The Singapore crack spread increased 1% from \$7.18 per barrel for the year ended December 31, 2017 to \$7.22 per barrel for the year ended December 31, 2018 . The Wyoming Index increased 4% from \$21.80 per barrel for the year ended December 31, 2017 to \$22.69 per barrel for the year ended December 31, 2018 . Another contributing factor was a decrease in RINs expense of approximately \$18.5 million due primarily to our refineries obtaining a small refinery exemption for 2017 during the first quarter of 2018.

Logistics . For the year ended December 31, 2018 , our logistics Adjusted Gross Margin was approximately \$48.0 million , a decrease of \$7.2 million compared to \$55.2 million for the year ended December 31, 2017 . The decrease was primarily driven by a decrease in barge revenues as a result of lower throughput volume and average prices per throughput barrel, partially offset by an increase in trucking volumes.

Retail . For the year ended December 31, 2018 , our retail Adjusted Gross Margin was approximately \$107.4 million , an increase of \$30.4 million compared to \$77.0 million for the year ended December 31, 2017 . The increase was primarily due to a 14% increase in sales prices and higher sales volumes of 26% , primarily due to the acquisition of Northwest Retail .

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

Refining . For the year ended December 31, 2017, our refining Adjusted Gross Margin was approximately \$254.8 million, an increase of \$115.7 million compared to \$139.1 million for the year ended December 31, 2016. The increase was primarily due to higher crack spreads and the full year contribution of Wyoming Refining. The Singapore crack spread increased 92% from \$3.74 per barrel for the year ended December 31, 2016 to \$7.18 per barrel for the year ended December 31, 2017. Wyoming Refining contributed approximately \$81.8 million and \$23.7 million of Adjusted Gross Margin to the refining segment for the years ended December 31, 2017 and 2016, respectively.

Logistics . For the year ended December 31, 2017, our logistics Adjusted Gross Margin was approximately \$55.2 million, an increase of \$17.9 million compared to \$37.3 million for the year ended December 31, 2016. The increase was primarily driven by the full year contribution of Wyoming Refining and lower maintenance project costs at our Hawaii refinery. Wyoming Refining contributed approximately \$17.3 million and \$5.1 million of Adjusted Gross Margin to the logistics segment for the years ended December 31, 2017 and 2016, respectively.

Retail. For the year ended December 31, 2017, our retail Adjusted Gross Margin was approximately \$77.0 million, an increase of \$7.1 million compared to \$69.9 million for the year ended December 31, 2016. The increase was primarily due to an increase of 12% in sales prices and an increase in sales volumes of 2%, partially offset by a 11% increase in fuel costs.

Discussion of Consolidated Results

Year Ended December 31, 2018 Compared to Year Ended December 31, 2017

Revenues. For the year ended December 31, 2018, revenues were \$3.4 billion, a \$1.0 billion increase compared to \$2.4 billion for the year ended December 31, 2017. The increase was primarily due to an increase of \$0.9 billion in third-party revenues at our refining segment, which was primarily the result of higher crude oil prices and volumes. Brent crude oil prices averaged \$71.55 per barrel in the year ended December 31, 2018 compared to \$54.82 per barrel in the year ended December 31, 2017, with similar increases experienced for WTI crude oil prices. Refined product sales volumes increased 11% from 90.7 Mbpd in the year ended December 31, 2017 to 100.3 Mbpd in the year ended December 31, 2018. Revenues in our retail segment increased \$114.9 million primarily driven by the acquisition of Northwest Retail.

Cost of Revenues (Excluding Depreciation). For the year ended December 31, 2018, cost of revenues (excluding depreciation), was \$3.0 billion, a \$0.9 billion increase compared to \$2.1 billion for the year ended December 31, 2017. The increase was primarily due to higher crude oil prices and volumes as stated above. Cost of revenues (excluding depreciation) in our retail segment increased \$84.6 million primarily driven by the acquisition of Northwest Retail.

Operating Expense (Excluding Depreciation). For the year ended December 31, 2018, operating expense (excluding depreciation) was approximately \$215.3 million, an increase of \$13.3 million compared to \$202.0 million for the year ended December 31, 2017. The increase was primarily due to operating expenses related to the Northwest Retail assets, which we acquired on March 23, 2018.

Depreciation, Depletion, and Amortization. For the year ended December 31, 2018, DD&A expense was approximately \$52.6 million, an increase of \$6.6 million compared to \$46.0 million for the year ended December 31, 2017. The increase was primarily due to the acquisition of Northwest Retail on March 23, 2018 and approximately \$4.1 million of accelerated depreciation resulting from changes in the estimated useful lives of certain refinery equipment, storage tanks, and leasehold improvements. Northwest Retail contributed \$1.9 million of DD&A for the year ended December 31, 2018.

General and Administrative Expense (Excluding Depreciation). For the year ended December 31, 2018, general and administrative expense (excluding depreciation) was approximately \$47.4 million, which is relatively consistent with expense of \$46.1 million for the year ended December 31, 2017.

Acquisition and Integration Costs. For the year ended December 31, 2018, we incurred approximately \$10.3 million of expenses primarily related to acquisition and integration costs for the Northwest Retail Acquisition, the Hawaii Refinery Expansion, and the Washington Refinery Acquisition. For the year ended December 31, 2017, we incurred approximately \$0.4 million of integration costs related to the WRC Acquisition completed in July 2016. Please read Note 4—Acquisitions to our consolidated financial statements under Item 8 of this Form 10-K for more information.

Interest Expense and Financing Costs, Net. For the year ended December 31, 2018, our interest expense and financing costs were approximately \$39.8 million, an increase of \$8.2 million compared to \$31.6 million for the year ended December 31, 2017. The increase was primarily due to interest expense of \$24.4 million related to the 7.75% Senior Secured Notes issued in December 2017 and increased financing costs of \$2.4 million associated with J. Aron deferred payments, partially offset by lower interest expense of \$17.4 million related to the debt and credit agreements terminated in December 2017 and a net increase on gains on interest rate derivatives of \$0.9 million. Please read Note 12—Debt to our consolidated financial statements under Item 8 of this Form 10-K for further discussion on our indebtedness.

Change in Value of Common Stock Warrants. For the year ended December 31, 2018, the change in value of common stock warrants resulted in a gain of approximately \$1.8 million, a change of \$3.5 million compared to a loss of \$1.7 million for the year ended December 31, 2017. For the year ended December 31, 2018, our stock price decreased from \$19.28 per share as of December 31, 2017 to \$14.18 per share as of December 31, 2018 which resulted in a decrease in the fair value of the common stock warrants. During the year ended December 31, 2017, our stock price increased from \$14.54 per share on December 31, 2016 to \$19.28 per share on December 31, 2017, which resulted in an increase in the value of the common stock warrants.

Change in Value of Contingent Consideration. For the year ended December 31, 2018, the change in value of our contingent consideration liability resulted in a loss of \$10.5 million as a result of the settlement agreement reached with Tesoro.

For the year ended December 31, 2017, there was no change in the value of our contingent consideration liability. Please read Note 15—Commitments and Contingencies to our consolidated financial statements under Item 8 of this Form 10-K for more information.

Debt extinguishment and commitment costs. For the year ended December 31, 2018, our debt extinguishment and commitment costs were approximately \$4.2 million and represents the commitment and other fees associated with the financing of the Washington Refinery Acquisition. For the year ended December 31, 2017, our debt extinguishment and commitment costs were approximately \$8.6 million and represent early termination fees and the acceleration of deferred amortization costs in connection with the termination of the Delayed Draw Term Loan and Bridge Loan Credit Agreement (“Term Loan”) during the second quarter of 2017 and the termination and repayment of our outstanding indebtedness under the Hawaii Retail Credit Facilities, the Wyoming Refining Credit Facilities, the Par Wyoming Holdings Credit Agreement, and the J. Aron Forward Sale in the fourth quarter of 2017.

Equity Losses From Laramie Energy. For the year ended December 31, 2018, equity earnings from Laramie Energy were approximately \$9.5 million, a change of \$8.9 million compared to equity earnings of \$18.4 million for the year ended December 31, 2017. The decrease was primarily due to Laramie Energy's loss on derivative instruments of \$13.4 million for the year ended December 31, 2018, compared to a gain on derivative instruments of \$35.5 million for the same period in 2017. The loss on derivative instruments was partially offset by a 42% increase in Laramie Energy's sales volumes for the year ended December 31, 2018 compared to the same period in 2017. In addition, our ownership percentage decreased from 42.3% to 39.1% on February 28, 2018 due to an investment made by a third party and increased to 46.0% on October 18, 2018 due to Laramie Energy's repurchase of units from certain unitholders.

Income Taxes. For the year ended December 31, 2018, we recorded an income tax expense of \$0.3 million primarily due to deferred tax expense of \$0.7 million offset by current federal income tax benefit of \$0.3 million. Deferred tax expense for the year ended December 31, 2018 includes a benefit of \$0.7 million related to the release of valuation allowance due to the impact of the U.S. tax reform legislation on the interest deduction limitation. For the year ended December 31, 2017, we recorded an income tax benefit of \$1.3 million primarily due to the release of \$0.8 million of valuation allowance associated with the U.S. tax reform legislation that converted the Alternative Minimum Tax Credit Carryovers to refundable credits.

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

Revenues. For the year ended December 31, 2017, revenues were \$2.4 billion, a \$0.5 billion increase compared to \$1.9 billion for the year ended December 31, 2016. The increase was primarily due to an increase of \$0.6 billion in third-party revenues at our refining segment, which was primarily the result of higher crude oil prices and the full year contribution of Wyoming Refining. Brent crude oil prices averaged \$54.82 per barrel in the year ended December 31, 2017 compared to \$45.14 per barrel in the year ended December 31, 2016, with similar increases experienced for WTI crude oil prices. Wyoming Refining contributed revenues of \$408.4 million and \$168.6 million to the refining segment for the years ended December 31, 2017 and 2016, respectively. Revenues in our retail segment increased \$35.7 million primarily driven by an increase of 12% in sales prices.

Cost of Revenues (Excluding Depreciation). For the year ended December 31, 2017, cost of revenues (excluding depreciation), was \$2.1 billion, a \$0.5 billion increase compared to \$1.6 billion for the year ended December 31, 2016. The increase was primarily due to an increase of \$0.5 billion in third-party cost of revenues (excluding depreciation) at our refining segment which was primarily the result of the full year contribution of Wyoming Refining and higher crude oil prices as discussed above. Wyoming Refining contributed cost of revenues (excluding depreciation) of \$326.6 million and \$145.9 million to the refining segment for the years ended December 31, 2017 and 2016, respectively. Cost of revenues (excluding depreciation) in our retail segment increased \$28.6 million primarily driven by 11% increase in fuel costs.

Operating Expense (Excluding Depreciation). For the year ended December 31, 2017, operating expense (excluding depreciation) was approximately \$202.0 million, an increase of \$32.6 million compared to \$169.4 million for the year ended December 31, 2016. The increase was primarily due to the full year contribution of Wyoming Refining, which contributed \$48.9 million and \$19.9 million for the years ended December 31, 2017 and 2016, respectively.

Depreciation, Depletion, and Amortization. For the year ended December 31, 2017, DD&A expense was approximately \$46.0 million, an increase of \$14.4 million compared to \$31.6 million for the year ended December 31, 2016. The increase was primarily due to DD&A related to assets acquired as part of the Wyoming Refining acquisition on July 14, 2016. Wyoming Refining contributed \$15.5 million and \$6.8 million of DD&A expense for the years ended December 31, 2017 and 2016, respectively. Additionally, amortization of deferred turnaround expenditures increased \$6.8 million during the year ended December 31, 2017 compared to the same period in 2016.

General and Administrative Expense (Excluding Depreciation). For the year ended December 31, 2017, general and administrative expense (excluding depreciation) was approximately \$46.1 million, an increase of \$4.0 million compared to

\$42.1 million for the year ended December 31, 2016. The increase is primarily due to higher payroll and employee benefit costs driven by increased headcount and severance costs incurred during the first quarter of 2017.

Acquisition and Integration Costs. For the year ended December 31, 2017, acquisition and integration costs were approximately \$0.4 million, a decrease of \$4.9 million compared to \$5.3 million for the year ended December 31, 2016. The decrease was primarily due to the completion of the WRC Acquisition in July 2016 compared to minor costs incurred in 2017 for the WRC integration and the pending Northwest Retail Acquisition.

Interest Expense and Financing Costs, Net. For the year ended December 31, 2017, our interest expense and financing costs were approximately \$31.6 million, an increase of \$3.1 million compared to \$28.5 million for the year ended December 31, 2016. The increase was primarily due to higher interest expense and financing costs of \$4.6 million related to the Wyoming Refining Credit Facilities and Par Wyoming Holdings Credit Agreement entered into during the third quarter of 2016 in conjunction with the WRC Acquisition, higher interest expense of \$5.0 million associated with our 5.00% Convertible Senior Notes issued during the second quarter of 2016, and a \$2.0 million reduction in the gain on interest rate swaps for the year ended December 31, 2017. These increases were partially offset by lower interest expense of \$6.1 million due to the full repayment and termination of the Term Loan during the second quarter of 2017 and lower interest expense and financing costs of approximately \$3.0 million due to the full repayment and termination of the Bridge Notes in the third quarter of 2016. Please read Note 12—Debt to our consolidated financial statements under Item 8 of this Form 10-K for further discussion on our indebtedness.

Change in Value of Common Stock Warrants. For the year ended December 31, 2017, the change in value of common stock warrants resulted in a loss of approximately \$1.7 million, a change of \$4.7 million when compared to a gain of \$3.0 million for the year ended December 31, 2016. For the year ended December 31, 2017, our stock price increased from \$14.54 per share as of December 31, 2016 to \$19.28 per share as of December 31, 2017 which resulted in an increase in the fair value of the common stock warrants. During the year ended December 31, 2016, our stock price decreased from \$23.54 per share on December 31, 2015 to \$14.54 per share on December 31, 2016, which resulted in a decrease in the value of the common stock warrants.

Change in Value of Contingent Consideration. For the year ended December 31, 2017, there was no change in value of our contingent consideration liability. For the year ended December 31, 2016, the change in the value of our contingent consideration liability resulted in a gain of \$10.8 million due to a decrease in our expected cash flows related to PHR for 2016 as a result of lower crack spreads. Please read Note 15—Commitments and Contingencies to our consolidated financial statements under Item 8 of this Form 10-K for more information.

Debt extinguishment and commitment costs. For the year ended December 31, 2017, our debt extinguishment and commitment costs were approximately \$8.6 million and represent early termination fees and the acceleration of deferred amortization costs in connection with the termination of the Term Loan during the second quarter of 2017 and the termination and repayment of our outstanding indebtedness under the Hawaii Retail Credit Facilities, the Wyoming Refining Credit Facilities, the Par Wyoming Holdings Credit Agreement, and the J. Aron Forward Sale in the fourth quarter of 2017. No such costs were incurred in 2016.

Gain on curtailment of pension obligation. During December 2016, the benefit plan acquired as part of the WRC Acquisition was amended to freeze all future benefit accruals for salaried plan participants, resulting in a reduction of the projected benefit obligation of \$3.1 million as of December 31, 2016. Please read Note 2—Summary of Significant Accounting Policies and Note 17—Benefit Plans to our consolidated financial statements under Item 8 of this Form 10-K for more information. No amendments were made to the plan in 2017.

Equity Earnings (Losses) From Laramie Energy. For the year ended December 31, 2017, equity earnings from Laramie Energy were approximately \$18.4 million, a change of \$40.8 million compared to equity losses of \$22.4 million for the year ended December 31, 2016. The change was primarily due to an increase in production volumes, natural gas prices, and an increase in our share of Laramie Energy's gain (loss) on derivative instruments of \$26.8 million for the year ended December 31, 2017 compared to the same period in 2016.

Income Taxes. For the year ended December 31, 2017, we recorded an income tax benefit of \$1.3 million primarily due to the release of \$0.8 million of valuation allowance associated with the U.S. tax reform legislation that converted the Alternative Minimum Tax Credit Carryovers to refundable credits. For the year ended December 31, 2016, we recorded an income tax benefit of \$7.9 million primarily due to the release of \$8.6 million of our valuation allowance as we expect to be able to utilize a portion of our net operating loss ("NOL") carryforwards to offset future taxable income associated with the reversal of the deferred tax liability recognized upon issuance of our 5.00% Convertible Senior Notes.

Consolidating Condensed Financial Information

On December 21, 2017, Par Petroleum, LLC (the “Issuer and Subsidiaries”), issued its 7.75% Senior Secured Notes due 2025 in a private offering under Rule 144A and Regulation S of the Securities Act. The notes were co-issued by Par Petroleum Finance Corp., which has no independent assets or operations. The notes are guaranteed on a senior unsecured basis only as to payment of principal and interest by Par Pacific Holdings, Inc. (the “Parent”) and are guaranteed on a senior secured basis by all of the subsidiaries of Par Petroleum, LLC (other than Par Petroleum Finance Corp.).

The following supplemental condensed consolidating financial information reflects (i) the Parent’s separate accounts, (ii) Par Petroleum, LLC and its consolidated subsidiaries’ accounts (which are all guarantors of the 7.75% Senior Secured Notes), (iii) the accounts of subsidiaries of the Parent that are not guarantors of the 7.75% Senior Secured Notes and consolidating adjustments and eliminations, and (iv) the Parent’s consolidated accounts for the dates and periods indicated. For purposes of the following condensed consolidating information, the Parent’s investment in its subsidiaries is accounted for under the equity method of accounting (dollar amounts in thousands).

	As of December 31, 2018			
	Parent Guarantor	Issuer and Subsidiaries	Non-Guarantor Subsidiaries and Eliminations	Par Pacific Holdings, Inc. and Subsidiaries
ASSETS				
Current assets				
Cash and cash equivalents	\$ 28,701	\$ 46,062	\$ 313	\$ 75,076
Restricted cash	743	—	—	743
Trade accounts receivable	—	159,630	708	160,338
Inventories	—	322,065	—	322,065
Prepaid and other current assets	11,711	17,048	(389)	28,370
Due from related parties	43,928	—	(43,928)	—
Total current assets	85,083	544,805	(43,296)	586,592
Property and equipment				
Property, plant, and equipment	18,939	630,429	—	649,368
Proved oil and gas properties, at cost, successful efforts method of accounting	—	—	400	400
Total property and equipment	18,939	630,429	400	649,768
Less accumulated depreciation and depletion	(9,034)	(102,180)	(293)	(111,507)
Property and equipment, net	9,905	528,249	107	538,261
Long-term assets				
Investment in Laramie Energy, LLC	—	—	136,656	136,656
Investment in subsidiaries	638,975	—	(638,975)	—
Intangible assets, net	—	23,947	—	23,947
Goodwill	—	150,799	2,598	153,397
Other long-term assets	3,334	18,547	—	21,881
Total assets	\$ 737,297	\$ 1,266,347	\$ (542,910)	\$ 1,460,734
LIABILITIES AND STOCKHOLDERS' EQUITY				
Current liabilities				
Current maturities of long-term debt	\$ —	\$ 33	\$ —	\$ 33
Obligations under inventory financing agreements	—	373,882	—	373,882
Accounts payable	8,312	44,997	1,478	54,787
Advances from customers	—	6,681	—	6,681
Accrued taxes	—	17,206	50	17,256
Other accrued liabilities	12,349	43,773	(1,560)	54,562
Due to related parties	96,963	9,848	(106,811)	—
Total current liabilities	117,624	496,420	(106,843)	507,201
Long-term liabilities				
Long-term debt, net of current maturities	100,411	292,196	—	392,607
Common stock warrants	5,007	—	—	5,007
Long-term capital lease obligations	475	5,648	—	6,123
Other liabilities	1,451	41,040	(5,024)	37,467
Total liabilities	224,968	835,304	(111,867)	948,405
Commitments and contingencies				
Stockholders' equity				
Preferred stock, \$0.01 par value: 3,000,000 shares authorized, none issued	—	—	—	—
Common stock, \$0.01 par value; 500,000,000 shares authorized and 46,983,924 shares issued	470	—	—	470
Additional paid-in capital	617,937	345,825	(345,825)	617,937
Accumulated earnings (deficit)	(108,751)	81,715	(81,715)	(108,751)
Accumulated other comprehensive income	2,673	3,503	(3,503)	2,673
Total stockholders' equity	512,329	431,043	(431,043)	512,329
Total liabilities and stockholders' equity	\$ 737,297	\$ 1,266,347	\$ (542,910)	\$ 1,460,734

As of December 31, 2017				
	Parent Guarantor	Issuer and Subsidiaries	Non-Guarantor Subsidiaries and Eliminations	Par Pacific Holdings, Inc. and Subsidiaries
ASSETS				
Current assets				
Cash and cash equivalents	\$ 65,615	\$ 51,429	\$ 1,289	\$ 118,333
Restricted cash	744	—	—	744
Trade accounts receivable	—	120,032	1,799	121,831
Inventories	—	345,072	285	345,357
Prepaid and other current assets	11,768	7,115	(1,604)	17,279
Due from related parties	8,113	32,171	(40,284)	—
Total current assets	86,240	555,819	(38,515)	603,544
Property and equipment				
Property, plant, and equipment	15,773	513,307	158	529,238
Proved oil and gas properties, at cost, successful efforts method of accounting	—	—	400	400
Total property and equipment	15,773	513,307	558	529,638
Less accumulated depreciation and depletion	(6,226)	(73,029)	(367)	(79,622)
Property and equipment, net	9,547	440,278	191	450,016
Long-term assets				
Investment in Laramie Energy, LLC	—	—	127,192	127,192
Investment in subsidiaries	552,748	—	(552,748)	—
Intangible assets, net	—	26,604	—	26,604
Goodwill	—	104,589	2,598	107,187
Other long-term assets	1,976	30,888	—	32,864
Total assets	\$ 650,511	\$ 1,158,178	\$ (461,282)	\$ 1,347,407
LIABILITIES AND STOCKHOLDERS' EQUITY				
Current liabilities				
Obligations under inventory financing agreements	\$ —	\$ 363,756	\$ —	\$ 363,756
Accounts payable	4,510	46,273	1,760	52,543
Advances from customers	—	9,522	—	9,522
Accrued taxes	—	20,227	(2,540)	17,687
Other accrued liabilities	12,913	14,420	111	27,444
Due to related parties	82,524	—	(82,524)	—
Total current liabilities	99,947	454,198	(83,193)	470,952
Long-term liabilities				
Long-term debt, net of current maturities	95,486	289,326	—	384,812
Common stock warrants	6,808	—	—	6,808
Long-term capital lease obligations	551	669	—	1,220
Other liabilities	—	41,253	(5,357)	35,896
Total liabilities	202,792	785,446	(88,550)	899,688
Commitments and contingencies				
Stockholders' equity				
Preferred stock, \$0.01 par value: 3,000,000 shares authorized, none issued	—	—	—	—
Common stock, \$0.01 par value; 500,000,000 shares authorized and 45,776,087 shares issued	458	—	—	458
Additional paid-in capital	593,295	345,825	(345,825)	593,295
Accumulated earnings (deficit)	(148,178)	23,933	(23,933)	(148,178)
Accumulated other comprehensive income	2,144	2,974	(2,974)	2,144
Total stockholders' equity	447,719	372,732	(372,732)	447,719
Total liabilities and stockholders' equity	\$ 650,511	\$ 1,158,178	\$ (461,282)	\$ 1,347,407

	Year Ended December 31, 2018			
	Parent Guarantor	Issuer and Subsidiaries	Non-Guarantor Subsidiaries and Eliminations	Par Pacific Holdings, Inc. and Subsidiaries
Revenues	\$ —	\$ 3,410,155	\$ 573	\$ 3,410,728
Operating expenses				
Cost of revenues (excluding depreciation)	—	3,002,718	398	3,003,116
Operating expense (excluding depreciation)	—	215,284	—	215,284
Depreciation, depletion, and amortization	4,092	48,513	37	52,642
General and administrative expense (excluding depreciation)	20,721	26,370	335	47,426
Acquisition and integration costs	10,118	201	—	10,319
Total operating expenses	34,931	3,293,086	770	3,328,787
Operating income (loss)	(34,931)	117,069	(197)	81,941
Other income (expense)				
Interest expense and financing costs, net	(10,867)	(28,897)	(4)	(39,768)
Debt extinguishment and commitment costs	—	(4,224)	—	(4,224)
Other income (expense), net	1,155	(99)	(10)	1,046
Change in value of common stock warrants	1,801	—	—	1,801
Change in value of contingent consideration	—	(10,500)	—	(10,500)
Equity earnings (losses) from subsidiaries	81,942	—	(81,942)	—
Equity earnings from Laramie Energy, LLC	—	—	9,464	9,464
Total other income (expense), net	74,031	(43,720)	(72,492)	(42,181)
Income (loss) before income taxes	39,100	73,349	(72,689)	39,760
Income tax benefit (expense)	327	(15,567)	14,907	(333)
Net income (loss)	\$ 39,427	\$ 57,782	\$ (57,782)	\$ 39,427
Adjusted EBITDA	\$ (19,566)	\$ 151,856	\$ (170)	\$ 132,120

	Year Ended December 31, 2017			
	Parent Guarantor	Issuer and Subsidiaries	Non-Guarantor Subsidiaries and Eliminations	Par Pacific Holdings, Inc. and Subsidiaries
Revenues	\$ —	\$ 2,442,188	\$ 878	\$ 2,443,066
Operating expenses				
Cost of revenues (excluding depreciation)	—	2,053,757	870	2,054,627
Operating expense (excluding depreciation)	—	202,019	(3)	202,016
Depreciation, depletion, and amortization	2,871	42,368	750	45,989
General and administrative expense (excluding depreciation)	18,922	26,967	189	46,078
Acquisition and integration costs	192	—	203	395
Total operating expenses	<u>21,985</u>	<u>2,325,111</u>	<u>2,009</u>	<u>2,349,105</u>
Operating income (loss)	(21,985)	117,077	(1,131)	93,961
Other income (expense)				
Interest expense and financing costs, net	(13,709)	(17,923)	—	(31,632)
Debt extinguishment and commitment costs	(1,804)	(6,829)	—	(8,633)
Other income (expense), net	631	154	126	911
Change in value of common stock warrants	(1,674)	—	—	(1,674)
Equity losses from subsidiaries	111,162	—	(111,162)	—
Equity losses from Laramie Energy, LLC	—	—	18,369	18,369
Total other income (expense), net	<u>94,606</u>	<u>(24,598)</u>	<u>(92,667)</u>	<u>(22,659)</u>
Income (loss) before income taxes	72,621	92,479	(93,798)	71,302
Income tax benefit (expense)	—	(29,079)	30,398	1,319
Net income (loss)	<u>\$ 72,621</u>	<u>\$ 63,400</u>	<u>\$ (63,400)</u>	<u>\$ 72,621</u>
Adjusted EBITDA	\$ (17,091)	\$ 157,910	\$ (52)	\$ 140,767

	Year Ended December 31, 2016			
	Parent Guarantor	Issuer and Subsidiaries	Non-Guarantor Subsidiaries and Eliminations	Par Pacific Holdings, Inc. and Subsidiaries
Revenues	\$ —	\$ 1,823,527	\$ 41,518	\$ 1,865,045
Operating expenses				
Cost of revenues (excluding depreciation)	—	1,593,998	42,341	1,636,339
Operating expense (excluding depreciation)	—	169,473	(102)	169,371
Depreciation, depletion, and amortization	2,205	28,659	753	31,617
General and administrative expense (excluding depreciation)	15,618	22,458	3,997	42,073
Acquisition and integration costs	4,781	—	513	5,294
Total operating expenses	22,604	1,814,588	47,502	1,884,694
Operating income (loss)	(22,604)	8,939	(5,984)	(19,649)
Other income (expense)				
Interest expense and financing costs, net	(18,246)	(10,152)	(108)	(28,506)
Interest income from subsidiaries	583	—	(583)	—
Gain on curtailment of pension obligation	—	3,067	—	3,067
Other income (expense), net	67	124	(201)	(10)
Change in value of common stock warrants	2,962	—	—	2,962
Change in value of contingent consideration	—	10,770	—	10,770
Equity losses from subsidiaries	(17,170)	—	17,170	—
Equity losses from Laramie Energy, LLC	—	—	(22,381)	(22,381)
Total other income (expense), net	(31,804)	3,809	(6,103)	(34,098)
Income (loss) before income taxes	(54,408)	12,748	(12,087)	(53,747)
Income tax benefit (expense)	8,573	(10,621)	9,960	7,912
Net income (loss)	\$ (45,835)	\$ 2,127	\$ (2,127)	\$ (45,835)
Adjusted EBITDA	\$ (14,863)	\$ 53,856	\$ (5,502)	\$ 33,491

Non-GAAP Financial Measures

Adjusted EBITDA for the supplemental consolidating condensed financial information, which is segregated at the “Parent Guarantor,” “Issuer and Subsidiaries,” and “Non-Guarantor Subsidiaries and Eliminations” levels, is calculated in the same manner as for the Par Pacific Holdings, Inc. Adjusted EBITDA calculations. See “Results of Operations — Non-GAAP Performance Measures — Adjusted Net Income (Loss) and Adjusted EBITDA” above.

The following tables present a reconciliation of Adjusted EBITDA to the most directly comparable GAAP financial measure, net income (loss), on a historical basis for the periods indicated (in thousands):

	Year Ended December 31, 2018			
	Parent Guarantor	Issuer and Subsidiaries	Non-Guarantor Subsidiaries and Eliminations	Par Pacific Holdings, Inc. and Subsidiaries
Net income (loss)	\$ 39,427	\$ 57,782	\$ (57,782)	\$ 39,427
Inventory valuation adjustment	—	(16,875)	—	(16,875)
RINs loss in excess of net obligation	—	4,544	—	4,544
Unrealized loss (gain) on derivatives	—	(1,497)	—	(1,497)
Acquisition and integration costs	10,118	201	—	10,319
Debt extinguishment and commitment costs	—	4,224	—	4,224
Increase in (release of) tax valuation allowance (1)	—	—	(660)	(660)
Change in value of common stock warrants	(1,801)	—	—	(1,801)
Change in value of contingent consideration	—	10,500	—	10,500
Par's share of Laramie Energy's unrealized loss (gain) on derivatives (2)	—	—	1,158	1,158
Depreciation, depletion, and amortization	4,092	48,513	37	52,642
Interest expense and financing costs, net	10,867	28,897	4	39,768
Equity losses (earnings) from Laramie Energy, LLC	—	—	(10,622)	(10,622)
Equity losses (income) from subsidiaries	(81,942)	—	81,942	—
Income tax expense (benefit)	(327)	15,567	(14,247)	993
Adjusted EBITDA (3)	<u>\$ (19,566)</u>	<u>\$ 151,856</u>	<u>\$ (170)</u>	<u>\$ 132,120</u>

Year Ended December 31, 2017				
	Parent Guarantor	Issuer and Subsidiaries	Non-Guarantor Subsidiaries and Eliminations	Par Pacific Holdings, Inc. and Subsidiaries
Net income (loss)	\$ 72,621	\$ 63,400	\$ (63,400)	\$ 72,621
Inventory valuation adjustment	—	(1,461)	—	(1,461)
RINs loss in excess of net obligation	—	—	—	—
Unrealized loss (gain) on derivatives	—	(623)	—	(623)
Acquisition and integration costs	192	—	203	395
Debt extinguishment and commitment costs	1,804	6,829	—	8,633
Change in value of common stock warrants	1,674	—	—	1,674
Severance costs	1,200	395	—	1,595
Par's share of Laramie Energy's unrealized loss (gain) on derivatives (2)	—	—	(19,568)	(19,568)
Depreciation, depletion, and amortization	2,871	42,368	750	45,989
Interest expense and financing costs, net	13,709	17,923	—	31,632
Equity losses (earnings) from Laramie Energy, LLC	—	—	1,199	1,199
Equity losses from subsidiaries	(111,162)	—	111,162	—
Income tax expense (benefit)	—	29,079	(30,398)	(1,319)
Adjusted EBITDA (3)	<u>\$ (17,091)</u>	<u>\$ 157,910</u>	<u>\$ (52)</u>	<u>\$ 140,767</u>

Year Ended December 31, 2016				
	Parent Guarantor	Issuer and Subsidiaries	Non-Guarantor Subsidiaries and Eliminations	Par Pacific Holdings, Inc. and Subsidiaries
Net income (loss)	\$ (45,835)	\$ 2,127	\$ (2,127)	\$ (45,835)
Inventory valuation adjustment	—	25,101	—	25,101
RINs loss in excess of net obligation	—	—	—	—
Unrealized loss (gain) on derivatives	—	(12,034)	—	(12,034)
Acquisition and integration costs	4,781	—	513	5,294
Increase in (release of) tax valuation allowance (1)	(8,573)	—	—	(8,573)
Change in value of common stock warrants	(2,962)	—	—	(2,962)
Change in value of contingent consideration	—	(10,770)	—	(10,770)
Severance costs	105	—	—	105
Par's share of Laramie Energy's unrealized loss (gain) on derivatives (2)	—	—	17,278	17,278
Depreciation, depletion, and amortization	2,205	28,659	753	31,617
Interest expense and financing costs, net	18,246	10,152	108	28,506
Equity losses (earnings) from Laramie Energy, LLC	—	—	5,103	5,103
Equity losses from subsidiaries	17,170	—	(17,170)	—
Income tax expense (benefit)	—	10,621	(9,960)	661
Adjusted EBITDA (3)	<u>\$ (14,863)</u>	<u>\$ 53,856</u>	<u>\$ (5,502)</u>	<u>\$ 33,491</u>

(1) Included in Income tax benefit on our consolidated statements of operations.

(2) Included in Equity earnings (losses) from Laramie Energy, LLC on our consolidated statements of operations.

(3) For the years ended December 31, 2018 , 2017 , and 2016 , there was no impairment expense or (gain) loss on sale of assets.

Liquidity and Capital Resources

Our liquidity and capital requirements are primarily a function of our debt maturities and debt service requirements, fixed capacity payments and contractual obligations, capital expenditures, and working capital needs. Examples of working capital needs include purchases and sales of commodities and associated margin and collateral requirements, facility maintenance costs, and other costs such as payroll. Our primary sources of liquidity are cash flows from operations, cash on hand, amounts available under our credit agreements, and access to capital markets.

Our liquidity position as of December 31, 2018 was \$138.8 million and consisted of \$109.4 million at Par Petroleum, LLC and subsidiaries, \$29.1 million at Par Pacific Holdings, and \$0.3 million at all our other subsidiaries. Our consolidated liquidity position as of February 27, 2019 was approximately \$144.1 million. The change in our liquidity position from December 31, 2018 to February 27, 2019 was primarily attributable to the funding for and purchase of the Washington Refinery Acquisition, capital expenditures, and changes in working capital. Please read Note 22—Subsequent Events to our consolidated financial statements under Item 8 of this Form 10-K for more information on the Washington Refinery Acquisition and the funding secured through a \$250 million term loan facility with Goldman Sachs Bank USA (the "GS Term Loan") and a \$45 million term loan with Bank of Hawaii (the "Par Pacific Term Loan").

As of December 31, 2018, our total liquidity of \$138.8 million was comprised of a deferred payment arrangement with J. Aron, availability under or available borrowings under the ABL Credit Facility, and cash on hand of \$75.1 million. In addition, we utilize the Supply and Offtake Agreements with J. Aron to finance the majority of the inventory at our co-located Hawaii refinery and, following the Washington Refinery Acquisition in January 2019, utilize an intermediation agreement with Merrill Lynch to procure feedstocks for our Washington refinery. Generally, the primary uses of our capital resources have been in the operations of our refining and retail segments, payments related to acquisitions, to repay or refinance indebtedness, and cash capital contributions to Laramie Energy.

We believe our cash flows from operations and available capital resources will be sufficient to meet our current capital expenditures, working capital, and debt service requirements for the next 12 months. Additionally, we may seek to raise additional debt or equity capital to fund any other significant changes to our business or to refinance existing debt. We cannot offer any assurances that such capital will be available in sufficient amounts or at an acceptable cost.

We may from time to time seek to retire or purchase our 5.00% Convertible Senior Notes or our 7.75% Senior Secured Notes and, following the Washington Refinery Acquisition in January 2019, our GS Term Loan and our Par Pacific Term Loan through cash purchases and/or exchanges for equity securities, in open market purchases, privately negotiated transactions, or otherwise. Such repurchases or exchanges, if any, will depend on prevailing market conditions, our liquidity requirements, contractual restrictions, and other factors. The amounts involved may be material.

Rights Offering

On September 22, 2016, we issued approximately 4 million shares of our common stock to certain investors at a purchase price of \$12.25 per share (the "Rights Offering"). The gross proceeds from the Rights Offering were approximately \$49.9 million, before deducting expenses of approximately \$0.9 million, for net proceeds of approximately \$49.0 million. The net proceeds from the Rights Offering were used to repay all accrued and unpaid interest and a portion of the outstanding principal amount on our Bridge Notes.

Debt Activity

We had the following significant debt issuances and amendments during the years ended December 31, 2018, 2017, and 2016:

- On December 5, 2018, we amended the Supply and Offtake Agreements to account for additional processing capacity expected to be provided through the Hawaii Refinery Expansion. The December 5, 2018 amendment to the Supply and Offtake Agreements also (i) requires us to increase our margin requirements by an aggregate \$2.5 million by making certain additional margin payments on December 19, 2018, March 1, 2019, and June 3, 2019, and (ii) only allows dividends, payments, or other distributions with respect to any equity interests in Par Hawaii Refining, LLC ("PHR") in limited and restricted circumstances.
- On September 27, 2018, Mid Pac Petroleum, LLC, our wholly owned subsidiary, entered into the Mid Pac Term Loan with American Savings Bank, FSB, which provided a term loan of up to approximately \$1.5 million, the proceeds of which were received on and used for the October 18, 2018 purchase of retail property.

- On December 21, 2017, Par Petroleum, LLC and Par Petroleum Finance Corp., both our wholly owned subsidiaries, completed the issuance and sale of \$300 million in aggregate principal amount of 7.75% Senior Secured Notes due 2025 in a private placement under Rule 144A and Regulation S of the Securities Act. The net proceeds of \$289.2 million (net of financing costs and original issue discount of 1%) from the sale were used to repay our outstanding indebtedness under the Hawaii Retail Credit Facilities, the Wyoming Refining Credit Facilities, the Par Wyoming Holdings Credit Agreement, and the J. Aron Forward Sale and for general corporate purposes.
- On December 21, 2017, in connection with the issuance of the 7.75% Senior Secured Notes, the ABL Borrowers entered into the ABL Credit Facility dated as of December 21, 2017, with certain lenders and Bank of America, N.A., as administrative agent and collateral agent. The ABL Credit Facility provides for a revolving credit facility that provides for revolving loans and for the issuance of letters of credit (the “ABL Revolver”). On July 24, 2018, we amended the ABL Credit Facility to increase the maximum principal amount at any time outstanding of the ABL Revolver by \$10 million to \$85 million, subject to a borrowing base. The ABL Revolver had no outstanding balance and had a borrowing base of approximately \$54.7 million at December 31, 2018.
- On June 30, 2017, we fully repaid and terminated the Term Loan. We recorded debt extinguishment costs of approximately \$1.8 million related to unamortized deferred financing costs associated with the Term Loan in the year ended December 31, 2017.
- On July 14, 2016, in connection with the WRC Acquisition, Par Wyoming Holdings, LLC, our indirect wholly owned subsidiary, entered into the Par Wyoming Holdings Credit Agreement with certain lenders and Chambers Energy Management, LP, as agent, which provided for a single advance secured term loan to our subsidiary in the amount of \$65.0 million (the “Par Wyoming Holdings Term Loan”) at the closing of the WRC Acquisition. The proceeds of the Par Wyoming Holdings Term Loan were used to pay a portion of the consideration for the WRC Acquisition, to pay certain fees and closing costs, and for general corporate purposes. Upon issuance of the 7.75% Senior Secured Notes on December 21, 2017, we repaid in full and terminated the Par Wyoming Holdings Credit Agreement.
- On July 14, 2016, in connection with the WRC Acquisition, we assumed debt consisting of term loans of \$58.0 million and revolving loans of \$10.1 million under a Third Amended and Restated Loan Agreement dated as of April 30, 2015 (as amended, the “Wyoming Refining Credit Facilities”), with Bank of America, N.A. The Wyoming Refining Credit Facilities also provided for a revolving credit facility in the maximum principal amount at any time outstanding of \$30.0 million, subject to a borrowing base, which provides for revolving loans and for the issuance of letters of credit. Upon issuance of the 7.75% Senior Secured Notes on December 21, 2017, we repaid in full and terminated the Wyoming Refining Credit Facilities.
- On July 14, 2016, we issued approximately \$52.6 million in aggregate principal amount of the Bridge Notes in a private offering pursuant to the terms of a note purchase agreement (the “Note Purchase Agreement”) entered into among the purchasers of the Bridge Notes and us. The net proceeds from the sale of the Bridge Notes of \$50.0 million were used to fund a portion of the consideration for the WRC Acquisition. On September 22, 2016, we used the net proceeds from the Rights Offering to repay all accrued and unpaid interest and a portion of the outstanding principal amount on the Bridge Notes. The remaining \$3.1 million aggregate principal amount and \$0.3 million unpaid interest of the Bridge Notes was mandatorily converted into 272,733 shares of our common stock based on a conversion price of \$12.25 per share.
- On June 21, 2016 and June 27, 2016, we completed the issuance and sale of \$115.0 million in aggregate principal amount of the 5.00% Convertible Senior Notes in a private placement under Rule 144A (the “Convertible Notes Offering”). The Convertible Notes Offering included the exercise in full of an option to purchase an additional \$15 million in aggregate principal amount of the 5.00% Convertible Senior Notes granted to the initial purchasers. The net proceeds of \$111.6 million (net of original issue discount of 3%) from the sale of the 5.00% Convertible Senior Notes were used to finance a portion of the WRC Acquisition, to repay \$5 million in principal amount of the Term Loan, and for general corporate purposes.
- On December 17, 2015, HIE Retail, LLC (“HIE Retail”) and Mid Pac entered into the Hawaii Retail Credit Facilities in the form of a revolving credit facility up to \$5.0 million (“Hawaii Retail Revolving Credit Facilities”), which provided for revolving loans and for the issuance of letters of credit and term loans (“Hawaii Retail Term Loans”) in the aggregate principal amount of \$110 million. The proceeds of the Hawaii Retail Term Loans were used to repay existing indebtedness under HIE Retail and Mid Pac’s then existing credit agreements, to pay transaction fees and expenses, and to facilitate a cash distribution to us. Upon issuance of the 7.75% Senior Secured Notes on December 21, 2017, we repaid in full and terminated the Hawaii Retail Revolving Credit Facilities.
- As part of the May 8, 2017 amendment to the Supply and Offtake Agreements, we also entered into a \$30 million forward sale of certain monthly volumes of jet fuel to be delivered to J. Aron over the remaining amended term (“J. Aron Forward

Sale ”). The proceeds from the J. Aron Forward Sale were used to pay a portion of the outstanding balance on the Term Loan. Upon issuance of the 7.75% Senior Secured Notes on December 21, 2017 , we repaid in full and terminated the J. Aron Forward Sale .

Please read Note 12—Debt and Note 22—Subsequent Events to our consolidated financial statements under Item 8 of this Form 10-K for further discussion on our debt agreements and the financing activities associated with the Washington Refinery Acquisition .

Cash Flows

The following table summarizes cash activities for the years ended December 31, 2018 , 2017 , and 2016 (in thousands):

	Years Ended December 31,		
	2018	2017	2016
Net cash provided by (used in) operating activities	\$ 90,620	\$ 106,483	\$ (23,393)
Net cash used in investing activities	(175,821)	(31,673)	(286,243)
Net cash provided by (used in) financing activities	41,943	(4,751)	190,118

Net cash provided by operating activities was approximately \$90.6 million for the year ended December 31, 2018 , which resulted from net income of approximately \$39.4 million and non-cash charges to operations of approximately \$61.7 million , offset by net cash used for changes in operating assets and liabilities of approximately \$10.5 million . Net cash provided by operating activities was approximately \$106.5 million for the year ended December 31, 2017 , which resulted from net income of approximately \$72.6 million and non-cash charges to operations of approximately \$50.1 million , offset by net cash used for changes in operating assets and liabilities of approximately \$16.2 million . Net cash used in operating activities was approximately \$23.4 million for the year ended December 31, 2016 , which resulted from a net loss of approximately \$45.8 million and net cash used for changes in operating assets and liabilities of approximately \$19.2 million , offset by non-cash charges to operations of approximately \$41.6 million .

For the year ended December 31, 2018 , net cash used in investing activities was approximately \$175.8 million and primarily related to \$74.3 million for the Northwest Retail Acquisition , \$53.9 million for the Hawaii Refinery Expansion , and additions to property and equipment totaling approximately \$48.4 million . Net cash used in investing activities was approximately \$31.7 million for the year ended December 31, 2017 and was primarily related to additions to property and equipment totaling approximately \$31.7 million . Net cash used in investing activities was approximately \$286.2 million for the year ended December 31, 2016 and was primarily related to \$209.2 million for the WRC Acquisition, an investment in Laramie Energy of \$55.0 million , and additions to property and equipment totaling approximately \$24.8 million .

Net cash provided by financing activities for the year ended December 31, 2018 was approximately \$41.9 million and consisted primarily of proceeds from net repayments of borrowings and net borrowings on our deferred payment arrangement of \$27.3 million and the issuance of common stock totaling approximately \$19.3 million , offset by the payment of \$3.4 million in commitment and other fees related to the funding for the Washington Refinery Acquisition . Net cash used in financing activities for the year ended December 31, 2017 of approximately \$4.8 million consisted primarily of proceeds from net borrowings and net payments on our deferred payment arrangement of \$10.7 million , offset by deferred loan costs of \$10.1 million and payments for early termination of financing agreements of \$4.4 million . Net cash provided by financing activities for the year ended December 31, 2016 of approximately \$190.1 million consisted primarily of proceeds from net borrowings and net borrowings on our deferred payment arrangement of \$160.5 million and the sale of common stock totaling approximately \$49.0 million , offset by a contingent consideration settlement of \$12.0 million and deferred loan costs of \$6.9 million .

Capital Expenditures

Our capital expenditures, excluding acquisitions, for the year ended December 31, 2018 , totaled approximately \$48.4 million and were primarily related to the first phase of our diesel hydrotreater project at our Hawaii refinery and other capital projects and scheduled maintenance across our operating segments. Our capital expenditure budget for 2019 ranges from \$100 to \$110 million and primarily relates to the second phase of our diesel hydrotreater project to increase ultra-low sulfur distillate production capacity in our Hawaii refinery, the first phase of a project to allow for processing and storage of renewable fuels at our Washington refinery, equipment purchases and pre-engineering work in preparation for the 2020 turnarounds at our refineries, construction of the Tie-In connecting our SPM to the IES crude oil pipeline for Hawaii logistics, and scheduled maintenance and other expansion projects.

We also continue to seek strategic investments in business opportunities, but the amount and timing of those investments are not predictable.

Contractual Obligations

We have various contractual obligations and financial commitments in the normal course of our operations and financing activities. Contractual obligations include future cash payments required under existing contractual arrangements, such as debt and lease agreements. These obligations may result from both general financing activities and from commercial arrangements that are directly related to our operating activities. The following table summarizes our contractual obligations as of December 31, 2018. Cash obligations reflected in the table below are not discounted.

	Total	Less than 1 Year	1 - 3 Years	3 - 5 Years	More than 5 Years
	(in thousands)				
Long-term debt (including current portion)	\$ 416,466	\$ 33	\$ 115,070	\$ 76	\$ 301,287
Interest payments on debt	177,272	29,064	55,010	46,618	46,580
Operating leases	433,488	62,589	101,953	77,229	191,717
Capital leases	12,004	2,723	4,021	2,660	2,600
Purchase commitments	538,471	537,390	1,081	—	—

Long-Term Debt (including Current Portion). Long-term debt includes the scheduled principal payments related to our outstanding debt obligations and letters of credit. Please read Note 12—Debt to our consolidated financial statements under Item 8 of this Form 10-K for further discussion.

Interest Payments on Debt. Interest payments on debt represent estimated periodic interest payment obligations associated with our outstanding debt obligations using interest rates in effect as of December 31, 2018. Please read Note 12—Debt to our consolidated financial statements under Item 8 of this Form 10-K for further discussion.

Operating Leases. Operating leases include minimum lease payment obligations associated with certain retail sites, office space, and office equipment leases. Also included in operating leases are terminal and charter agreements associated with our logistics operations.

Capital Leases. Capital leases include minimum lease payment obligations associated with certain retail sites, vehicles, and information technology systems.

Purchase Commitments. Purchase commitments primarily consist of contracts executed as of December 31, 2018 for the purchase of crude oil for use at our refineries that are scheduled for delivery in 2019.

Commitments and Contingencies

Supply and Offtake Agreements. On June 1, 2015, we entered into several agreements with J. Aron to support the operations of our Hawaii refinery (the “Supply and Offtake Agreements”). On May 8, 2017, we and J. Aron amended the Supply and Offtake Agreements and extended the term through May 31, 2021 with a one-year extension option upon mutual agreement of the parties. The Supply and Offtake Agreements were amended and restated on December 21, 2017 in connection with the issuance of the 7.75% Senior Secured Notes and the entry into the ABL Credit Facility. On June 27, 2018, we and J. Aron amended the Supply and Offtake Agreements to increase the amount that we may defer under the deferred payment arrangement. On December 5, 2018, we amended the Supply and Offtake Agreements to account for additional processing capacity expected to be provided through the Hawaii Refinery Expansion. Please read Note 11—Inventory Financing Agreements to our consolidated financial statements under Item 8 of this Form 10-K for more information.

Environmental Matters. Our operations and the third-party oil and gas exploration and production operations in which we have a working interest are subject to extensive and periodically changing federal, state, and local environmental laws and regulations governing air emissions, wastewater discharges, and solid and hazardous waste management activities. Many of these laws and regulations are becoming increasingly stringent and the cost of compliance can be expected to increase over time. Our policy is to accrue environmental and clean-up related costs of a non-capital nature when it is probable that a liability has been incurred and the amount can be reasonably estimated. Such estimates may be subject to revision in the future as regulations and other conditions change.

Periodically, we receive communications from various federal, state, and local governmental authorities asserting violations of environmental laws and/or regulations. These governmental entities may also propose or assess fines or require corrective actions for these asserted violations. We intend to respond in a timely manner to all such communications and to take appropriate corrective action. We do not anticipate that any such matters currently asserted will have a material impact on our financial condition, results of operations, or cash flows.

Regulation of Greenhouse Gases

The EPA has begun regulating GHG under the CAA. New construction or material expansions that meet certain GHG emissions thresholds will likely require that, among other things, a GHG permit be issued in accordance with the federal CAA regulations and we will be required in connection with such permitting to undertake a technology review to determine appropriate controls to be implemented with the project in order to reduce GHG emissions.

Furthermore, the EPA is developing refinery-specific GHG regulations and performance standards that are expected to impose GHG emission limits and/or technology requirements. These control requirements may affect a wide range of refinery operations. Any such controls could result in material increased compliance costs, additional operating restrictions for our business, and an increase in cost of the products we produce, which could have a material adverse effect on our financial position, results of operations, and liquidity.

On September 29, 2015, the EPA announced a final rule updating standards that control toxic air emissions from petroleum refineries, addressing, among other things, flaring operations, fenceline air quality monitoring, and additional emission reductions from storage tanks and delayed coking units. Compliance with this rule has not had a material impact on our financial condition, results of operations, or cash flows to date.

In 2007, the State of Hawaii passed Act 234, which required that GHG emissions be rolled back on a statewide basis to 1990 levels by the year 2020. Although delayed, the Hawaii Department of Health has issued regulations that would require each major facility to reduce CO₂ emissions by 16% by 2020 relative to a calendar year 2010 baseline (the first year in which GHG emissions were reported to the EPA under 40 CFR Part 98). Those rules are pending final approval by the Hawaii State Government. The capacity of our co-located refinery in Hawaii to reduce fuel use and GHG emissions is limited. However, the state's pending regulation allows, and we anticipate our co-located Hawaii refinery will be able to demonstrate, that additional reductions are not cost-effective or necessary in light of the state's current GHG inventory and future year projections. The pending regulation allows for "partnering" with other facilities (principally power plants) which have already dramatically reduced greenhouse emissions or are on schedule to reduce CO₂ emissions in order to comply with the state's Renewable Portfolio Standards.

Fuel Standards

In 2007, the U.S. Congress passed the Energy Independence and Security Act ("EISA") which, among other things, set a target fuel economy standard of 35 miles per gallon for the combined fleet of cars and light trucks in the U.S. by model year 2020 and contained an expanded Renewable Fuel Standard (the "RFS2"). In August 2012, the EPA and National Highway Traffic Safety Administration ("NHTSA") jointly adopted regulations that establish an average industry fuel economy of 54.5 miles per gallon by model year 2025. On August 8, 2018, the EPA and NHTSA jointly proposed to revise existing fuel economy standards for model years 2021-2025 and to set standards for 2026 for the first time. The agencies have not yet issued a final rule, but they are expected to do so in 2019. Although the revised fuel economy standards are expected to be less stringent than the initial standards for model years 2021-2025, it is uncertain whether the revised standards will increase year over year. Higher fuel economy standards have the potential to reduce demand for our refined transportation fuel products.

Under EISA, the RFS2 requires an increasing amount of renewable fuel to be blended into the nation's transportation fuel supply, up to 36.0 billion gallons by 2022. In the near term, the RFS2 will be satisfied primarily with fuel ethanol blended into gasoline. We, and other refiners subject to the RFS, may meet the RFS requirements by blending the necessary volumes of renewable fuels produced by us or purchased from third parties. To the extent that refiners will not or cannot blend renewable fuels into the products they produce in the quantities required to satisfy their obligations under the RFS program, those refiners must purchase renewable credits, referred to as Renewable Identification Numbers ("RINs"), to maintain compliance. To the extent that we exceed the minimum volumetric requirements for blending of renewable fuels, we generate our own RINs for which we have the option of retaining the RINs for current or future RFS compliance or selling those RINs on the open market. The RFS2 may present production and logistics challenges for both the renewable fuels and petroleum refining and marketing industries in that we may have to enter into arrangements with other parties or purchase credits from the EPA to meet our obligations to use advanced biofuels, including biomass-based diesel and cellulosic biofuel, with potentially uncertain supplies of these new fuels.

In October 2010, the EPA issued a partial waiver decision under the federal CAA to allow for an increase in the amount of ethanol permitted to be blended into gasoline from 10% ("E10") to 15% ("E15") for 2007 and newer light duty motor vehicles. In January 2011, the EPA issued a second waiver for the use of E15 in vehicles model years 2001-2006. In 2019, EPA is expected

to conduct a rulemaking to allow year-round sales of E15. There are numerous issues, including state and federal regulatory issues, which need to be addressed before E15 can be marketed on a large scale for use in traditional gasoline engines; however, increased renewable fuel in the nation's transportation fuel supply could reduce demand for our refined products.

In March 2014, the EPA published a final Tier 3 gasoline standard that requires, among other things, that gasoline contain no more than 10 parts per million ("ppm") sulfur on an annual average basis and no more than 80 ppm sulfur on a per-gallon basis. The standard also lowers the allowable sulfur level in gasoline to 10 parts per million ("ppm") and also lowers the allowable benzene, aromatics, and olefins content of gasoline. The effective date for the new standard is January 1, 2017, however, approved small volume refineries have until January 1, 2020 to meet the standard. Our Hawaii refinery is required to comply with Tier 3 gasoline standards within 30 months of June 21, 2016, the date our Hawaii refinery was disqualified from small volume refinery status. On March 19, 2015, the EPA confirmed the small refinery status of our Wyoming refinery. The Par East facility of our Hawaii refinery, our Wyoming refinery, and our Washington refinery were all granted small refinery status by the EPA for 2017. The EPA is expected to make small refinery status determinations for 2018 in the first quarter of 2019.

Beginning on June 30, 2014, new sulfur standards for fuel oil used by marine vessels operating within 200 miles of the U.S. coastline (which includes the entire Hawaiian Island chain) was lowered from 10,000 ppm (1%) to 1,000 ppm (0.1%). The sulfur standards began at the Hawaii refinery and were phased in so that by January 1, 2015, they were to be fully aligned with the International Marine Organization ("IMO") standards and deadline. The more stringent standards apply universally to both U.S. and foreign flagged ships. Although the marine fuel regulations provided vessel operators with a few compliance options such as installation of on-board pollution controls and demonstration unavailability, many vessel operators will be forced to switch to a distillate fuel while operating within the Emission Control Area ("ECA"). Beyond the 200 mile ECA, large ocean vessels are still allowed to burn marine fuel with up to 3.5% sulfur. Our Hawaii refinery is capable of producing the 1% sulfur residual fuel oil that was previously required within the ECA. Although our Hawaii refinery remains in a position to supply vessels traveling to and through Hawaii, the market for 0.1% sulfur distillate fuel and 3.5% sulfur residual fuel is much more competitive.

In addition to U.S. fuels requirements, the IMO has also adopted newer standards that further reduce the global limit on sulfur content in maritime fuels to 0.5% beginning in 2020 ("IMO 2020"). Like the rest of the refining industry, we are focused on meeting these standards and may incur costs in producing lower-sulfur fuels.

There will be compliance costs and uncertainties regarding how we will comply with the various requirements contained in the EISA, IMO 2020, and other fuel-related regulations. We may experience a decrease in demand for refined petroleum products due to an increase in combined fleet mileage or due to refined petroleum products being replaced by renewable fuels.

Wyoming Refinery; Recent Acquisitions

Our Wyoming refinery is subject to a number of consent decrees, orders, and settlement agreements involving the EPA and/or the Wyoming Department of Environmental Quality, some of which date back to the late 1970s and several of which remain in effect, requiring further actions at the Wyoming refinery. Our recent acquisition of Par East in Hawaii and the Washington refinery acquisition will also subject us to additional environmental compliance costs. Please read Note 15—Commitments and Contingencies to our consolidated financial statements under Item 8 of this Form 10-K for more information.

Environmental Agreement

On September 25, 2013, Par Petroleum, LLC, Tesoro, and PHR entered into an Environmental Agreement ("Environmental Agreement"), which allocated responsibility for known and contingent environmental liabilities related to the acquisition of PHR, including the Consent Decree. Please read Note 15—Commitments and Contingencies to our consolidated financial statements under Item 8 and Legal Proceedings under Item 3 of this Form 10-K for more information.

Tesoro Earn-out Dispute. On June 17, 2013, a wholly owned subsidiary of Par entered into a membership interest purchase agreement with Tesoro, pursuant to which it purchased all of the issued and outstanding membership interests in PHR. The PHR acquisition was subject to an earn-out provision during the years 2014-2016, subject to, among other things, an annual earn-out cap of \$20 million. On March 22, 2018, Tesoro agreed to settle the earn-out dispute and release and discharge any related claims in exchange for our payment of \$10.5 million. Please read Note 15—Commitments and Contingencies to our consolidated financial statements under Item 8 of this Form 10-K for more information.

Bankruptcy Matters. We emerged from the reorganization of Delta Petroleum Corporation ("Delta") on August 31, 2012 ("Emergence Date") when the plan of reorganization ("Plan") was consummated. Please read "Item 1. — Business — Bankruptcy and Plan of Reorganization" of this Form 10-K for more information.

Operating Leases. We have various cancelable and noncancelable operating leases related to land, vehicles, office, and retail facilities and other facilities used in the storage, transportation, and sale of crude oil and refined products. The majority of

the future lease payments relate to retail stations and facilities used in the storage, transportation, and sale of crude oil and refined products. We have operating leases for most of our retail stations with an average term of 8 years remaining and generally containing renewal options and escalation clauses. Leases for facilities used in the storage, transportation, and sale of crude oil and refined products have various expiration dates extending to 2044 .

In addition, within our corporate and other and logistics segments, we have various agreements to lease storage facilities, towboats, barges, and other equipment. These leasing agreements have been classified as operating leases for financial reporting purposes and the related rental fees are charged to expense over the lease term as they become payable. The leases generally range in duration of five years or less and contain lease renewal options at fair value.

Minimum annual lease payments extending to 2044 for operating leases to which we are legally obligated and having initial or remaining noncancelable lease terms in excess of one year are as follows (in thousands):

2019	\$	62,589
2020		62,132
2021		39,821
2022		38,402
2023		38,827
Thereafter		191,717
Total minimum rental payments	\$	433,488

Capital Leases. We have capital lease obligations related primarily to the leases of 17 retail stations. Most leases include one or more options to renew, with renewal terms that can extend the lease term from one to 15 years or more. Certain leases include escalation clauses and/or purchase options. Minimum annual lease payments including interest, for capital leases are as follows (in thousands):

2019	\$	2,723
2020		2,264
2021		1,757
2022		1,512
2023		1,148
Thereafter		2,600
Total minimum lease payments	\$	12,004
Less amount representing interest		1,865
Total minimum rental payments	\$	10,139

Off-Balance Sheet Arrangements

Other than our operating leases, we have no material off-balance sheet arrangements as of December 31, 2018 that are reasonably likely to have a current or future material affect on our financial condition, results of operations, or cash flows.

Critical Accounting Policies and Estimates

The discussion and analysis of our financial condition and results of operations were based on the consolidated financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of these consolidated financial statements required us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues, and expenses. Our significant accounting policies are described in Note 2—Summary of Significant Accounting Policies to our audited consolidated financial statements under Item 8 of this Form 10-K. We have identified certain of these policies as being of particular importance to the portrayal of our financial position and results of operations and which require the application of significant judgment by management. We analyze our estimates on a periodic basis, including those related to fair value, impairments, natural gas and crude oil reserves, bad debts, natural gas and oil properties, income taxes, derivatives, contingencies, and litigation and base our estimates on historical experience and various other assumptions that we believe are reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or conditions. We believe the following critical accounting policies affect our more significant judgments and estimates used in the preparation of our consolidated financial statements.

Inventory

Inventories are stated at the lower of cost or net realizable value using the first-in, first-out accounting method. We value merchandise along with spare parts, materials, and supplies at average cost. Estimating the net realizable value of our inventory requires management to make assumptions about the timing of sales and the expected proceeds that will be realized for the sales.

Our refining segment acquires all of its crude oil utilized at the Hawaii refinery from J. Aron under procurement contracts. The crude oil remains in the legal title of J. Aron and is stored in our storage tanks governed by a storage agreement. Legal title to the crude oil passes to us at the tank outlet. After processing, J. Aron takes title to the refined products stored in our storage tanks until they are sold to our retail locations or to third parties. We record the inventory owned by J. Aron on our behalf as inventory with a corresponding accrued liability on our balance sheet because we maintain the risk of loss until the refined products are sold to third parties and we have an obligation to repurchase it. The valuation of our repurchase obligation requires that we make estimates of the prices and differentials assuming settlement at the end of the reporting period. Please read Note 11—Inventory Financing Agreements to our consolidated financial statements under Item 8 of this Form 10-K for additional information.

Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. In estimating fair value, we use discounted cash flow projections, recent comparable market transactions, if available, or quoted prices. We consider assumptions that third parties would make in estimating fair value, including the highest and best use of the asset. The assumptions used by another party could differ significantly from our assumptions.

We classify fair value balances based on the classification of the inputs used to calculate the fair value of a transaction. The inputs used to measure fair value have been placed in a hierarchy based on priority. The hierarchy gives the highest priority to unadjusted, readily observable quoted prices in active markets for identical assets or liabilities (Level 1 measurement) and the lowest priority to unobservable inputs (Level 3 measurement). Please read Note 14—Fair Value Measurements to our consolidated financial statements under Item 8 of this Form 10-K for additional information.

We recognize assets acquired and liabilities assumed in business combinations at their estimated fair values as of the date of acquisition. Significant judgment is required in estimating the fair value of assets acquired. We obtain the assistance of third-party valuation specialists in estimating fair values of tangible and intangible assets based on available historical information and on expectations and assumptions about the future, considering the perspective of marketplace participants. These valuation methods require management to make estimates and assumptions regarding characteristics of the acquired property and future revenues and expenses. Changes in these estimates and assumptions would result in different amounts allocated to the related assets and liabilities.

Impairment of Goodwill and Long-lived Assets

We assess the recoverability of the carrying value of goodwill during the fourth quarter of each year or whenever events or changes in circumstances indicate that the carrying amount of the goodwill of a reporting unit may not be fully recoverable. We first assess qualitative factors to determine whether it is more likely than not that the fair value of the reporting unit is less than its carrying value. If the qualitative assessment indicates that it is more likely than not that the carrying value of a reporting unit exceeds its estimated fair value, a quantitative test is required. Under the quantitative test, we compare the carrying value of the net assets of the reporting unit to the estimated fair value of the reporting unit. If the carrying value exceeds the estimated fair value of the reporting unit, an impairment loss is recorded. The fair value of a reporting unit is determined using the income approach and the market approach. Under the income approach, we estimate the present value of expected future cash flows using a market participant discount rate. Under the market approach, we estimate fair value using observable multiples for comparable companies within our industry. These valuation methods require us to make significant estimates and assumptions regarding future cash flows, capital projects, commodity prices, long-term growth rates, and discount rates.

We review property, plant, and equipment and other long-lived assets whenever events or changes in business circumstances indicate the carrying value of the assets may not be recoverable. Impairment is indicated when the undiscounted cash flows estimated to be generated by those assets are less than the assets' carrying value. If this occurs, an impairment loss is recognized for the difference between the fair value and carrying value. The fair value of long-lived assets is determined using the income approach.

Derivatives and Other Financial Instruments

We are exposed to commodity price risk related to crude oil and refined products. We manage this exposure through the use of various derivative commodity instruments. These instruments include exchange traded futures and over-the-counter swaps,

forwards, and options.

For our forward contracts that are derivatives, we have elected the normal purchase normal sale exclusion, as it is our policy to fulfill or accept the physical delivery of the product and we will not net settle. Therefore, we did not recognize the unrealized gains or losses related to these contracts in our consolidated financial statements. We apply the accrual method of accounting to contracts qualifying for the normal purchase and sale exemption.

All derivative instruments not designated as normal purchases or sales are recorded in the balance sheet as either assets or liabilities measured at their fair values. Changes in the fair value of these derivative instruments are recognized currently in earnings. We have not designated any derivative instruments as cash flow or fair value hedges and, therefore, do not apply hedge accounting treatment.

In addition, we may have other financial instruments, such as warrants or embedded debt features, that may be classified as liabilities when either (a) the holders possess rights to net cash settlement, (b) physical or net equity settlement is not in our control, or (c) the instruments contain other provisions that cause us to conclude that they are not indexed to our equity. We have accounted for our obligation to repurchase crude oil and refined products from J.Aron at the termination of the Supply and Offtake Agreements as an embedded derivative. Additionally, we have determined that the redemption option and the related make-whole premium on our 5.00% Convertible Senior Notes represent an embedded derivative. These liabilities were initially recorded at fair value and subsequently adjusted to fair value at the end of each reporting period through earnings.

Asset Retirement Obligations

We record asset retirement obligations (“AROs”) at fair value in the period in which we have a legal obligation, whether by government action or contractual arrangement, to incur these costs and can make a reasonable estimate of the fair value of the liability. Our AROs arise from our refining, retail, and logistics operations, as well as plugging and abandonment of wells within our natural gas and crude oil operations. AROs are calculated based on the present value of the estimated removal and other closure costs using our credit-adjusted risk-free rate. When the liability is initially recorded, we capitalize the cost by increasing the book value of the related long-lived tangible asset. The liability is accreted to its estimated settlement value and the related capitalized cost is depreciated over the asset’s useful life. Both expenses are recorded in Depreciation, depletion, and amortization in the consolidated statements of operations. The difference between the settlement amount and the recorded liability is recorded as a gain or loss on asset disposals in our consolidated statements of operations. We estimate settlement dates by considering our past practice, industry practice, management’s intent, and estimated economic lives.

We cannot currently estimate the fair value for certain AROs primarily because we cannot estimate settlement dates (or ranges of dates) associated with these assets. These AROs include hazardous materials disposal (such as petroleum manufacturing by-products, chemical catalysts, and sealed insulation material containing asbestos) and removal or dismantlement requirements associated with the closure of our refining facilities, terminal facilities, or pipelines, including the demolition or removal of certain major processing units, buildings, tanks, pipelines, or other equipment.

Income Taxes

We use the asset and liability method of accounting for income taxes. Under the asset and liability method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and net operating loss (“NOLs”) and tax credit carry forwards. The realizability of deferred tax assets is evaluated quarterly based on a “more likely than not” standard and, to the extent this threshold is not met, a valuation allowance is recorded. In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Management considers the scheduled reversal of deferred tax liabilities, projected future results of operations, and tax planning strategies in making this assessment.

Based upon the level of historical taxable income, significant book losses during the prior periods, and projections for future results of operations over the periods in which the deferred tax assets are deductible, among other factors, management concluded that we did not meet the “more likely than not” requirement in order to recognize deferred tax assets and therefore, a valuation allowance has been recorded for substantially all of our net deferred tax assets at December 31, 2018 and 2017.

Environmental Matters

We capitalize environmental expenditures that extend the life or increase the capacity of facilities as well as expenditures that prevent environmental contamination. We expense costs that relate to an existing condition caused by past operations and that

do not contribute to current or future revenue generation. We record liabilities when environmental assessments and/or remedial efforts are probable and can be reasonably estimated. Cost estimates are based on the expected timing and extent of remedial actions required by governing agencies, experience gained from similar sites for which environmental assessments or remediation have been completed, and the amount of our anticipated liability considering the proportional liability and financial abilities of other responsible parties. Usually, the timing of these accruals coincides with the completion of a feasibility study or our commitment to a formal plan of action. Estimated liabilities are not discounted to present value and are presented within Other liabilities on our consolidated balance sheets. Environmental expenses are recorded in Operating expenses on our consolidated statements of operations.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Commodity Price Risk

Our earnings, cash flow, and liquidity are significantly affected by commodity price volatility. Our Revenues fluctuate with refined product prices and our Cost of revenues (excluding depreciation) fluctuates with movements in crude oil and feedstock prices. Assuming all other factors remain constant, a \$1 per barrel change in average gross refining margins, based on our throughput of 93 Mbpd for the fourth quarter of 2018, would change annualized operating income by approximately \$33.4 million. Total throughput is expected to increase by approximately 80 Mbpd in 2019 as a result of the Hawaii Refinery Expansion and Washington Refinery Acquisition. This analysis may differ from actual results.

In order to manage commodity price risks, we utilize exchange traded futures, options, and over-the-counter (“OTC”) swaps to manage commodity price risks associated with:

- the price for which we sell our refined products;
- the price we pay for crude oil and other feedstocks;
- our crude oil and refined products inventory; and
- our fuel requirements for our refineries.

We are required under the Supply and Offtake Agreements with J.Aron to hedge the time spread between the period of crude oil cargo pricing and the month of delivery for certain crude oil purchases. We manage this exposure by entering into swaps with J.Aron. Please read Note 11—Inventory Financing Agreements to our consolidated financial statements under Item 8 of this Form 10-K for more information.

All of our futures and OTC swaps are executed to economically hedge our physical commodity purchases, sales, and inventory. Our open futures and OTC swaps expire at various dates through March 2019. At December 31, 2018, these open commodity derivative contracts represent (in thousands of barrels):

Contract type	Long	Short	Net
Futures	305	(26)	279
Swaps	300	(804)	(504)
Total	605	(830)	(225)

Based on our net open positions at December 31, 2018, a \$1 change in the price of crude oil, assuming all other factors remain constant, would result in \$225 thousand change to the fair value of our derivative instruments and Cost of revenues (excluding depreciation).

Our predominant variable operating cost is the cost of fuel consumed in the refining process, which is included in Cost of revenues (excluding depreciation) on our consolidated statements of operations. We consumed approximately 75 Mbpd of crude oil during the refining process at our Hawaii refinery in 2018. With the additions of the Hawaii Refinery Expansion and the Washington Refinery, and assuming normal operating conditions, we expect to increase this consumption by approximately 80 Mbpd. Historically, we have internally consumed approximately 3% of this throughput in the refining process which is accounted for as a fuel cost. At December 31, 2018, there are no outstanding economic hedges for internally consumed fuel cost at our refineries.

Compliance Program Price Risk

We are exposed to market risks related to the volatility in the price of RINs required to comply with the Renewable Fuel Standard. Our overall RINs obligation is based on a percentage of our domestic shipments of on-road fuels as established by the EPA. To the degree we are unable to blend the required amount of biofuels to satisfy our RINs obligation, we must purchase RINs on the open market. To mitigate the impact of this risk on our results of operations and cash flows, we may purchase RINs when the price of these instruments is deemed favorable. Some of these contracts are derivative instruments, however, we elect the normal purchases normal sales exception and do not record these contracts at their fair values.

Interest Rate Risk

As of December 31, 2018, we had no outstanding debt that was subject to floating interest rates. We had interest rate exposure in connection with our liability under the J. Aron Supply and Offtake Agreements for which we pay a charge based on three-month LIBOR. Historically, an increase of 1% in the variable rate on our indebtedness, after considering the instruments subject to minimum interest rates, would result in an increase to our Cost of revenues (excluding depreciation) and Interest expense and financing costs, net of approximately \$3.1 million and \$0.6 million per year, respectively. In January 2019, we entered into a \$250.0 million term loan with Goldman Sachs Bank USA (the “GS Term Loan”) and a \$45.0 million term loan with the Bank of Hawaii (the “Par Pacific Term Loan”) to fund the purchase of the Washington Refinery Acquisition. Additionally, upon closing the Washington Refinery Acquisition on January 11, 2019, we assumed an inventory intermediation facility with Merrill Lynch (the “Washington Refinery Intermediation Agreement”). Our liability under the two term loans and the Washington Refinery Intermediation Agreement is subject to floating interest rates. Please read Note 22—Subsequent Events to our consolidated financial statements under Item 8 of this Form 10-K for more information.

We utilize interest rate swaps, interest rate caps, interest rate collars, or other similar contracts to manage our interest rate risk. As of December 31, 2018, we had locked in an average fixed rate of 0.97% in exchange for a floating interest rate indexed to the three-month LIBOR on an aggregate notional amount of \$100 million. The interest rate swap matured in February 2019.

Credit Risk

We are subject to risk of losses resulting from nonpayment or nonperformance by our counterparties. We will continue to closely monitor the creditworthiness of customers to whom we grant credit and establish credit limits in accordance with our credit policy.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The consolidated financial statements and schedule required by this item are set forth beginning on page F-1.

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURES

None.

Item 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Disclosure controls and procedures are designed with the objective of ensuring that all information required to be disclosed in our reports filed under the Securities Exchange Act of 1934, as amended (“Exchange Act”), such as this report, is recorded, processed, summarized, and reported within the time periods specified by the SEC. In connection with the preparation of this Annual Report on Form 10-K, as of December 31, 2018, an evaluation was performed under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act). Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that these disclosure controls and procedures were effective as of December 31, 2018.

Changes in Internal Control over Financial Reporting

There were no changes during the quarter ended December 31, 2018 in our internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

MANAGEMENT’S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The Company’s management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934). The Company’s internal control system was designed to provide reasonable assurance to the Company’s management and Board of Directors regarding the reliability of financial reporting and the preparation and fair presentation of published financial statements. All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

The Company’s management assessed the effectiveness of the Company’s internal control over financial reporting as of December 31, 2018 . In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control—Integrated Framework (2013). Based on our assessment we believe that, as of December 31, 2018 , the Company’s internal control over financial reporting is effective based on those criteria.

Deloitte & Touche LLP, the Company’s independent registered public accounting firm that audited the Company’s financial statements included in this Annual Report on Form 10-K, has issued an audit report on the effectiveness of the Company’s internal control over financial reporting as of December 31, 2018 , which is included herein.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of
Par Pacific Holdings, Inc.
Houston, Texas

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Par Pacific Holdings, Inc. and subsidiaries (the “Company”) as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2018 of the Company and our report dated March 11, 2019 expressed an unqualified opinion on those financial statements.

Basis for Opinion

The Company’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 Management’s 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 are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. 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, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (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.

/s/ DELOITTE & TOUCHE LLP

Houston, Texas
March 11, 2019

Item 9B. OTHER INFORMATION

None.

PART III**Item 10. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE**

The information required by this item is incorporated in this Annual Report on Form 10-K by reference to our definitive proxy statement or an amendment to this Annual Report on Form 10-K to be filed with the Securities and Exchange Commission not later than 120 days after the end of the fiscal year ended December 31, 2018 .

Item 11. EXECUTIVE COMPENSATION

The information required by this item is incorporated in this Annual Report on Form 10-K by reference to our definitive proxy statement or an amendment to this Annual Report on Form 10-K to be filed with the Securities and Exchange Commission not later than 120 days after the end of the fiscal year ended December 31, 2018 .

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this item is incorporated in this Annual Report on Form 10-K by reference to our definitive proxy statement or an amendment to this Annual Report on Form 10-K to be filed with the Securities and Exchange Commission not later than 120 days after the close of our fiscal year ended December 31, 2018 .

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

The information required by this item is incorporated in this Annual Report on Form 10-K by reference to our definitive proxy statement or an amendment to this Annual Report on Form 10-K to be filed with the Securities and Exchange Commission not later than 120 days after the end of the fiscal year ended December 31, 2018 .

Item 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this item is incorporated in this Annual Report on Form 10-K by reference to our definitive proxy statement or an amendment to this Annual Report on Form 10-K to be filed with the Securities and Exchange Commission not later than 120 days after the end of the fiscal year ended December 31, 2018 .

PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this report:

- (1) Consolidated Financial Statements (Included under Item 8). The Index to the Consolidated Financial Statements is included on page [E-1](#) of this annual report on Form 10-K and is incorporated herein by reference.
- (2) Financial Statement Schedules

Schedule I – Condensed Financial Information of Registrant

(b) Index to Exhibits

- 2.1 [Third Amended Joint Chapter 11 Plan of Reorganization of Delta Petroleum Corporation and Its Debtor Affiliates dated August 16, 2012, Incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K filed on September 7, 2012.**](#)
- 2.2 [Contribution Agreement, dated as of June 4, 2012, among Piceance Energy, LLC, Laramie Energy, LLC and the Company. Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on June 8, 2012.**](#)
- 2.3 [Membership Interest Purchase Agreement dated as of June 17, 2013, by and among Tesoro Corporation, Tesoro Hawaii, LLC and Hawaii Pacific Energy, LLC Incorporated by reference to Exhibit 2.4 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2013, filed on August 14, 2013.**](#)
- 2.4 [Agreement and Plan of Merger dated as of June 2, 2014, by and among the Company, Bogey, Inc., Koko'oha Investments, Inc., and Bill D. Mills, in his capacity as the Shareholders' Representative. Incorporated by reference to Exhibit 2.5 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2014, filed on August 11, 2014.**](#)
- 2.5 [Amendment of Agreement and Plan of Merger dated as of September 9, 2014, by and among the Company, Bogey, Inc., Koko'oha Investments, Inc. and Bill D. Mills, in his capacity as the Shareholders' Representative. Incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on September 10, 2014.**](#)
- 2.6 [Second Amendment of Agreement and Plan of Merger dated as of December 31, 2014, by and among Par Petroleum Corporation, Bogey, Inc., Koko'oha Investments, Inc. and Bill D. Mills, in his capacity as the Shareholder's Representative. Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on January 7, 2015.**](#)
- 2.7 [Third Amendment to Agreement and Plan of Merger dated as of March 31, 2015, by and among the Company, Bogey, Inc., Koko'oha Investments, Inc. and Bill D. Mills, in his capacity as the Shareholders' Representative. Incorporated by reference to Exhibit 2.4 to the Company's Current Report on Form 8-K filed on April 2, 2015.**](#)
- 2.8 [Unit Purchase Agreement, dated as of June 13, 2016, between Par Wyoming, LLC and Black Elk Refining, LLC. Incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K filed on June 15, 2016.**](#)
- 2.9 [First Amendment to Unit Purchase Agreement dated as of July 14, 2016, between Par Wyoming, LLC and Black Elk Refining, LLC. Incorporated by reference to Exhibit 2.2 to the Company's Current Report on Form 8-K filed on July 15, 2016.**](#)
- 2.10 [Purchase and Sale Agreement dated as of November 26, 2018, among Par Petroleum, LLC, TrailStone NA Oil & Refining Holdings, LLC, and solely for certain purposes specified therein, the Company. Incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K/A filed on November 30, 2018.**#](#)
- 2.11 [Amendment No. 1 to Purchase and Sale Agreement dated as of January 11, 2019, among Par Petroleum, LLC, TrailStone NA Oil & Refining Holdings, LLC and Par Pacific Holdings, Inc. Incorporated by reference to Exhibit 2.2 to the Company's Current Report on Form 8-K filed on January 14, 2019.](#)
- 3.1 [Restated Certificate of Incorporation of the Company dated October 20, 2015. Incorporated by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K filed on October 20, 2015.](#)

- 3.2 [Second Amended and Restated Bylaws of the Company dated October 20, 2015. Incorporated by reference to Exhibit 3.3 to the Company's Current Report on Form 8-K filed on October 20, 2015.](#)
- 4.1 [Form of the Company's Common Stock Certificate. Incorporated by reference to Exhibit 4.1 to the Company's Annual Report on Form 10-K filed on March 31, 2014.](#)
- 4.2 [Registration Rights Agreement effective as of August 31, 2012, by and among the Company, Zell Credit Opportunities Master Fund, L.P., Waterstone Capital Management, L.P., Pandora Select Partners, LP, Iam Mini-Fund 14 Limited, Whitebox Multi-Strategy Partners, LP, Whitebox Credit Arbitrage Partners, LP, HFR RVA Combined Master Trust, Whitebox Concentrated Convertible Arbitrage Partners, LP and Whitebox Asymmetric Partners, LP. Incorporated by reference to Exhibit 4.3 to the Company's Current Report on Form 8-K filed on September 7, 2012.](#)
- 4.3 [First Amendment to Registration Rights Agreement dated as of December 19, 2018, by and among the Company and the holders party thereto. Incorporated by reference to Exhibit 4.3 to the Company's registration statement on Form S-3 filed on December 21, 2018.](#)
- 4.4 [Warrant Issuance Agreement dated as of August 31, 2012, by and among the Company and WB Delta, Ltd., Waterstone Offshore ER Fund, Ltd., Prime Capital Master SPC, Waterstone Market Neutral MAC51, Ltd., Waterstone Market Neutral Master Fund, Ltd., Waterstone MF Fund, Ltd., Nomura Waterstone Market Neutral Fund, ZCOF Par Petroleum Holdings, L.L.C. and Highbridge International, LLC. Incorporated by reference to Exhibit 4.4 to the Company's Current Report on Form 8-K filed on September 7, 2012.](#)
- 4.5 [Form of Common Stock Purchase Warrant dated as of June 4, 2012. Incorporated by reference to Exhibit 4.5 to the Company's Current Report on Form 8-K filed on September 7, 2012.](#)
- 4.6 [Par Pacific Holdings, Inc. Amended and Restated 2012 Long Term Incentive Plan. Incorporated by reference to Appendix A to the Company's Proxy Statement on Schedule 14A filed on April 21, 2016.****](#)
- 4.7 [Par Pacific Holdings, Inc. Second Amended and Restated 2012 Long Term Incentive Plan. Incorporated by reference to Exhibit 4.1 to the Company's registration statement on Form S-8 filed on May 18, 2018.****](#)
- 4.8 [Par Pacific Holdings, Inc. 2018 Employee Stock Purchase Plan. Incorporated by reference to Exhibit 4.2 to the Company's Registration Statement on Form S-8 filed on May 18, 2018.****](#)
- 4.9 [Registration Rights Agreement dated as of September 25, 2013, by and among the Company and the Purchasers party thereto. Incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on September 27, 2013.](#)
- 4.10 [Stockholders Agreement dated April 10, 2015. Incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on April 13, 2015.](#)
- 4.11 [Registration Rights Agreement, dated June 21, 2016, between Par Pacific Holdings, Inc. and Merrill Lynch, Pierce, Fenner & Smith Incorporated, as representative of the Initial Purchasers. Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on June 22, 2016.](#)
- 4.12 [Registration Rights Agreement dated as of July 14, 2016, by and among Par Pacific Holdings, Inc. and the purchasers party thereto. Incorporated by Reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on July 15, 2016.](#)
- 4.13 [First Amendment to Registration Rights Agreement dated as of September 27, 2016, by and among the Company and the purchasers party thereof. Incorporated by reference to Exhibit 4.14 to the Company's Quarterly Report on Form 10-Q filed on November 4, 2016.](#)
- 4.14 [Second Amendment to Registration Rights Agreement dated as of September 30, 2016, by and among the Company and the holders party thereto. Incorporated by reference to Exhibit 4.15 to the Company's Quarterly Report on Form 10-Q filed on November 4, 2016.](#)
- 4.15 [Third Amendment to Registration Rights Agreement dated as of October 7, 2016, by and among the Company and the holders party thereto. Incorporated by reference to Exhibit 4.16 to the Company's Quarterly Report on Form 10-Q filed on November 4, 2016.](#)
- 4.16 [Fourth Amendment to Registration Rights Agreement dated as of October 14, 2016, by and among the Company and the holders party thereto. Incorporated by reference to Exhibit 4.17 to the Company's Quarterly Report on Form 10-Q filed on November 4, 2016.](#)
- 4.17 [Fifth Amendment to Registration Rights Agreement dated as of October 21, 2016, by and among the Company and the holders party thereto. Incorporated by reference to Exhibit 4.18 to the Company's Quarterly Report on Form 10-Q filed on November 4, 2016.](#)

- 4.18 [Sixth Amendment to Registration Rights Agreement dated as of October 28, 2016 by and among the Company and the holders party thereto. Incorporated by reference to Exhibit 4.19 to the Company's Quarterly Report on Form 10-Q filed on November 4, 2016.](#)
- 4.19 [Indenture, dated June 21, 2016, between Par Pacific Holdings, Inc. and Wilmington Trust, National Association, as Trustee. Incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on June 22, 2016.](#)
- 4.20 [Indenture, dated December 21, 2017, among Par Petroleum, LLC, Par Petroleum Finance Corp., the Guarantors \(as defined therein\), and Wilmington Trust, National Association, as Trustee and Collateral Trustee. Incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on December 22, 2017.](#)
- 4.21 [First Supplemental Indenture, dated November 20, 2018, among Par Petroleum, LLC, Par Petroleum Finance Corp., the Guarantors \(as defined therein\), and Wilmington Trust, National Association, as Trustee. Incorporated by reference to Exhibit 4.21 to the Company's registration statement on Form S-3 filed on December 21, 2018.](#)
- 4.22 [Second Supplemental Indenture, dated January 11, 2019, among Par Tacoma, LLC \(f/k/a TrailStone NA Asset Finance I, LLC\), U.S. Oil & Refining Co., McChord Pipeline Co., Par Petroleum, LLC, Par Petroleum Finance Corp., Par Pacific Holdings, Inc., the other guarantors party thereto, and Wilmington Trust, National Association. Incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K filed on January 14, 2019.](#)
- 4.23 [Registration Rights Agreement dated as of December 19, 2018, by and between the Company and IES Downstream, LLC. Incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on December 20, 2018.](#)
- 4.24 [Registration Rights Agreement dated as of January 11, 2019, by and between the Company and TrailStone NA Oil & Refining Holdings, LLC. Incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on January 14, 2019.](#)
- 10.1 [Loan and Security Agreement dated as of December 21, 2017, among Par Petroleum, LLC, Par Hawaii, Inc, Mid Pac Petroleum, LLC, HIE Retail, LLC, Hermes Consolidated, LLC, Wyoming Pipeline Company, LLC, and the other members party thereto, the financial institutions party thereto, and Bank of America, N.A., as administrative agent. Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on December 22, 2017.](#)
- 10.2 [Fourth Amended and Restated Limited Liability Company Agreement of Laramie Energy, LLC, dated as of October 18, 2018, by and among Par Piceance Energy Equity LLC and the other members party thereto. Incorporated by reference to Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q filed on November 7, 2018.](#)
- 10.3 [Credit Agreement dated as of June 4, 2012 among Piceance Energy, LLC, the financial institutions party thereto, JPMorgan Chase Bank, N.A., as administrative agent and Wells Fargo Bank, National Association, as syndication agent. Incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on September 7, 2012.](#)
- 10.4 [First Amendment to Credit Agreement dated August 31, 2012, by and among Piceance Energy, LLC, the financial institutions party thereto and JPMorgan Chase Bank, N.A. Incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed on September 7, 2012.](#)
- 10.5 [Delta Petroleum General Recovery Trust Agreement dated August 27, 2012, by and among the Company, DPCA LLC, Delta Exploration Company, Inc., Delta Pipeline, LLC, DLC, Inc., CEC, Inc., Castle Texas Production Limited, Partnership, Amber Resources Company of Colorado, Castle Exploration Company, Inc. and John T. Young. Incorporated by reference to Exhibit 10.6 to the Company's Current Report on Form 8-K filed on September 7, 2012.](#)
- 10.6 [Pledge Agreement dated August 31, 2012, by Par Piceance Energy Equity LLC in favor of Jefferies Finance LLC. Incorporated by reference to Exhibit 10.7 to the Company's Current Report on Form 8-K filed on September 7, 2012.](#)
- 10.7 [Intercreditor Agreement dated August 31, 2012, by and among JP Morgan Chase Bank, N.A., as administrative agent for the First Priority Secured Parties \(as defined therein\), Jefferies Finance LLC, as administrative agent for the Second Priority Secured Parties \(as defined therein\), the Company and Par Piceance Energy Equity LLC. Incorporated by reference to Exhibit 10.8 to the Company's Current Report on Form 8-K filed on September 7, 2012.](#)
- 10.8 [Pledge and Security Agreement, dated August 31, 2012, by the Company and certain of its subsidiaries in favor of Jefferies Finance LLC. Incorporated by reference to Exhibit 10.9 to the Company's Current Report on Form 8-K filed on September 7, 2012.](#)
- 10.9 [Form of Indemnification Agreement between the Company and its Directors and Executive Officers. Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on October 19, 2012.****](#)

- 10.10 [Letter Agreement dated as of September 17, 2013 but effective as of January 1, 2013, by and between Equity Group Investments and the Company. Incorporated by reference to Exhibit 10.17 to the Company's Quarterly Report on Form 10-Q filed on November 14, 2013.](#)
- 10.11 [Environmental Agreement dated as of September 25, 2013, by and among Tesoro Corporation, Tesoro Hawaii, LLC and Hawaii Pacific Energy, LLC. Incorporated by reference to Exhibit 10.16 to the Company's Quarterly Report on Form 10-Q filed on November 14, 2013.](#)
- 10.12 [Employment Offer Letter with William Monteleone dated September 25, 2013. Incorporated by reference to Exhibit 10.43 to the Company's Amendment No. 3 to Annual Report on Form 10-K/A filed on July 2, 2014.****](#)
- 10.13 [Award Notice of Restricted Stock with William Monteleone dated December 31, 2012. Incorporated by reference to Exhibit 10.46 to the Company's Amendment No. 3 to Annual Report on Form 10-K/A filed on July 2, 2014.****](#)
- 10.14 [Award Notice of Restricted Stock with William Monteleone dated September 25, 2013. Incorporated by reference to Exhibit 10.47 to the Company's Amendment No. 3 to Annual Report on Form 10-K/A filed on July 2, 2014.****](#)
- 10.15 [Employment Offer Letter with Joseph Israel dated December 12, 2014. Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on December 17, 2014.****](#)
- 10.16 [Award Notice of Restricted Stock with Joseph Israel dated January 5, 2015. Incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on January 7, 2015.****](#)
- 10.17 [Nonstatutory Stock Option Agreement with Joseph Israel dated January 5, 2015. Incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on January 7, 2015.****](#)
- 10.18 [Employment Offer Letter with James Matthew Vaughn dated July 3, 2014. Incorporated by reference to Exhibit 10.7 to the Company's Quarterly Report on Form 10-Q filed on May 5, 2016.****](#)
- 10.19 [Initial Award with James Matthew Vaughn dated November 5, 2014. Incorporated by reference to Exhibit 10.8 to the Company's Quarterly Report on Form 10-Q filed on May 5, 2016.****](#)
- 10.20 [Stock Award with James Matthew Vaughn dated July 3, 2015. Incorporated by reference to Exhibit 10.9 to the Company's Quarterly Report on Form 10-Q filed on May 5, 2016.****](#)
- 10.21 [Employment Offer Letter with Jim Yates dated March 10, 2015. Incorporated by reference to Exhibit 10.10 to the Company's Quarterly Report on Form 10-Q filed on May 5, 2016.****](#)
- 10.22 [Initial Award with Jim Yates dated May 8, 2015. Incorporated by reference to Exhibit 10.11 to the Company's Quarterly Report on Form 10-Q filed on May 5, 2016.****](#)
- 10.23 [Restricted Stock Award between Par Pacific Holdings, Inc. and William Monteleone dated February 16, 2016. Incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed on August 9, 2016.****](#)
- 10.24 [Stock Option Award between Par Pacific Holdings, Inc. and William Monteleone dated February 16, 2016. Incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed on August 9, 2016.****](#)
- 10.25 [Restricted Stock Award between Par Pacific Holdings, Inc. and James Matthew Vaughn dated February 16, 2016. Incorporated by reference to Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q filed on August 9, 2016.****](#)
- 10.26 [Stock Option Award between Par Pacific Holdings, Inc. and James Matthew Vaughn dated February 16, 2016. Incorporated by reference to Exhibit 10.6 to the Company's Quarterly Report on Form 10-Q filed on August 9, 2016.****](#)
- 10.27 [Restricted Stock Award between Par Pacific Holdings, Inc. and Jim Yates dated February 16, 2016. Incorporated by reference to Exhibit 10.7 to the Company's Quarterly Report on Form 10-Q filed on August 9, 2016.****](#)
- 10.28 [Stock Option Award between Par Pacific Holdings, Inc. and Jim Yates dated February 16, 2016. Incorporated by reference to Exhibit 10.8 to the Company's Quarterly Report on Form 10-Q filed on August 9, 2016.****](#)
- 10.29 [Third Amendment to Delayed Draw Term Loan and Bridge Credit Agreement dated as of March 11, 2015, by and among the Company, the Guarantors party thereto, the Term Lenders party thereto and Jefferies Finance LLC, as administrative agent for the Lenders. Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on March 12, 2015.](#)

- 10.30 [Credit Agreement dated as of April 1, 2015, by and among Koko’oha Investments, Inc., Mid Pac Petroleum, LLC, Bank of Hawaii and the other lenders party thereto, and Bank of Hawaii, as administrative agent. Incorporated by reference to Exhibit 10.1 to the Company’s Current Report on Form 8-K filed on April 2, 2015.](#)
- 10.31 [Pledge Agreement dated as of April 1, 2015, by Hawaii Pacific Energy, LLC in favor of Jefferies Finance LLC. Incorporated by reference to Exhibit 10.2 to the Company’s Current Report on Form 8-K filed on April 2, 2015.](#)
- 10.32 [Limited Recourse Guaranty dated as of April 1, 2015, by Hawaii Pacific Energy, LLC. Incorporated by reference to Exhibit 10.3 to the Company’s Current Report on Form 8-K filed on April 2, 2015.](#)
- 10.33 [Fourth Amendment to Delayed Draw Term Loan and Bridge Loan Credit Agreement dated as of April 1, 2015, by and among the Company, the Guarantors party thereto, the Term Lenders party thereto and Jefferies Finance LLC, as administrative agent for the lenders. Incorporated by reference to Exhibit 10.4 to the Company’s Current Report on Form 8-K filed on April 2, 2015.](#)
- 10.34 [First Amendment to Credit Agreement dated as of March 30, 2015 among HIE Retail, LLC, Bank of Hawaii, American Savings Bank, F.S.B. and Central Pacific Bank, and Bank of Hawaii, as administrative and collateral agent for the Lenders. Incorporated by reference to Exhibit 10.6 to the Company’s Current Report on Form 8-K filed on April 2, 2015.](#)
- 10.35 [Form of Award of Restricted Stock \(Discretionary Long Term Incentive Plan\). Incorporated by reference to Exhibit 10.2 to the Company’s Current Report on Form 8-K filed on April 2, 2015.****](#)
- 10.36 [Form of Award of Restricted Stock Units \(Discretionary Long Term Incentive Plan\). Incorporated by reference to Exhibit 10.3 to the Company’s Current Report on Form 8-K filed on April 2, 2015.****](#)
- 10.37 [Form of Nonstatutory Stock Option Agreement \(Discretionary Long Term Incentive Plan\). Incorporated by reference to Exhibit 10.4 to the Company’s Current Report on Form 8-K filed on April 2, 2015.****](#)
- 10.38 [Termination of Stockholders Agreement dated April 10, 2015 by and among Par Petroleum Corporation, Zell Credit Opportunities Fund, L.P., ZCOF Par Petroleum Holdings, LLC, Pandora Select Partners, LP, Whitebox Multi-Strategy Partners, LP, Whitebox Credit Arbitrage Partners, LP, Whitebox Concentrated Convertible Arbitrage Partners, LP, and Whitebox Asymmetric Partners, LP. Incorporated by reference to Exhibit 10.1 to the Company’s Current Report on Form 8-K filed on April 13, 2015.](#)
- 10.39 [Par Petroleum \(and subsidiaries\) Incentive Compensation Plan. Incorporated by reference to Exhibit 10.1 to the Company’s Current Report on Form 8-K filed on May 12, 2015.****](#)
- 10.40 [Amended and Restated Supply and Offtake Agreement dated as of December 21, 2017, between Par Hawaii Refining, LLC and J. Aron & Company, LLC. Incorporated by reference to Exhibit 10.2 to the Company’s Current Report on Form 8-K filed on December 22, 2017.](#)
- 10.41 [Amendment to Amended and Restated Supply and Offtake Agreement dated as of December 5, 2018, between Par Hawaii Refining, LLC and J. Aron & Company, LLC. Incorporated by reference to Exhibit 10.1 to the Company’s Current Report on Form 8-K filed on December 11, 2018.](#)
- 10.42 [Amendment to Amended and Restated Supply and Offtake Agreement dated as of February 19, 2019 by and among Par Hawaii Refining, LLC, Par Petroleum, LLC and J. Aron & Company LLC. *](#)
- 10.43 [Storage Facilities Agreement dated as of June 1, 2015, between Hawaii Independent Energy, LLC and J. Aron & Company. Incorporated by reference to Exhibit 10.2 to the Company’s Current Report on Form 8-K filed June 2, 2015.](#)
- 10.44 [Marketing and Sales Agreement dated as of June 1, 2015, between Hawaii Independent Energy, LLC and J. Aron & Company. Incorporated as Exhibit 10.3 to the Company’s Current Report on Form 8-K filed June 2, 2015.](#)
- 10.45 [Amended and Restated Pledge and Security Agreement dated as of December 21, 2017, between Par Hawaii Refining, LLC and J. Aron & Company, LLC. Incorporated by reference to Exhibit 10.3 to the Company’s Current Report on Form 8-K filed on December 22, 2017.](#)
- 10.46 [Amendment to Amended and Restated Pledge and Security Agreement dated January 11, 2019, among Par Hawaii Refining, LLC and J. Aron & Company LLC. Incorporated by reference to Exhibit 10.5 to the Company’s Current Report on Form 8-K filed on January 14, 2019.](#)
- 10.47 [Environmental Indemnity Agreement dated as of June 1, 2015, by Hawaii Independent Energy, LLC in favor of J. Aron & Company. Incorporated by reference to Exhibit 10.7 to the Company’s Current Report on Form 8-K filed June 2, 2015.](#)
- 10.48 [Employment Offer Letter with William C. Pate dated October 12, 2015. Incorporated by reference to Exhibit 10.1 to the Company’s Current Report on Form 8-K filed October 14, 2015.****](#)

- 10.49 [Initial Award with William C. Pate dated October 12, 2015. Incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed October 14, 2015.****](#)
- 10.50 [Amendment to Employment Offer Letter with Joseph Israel dated October 12, 2015. Incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed October 14, 2015.****](#)
- 10.51 [Unit Purchase Agreement dated February 22, 2016, by and among Laramie Energy, LLC, Par Piceance Energy Equity LLC, and the other parties thereto. Incorporated by reference to Exhibit 10.74 to the Company's Annual Report on Form 10-K filed on March 3, 2016.**](#)
- 10.52 [Equity Commitment Letter dated December 17, 2015, by and between Par Pacific Holdings, Inc. and Piceance Energy, LLC. Incorporated by reference to Exhibit 10.75 to the Company's Annual Report on Form 10-K filed on March 3, 2016.**](#)
- 10.53 [First Amendment to Third Amended and Restated Loan Agreement dated as of March 31, 2016, by and among Hermes Consolidated, LLC, Wyoming Pipeline Company LLC, Par Wyoming, LLC and Bank of America, N.A. Incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed July 15, 2016.](#)
- 10.54 [Second Amendment to Third Amended and Restated Loan Agreement dated as of May 25, 2016, by and among Hermes Consolidated, LLC, Wyoming Pipeline Company LLC, Par Wyoming, LLC and Bank of America, N.A. Incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed July 15, 2016.](#)
- 10.55 [Third Amendment to Third Amended and Restated Loan Agreement dated as of July 14, 2016, by and among Hermes Consolidated, LLC, Wyoming Pipeline Company LLC, Par Wyoming, LLC and Bank of America, N.A. Incorporated by reference to Exhibit 10.5 to the Company's Current Report on Form 8-K filed July 15, 2016.](#)
- 10.56 [Fourth Amendment to Third Amended and Restated Loan Agreement dated as of July 14, 2016, by and among Hermes Consolidated, LLC, Wyoming Pipeline Company LLC, Par Wyoming, LLC and Bank of America, N.A. Incorporated by reference to Exhibit 10.6 to the Company's Current Report on Form 8-K filed July 15, 2016.](#)
- 10.57 [Note Purchase Agreement dated as of July 14, 2016, by and among Par Pacific Holdings, Inc. and the purchasers named therein. Incorporated by reference to Exhibit 10.7 to the Company's Current Report on Form 8-K filed July 15, 2016.](#)
- 10.58 [Par Pacific Holdings, Inc. Non-Qualified Deferred Compensation Plan. Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on March 6, 2017.****](#)
- 10.59 [Par Pacific Holdings, Inc. Severance Plan for Senior Officers. Incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on March 6, 2017. ****](#)
- 10.60 [First Amendment to Loan and Security Agreement dated as of April 3, 2018 by and among Par Petroleum, LLC, Par Hawaii, Inc., Mid Pac Petroleum, LLC, HIE Retail, LLC, Hermes Consolidated, LLC, Wyoming Pipeline Company and Bank of America N.A. Incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed on May 10, 2018.](#)
- 10.61 [Asset Purchase Agreement dated as of January 9, 2018 by and among CHS Inc., Par Hawaii, Inc., and Par Pacific Holdings, Inc. Incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed on May 10, 2018. #](#)
- 10.62 [First Amendment to Asset Purchase Agreement dated as of March 23, 2018 by and among CHS Inc., Par Hawaii, Inc., and Par Pacific Holdings, Inc. Incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q filed on May 10, 2018. #](#)
- 10.63 [Term Loan and Guaranty Agreement, dated as of January 11, 2019, among Par Petroleum, LLC, Par Petroleum Finance Corp., the guarantors party thereto, Par Pacific Holdings, Inc. solely for the limited purposes set forth therein, the lenders party thereto, and Goldman Sachs Bank USA, as administrative agent. Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on January 14, 2019.](#)
- 10.64 [Collateral Trust and Intercreditor Agreement, dated as of December 21, 2017, among Par Petroleum, LLC, Par Petroleum Finance Corp., the guarantors from time to time party thereto, Wilmington Trust, National Association, as indenture trustee and as collateral trustee, J. Aron & Company LLC, and Goldman Sachs Bank USA. Incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on January 14, 2019.](#)
- 10.65 [Fourth Amendment to Loan and Security Agreement, dated as of January 11, 2019, among Par Petroleum, LLC, Par Hawaii, Inc., Mid Pac Petroleum, LLC, HIE Retail, LLC, Hermes Consolidated, LLC, Wyoming Pipeline Company LLC, the guarantors party thereto, the financial institutions party thereto, as lenders, and Bank of America, N.A., as administrative agent and collateral agent for the lenders. Incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on January 14, 2019.](#)

10.66	<u>Conformed Copy of First Lien ISDA Master Agreement dated as of January 11, 2019, between Merrill Lynch Commodities, Inc. and U.S. Oil & Refining Co. Incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed on January 14, 2019.</u>
10.67	<u>Amendment to Amended and Restated Pledge and Security Agreement dated January 11, 2019, among Par Hawaii Refining, LLC and J. Aron & Company LLC. Incorporated by reference to Exhibit 10.5 to the Company's Current Report on Form 8-K filed on January 14, 2019.</u>
10.68	<u>Loan Agreement, dated January 9, 2018, between Par Pacific Holdings, Inc. and Bank of Hawaii. Incorporated by reference to Exhibit 10.6 to the Company's Current Report on Form 8-K filed on January 14, 2019.</u>
10.69	<u>Note made by Par Pacific Holdings, Inc. to Bank of Hawaii, dated as of January 9, 2018. Incorporated by reference to Exhibit 10.7 to the Company's Current Report on Form 8-K filed on January 14, 2019.</u>
10.70	<u>Increase Agreement dated July 24, 2018 among Par Petroleum, LLC, Par Hawaii, Inc., Mid Pac Petroleum, LLC, HIE Retail, LLC, Hermes Consolidated, LLC, Wyoming Pipeline Company, LLC, and certain lenders. Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed July 27, 2018.</u>
10.71	<u>Topping Unit Purchase Agreement by and among IES Downstream, LLC, Eagle Island, LLC, Par Hawaii Refining, LLC, and Par Pacific Holdings, Inc., dated as of August 29, 2018. Incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed on November 7, 2018. #</u>
10.72	<u>Unit Purchase Agreement by and among Laramie Energy, LLC, EnCap Energy Capital Fund VI, L.P., and EnCap Energy VI-B Acquisitions, L.P., dated as of October 18, 2018. Incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed on November 7, 2018. #</u>
10.73	<u>Second Amendment to Loan and Security Agreement dated as of October 16, 2018 by and among Par Petroleum, LLC, Par Hawaii, Inc., Mid Pac Petroleum, LLC, HIE Retail, LLC, Hermes Consolidated, LLC, Wyoming Pipeline Company, LLC, and the other members party thereto, the financial institutions party thereto, and Bank of America, N.A., as administrative agent. Incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q filed on November 7, 2018.</u>
14.1	<u>Par Pacific Holdings, Inc. Code of Business Conduct and Ethics for Employees, Executive Officers and Directors, effective December 3, 2015. Incorporated by reference to Exhibit 14.1 to the Company's Annual Report on Form 10-K filed March 3, 2016.</u>
21.1	<u>Subsidiaries of the Registrant.*</u>
23.1	<u>Consent of Deloitte & Touche LLP*</u>
23.2	<u>Consent of Deloitte & Touche LLP related to the financial statements of Laramie Energy, LLC.*</u>
23.3	<u>Consent of Netherland, Sewell & Associates, Inc. *</u>
31.1	<u>Certification of Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.*</u>
31.2	<u>Certification of Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.*</u>
32.1	<u>Certification of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350.*</u>
32.2	<u>Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350.*</u>
99.1	<u>Report of Netherland, Sewell & Associates, Inc. regarding the registrants Proved Reserves as of December 31, 2018.*</u>
99.2	<u>Laramie Energy, LLC Financial Statements and Independent Auditors' Report, as of December 31, 2018 and 2017, and for the years ended December 31, 2018, 2017, and 2016.*</u>
101.INS	XBRL Instance Document.***
101.SCH	XBRL Taxonomy Extension Schema Documents.***
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.***
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.***
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.***
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.***

- * Filed herewith.
- ** Schedules and similar attachments have been omitted pursuant to Item 601(b)(2) of Regulation S-K. The Company will furnish supplementally a copy of any omitted schedule or similar attachment to the Securities and Exchange Commission upon request.
- *** These interactive data files are furnished and deemed not filed or part of a registration statement or prospectus for purposes of Sections 11 or 12 of the Securities Act of 1933, as amended, are deemed not filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended and otherwise are not subject to liability under those sections.
- **** Management contract or compensatory plan or arrangement.
- # Confidential treatment has been granted for portions of this exhibit. Omissions are designated with brackets containing asterisks. As part of our confidential treatment request, a complete version of this exhibit has been filed separately with the SEC.

PAR PACIFIC HOLDINGS, INC. AND SUBSIDIARIES
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS
For the Years Ended December 31, 2018, 2017, and 2016

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of
Par Pacific Holdings, Inc.
Houston, Texas

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Par Pacific Holdings, Inc. and subsidiaries (the "Company") as of December 31, 2018 and 2017 , the related consolidated statements of operations, comprehensive income (loss), cash flows and changes in stockholders' equity for each of the three years in the period ended December 31, 2018 , and the related notes and the schedule listed in the Index at Item 15 (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017 , and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018 , in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 11, 2019 , expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ DELOITTE & TOUCHE LLP

Houston, Texas
March 11, 2019

We have served as the Company's auditor since 2013.

PAR PACIFIC HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(in thousands, except share data)

	December 31, 2018	December 31, 2017
ASSETS		
Current assets		
Cash and cash equivalents	\$ 75,076	\$ 118,333
Restricted cash	743	744
Total cash, cash equivalents, and restricted cash	75,819	119,077
Trade accounts receivable	160,338	121,831
Inventories	322,065	345,357
Prepaid and other current assets	28,370	17,279
Total current assets	586,592	603,544
Property and equipment		
Property, plant, and equipment	649,368	529,238
Proved oil and gas properties, at cost, successful efforts method of accounting	400	400
Total property and equipment	649,768	529,638
Less accumulated depreciation and depletion	(111,507)	(79,622)
Property and equipment, net	538,261	450,016
Long-term assets		
Investment in Laramie Energy, LLC	136,656	127,192
Intangible assets, net	23,947	26,604
Goodwill	153,397	107,187
Other long-term assets	21,881	32,864
Total assets	<u>\$ 1,460,734</u>	<u>\$ 1,347,407</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Current maturities of long-term debt	\$ 33	\$ —
Obligations under inventory financing agreements	373,882	363,756
Accounts payable	54,787	52,543
Advances from customers	6,681	9,522
Accrued taxes	17,256	17,687
Other accrued liabilities	54,562	27,444
Total current liabilities	507,201	470,952
Long-term liabilities		
Long-term debt, net of current maturities	392,607	384,812
Common stock warrants	5,007	6,808
Long-term capital lease obligations	6,123	1,220
Other liabilities	37,467	35,896
Total liabilities	948,405	899,688
Commitments and Contingencies (Note 15)		
Stockholders' equity		
Preferred stock, \$0.01 par value: 3,000,000 shares authorized, none issued	—	—
Common stock, \$0.01 par value; 500,000,000 shares authorized at December 31, 2018 and December 31, 2017, 46,983,924 shares and 45,776,087 shares issued at December 31, 2018 and December 31, 2017, respectively	470	458
Additional paid-in capital	617,937	593,295
Accumulated deficit	(108,751)	(148,178)
Accumulated other comprehensive income	2,673	2,144
Total stockholders' equity	512,329	447,719
Total liabilities and stockholders' equity	<u>\$ 1,460,734</u>	<u>\$ 1,347,407</u>

See accompanying notes to consolidated financial statements.

PAR PACIFIC HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share amounts)

	Year Ended December 31,		
	2018	2017	2016
Revenues	\$ 3,410,728	\$ 2,443,066	\$ 1,865,045
Operating expenses			
Cost of revenues (excluding depreciation)	3,003,116	2,054,627	1,636,339
Operating expense (excluding depreciation)	215,284	202,016	169,371
Depreciation, depletion, and amortization	52,642	45,989	31,617
General and administrative expense (excluding depreciation)	47,426	46,078	42,073
Acquisition and integration costs	10,319	395	5,294
Total operating expenses	<u>3,328,787</u>	<u>2,349,105</u>	<u>1,884,694</u>
Operating income (loss)	81,941	93,961	(19,649)
Other income (expense)			
Interest expense and financing costs, net	(39,768)	(31,632)	(28,506)
Debt extinguishment and commitment costs	(4,224)	(8,633)	—
Gain on curtailment of pension obligation	—	—	3,067
Other income (expense), net	1,046	911	(10)
Change in value of common stock warrants	1,801	(1,674)	2,962
Change in value of contingent consideration	(10,500)	—	10,770
Equity earnings (losses) from Laramie Energy, LLC	9,464	18,369	(22,381)
Total other expense, net	<u>(42,181)</u>	<u>(22,659)</u>	<u>(34,098)</u>
Income (loss) before income taxes	39,760	71,302	(53,747)
Income tax benefit (expense)	(333)	1,319	7,912
Net income (loss)	<u>\$ 39,427</u>	<u>\$ 72,621</u>	<u>\$ (45,835)</u>
Income (loss) per share			
Basic	\$ 0.85	\$ 1.58	\$ (1.08)
Diluted	\$ 0.85	\$ 1.57	\$ (1.08)
Weighted-average number of shares outstanding			
Basic	45,726	45,543	42,349
Diluted	45,755	45,583	42,349

See accompanying notes to consolidated financial statements.

PAR PACIFIC HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(in thousands)

	Year Ended December 31,		
	2018	2017	2016
Net income (loss)	\$ 39,427	\$ 72,621	\$ (45,835)
Other comprehensive income (loss):			
Other post-retirement benefits income (loss), net of tax	529	(52)	2,196
Total other comprehensive income (loss), net of tax	529	(52)	2,196
Comprehensive income (loss)	<u>\$ 39,956</u>	<u>\$ 72,569</u>	<u>\$ (43,639)</u>

See accompanying notes to consolidated financial statements.

PAR PACIFIC HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Year Ended December 31,		
	2018	2017	2016
Cash flows from operating activities:			
Net income (loss)	\$ 39,427	\$ 72,621	\$ (45,835)
Adjustments to reconcile net income (loss) to cash provided by (used in) operating activities:			
Depreciation, depletion, and amortization	52,642	45,989	31,617
Debt extinguishment and commitment costs	4,224	8,633	—
Non-cash interest expense	7,127	7,276	18,121
Change in value of common stock warrants	(1,801)	1,674	(2,962)
Change in value of contingent consideration	—	—	(10,770)
Deferred taxes	661	(1,321)	(7,935)
Stock-based compensation	6,196	7,204	6,625
Unrealized (gain) loss on derivative contracts	2,122	(989)	(15,479)
Equity (earnings) losses from Laramie Energy, LLC	(9,464)	(18,369)	22,381
Net changes in operating assets and liabilities:			
Trade accounts receivable	(35,790)	(19,100)	(17,162)
Collateral posted with broker for derivative transactions	(3,790)	2,499	18,212
Prepaid and other assets	(5,521)	37,645	945
Inventories	31,840	(146,533)	49,015
Deferred turnaround expenditures	—	—	(32,661)
Obligations under inventory financing agreements	(17,138)	143,034	(5,977)
Accounts payable and other accrued liabilities	19,885	(33,780)	(26,698)
Contingent consideration	—	—	(4,830)
Net cash provided by (used in) operating activities	90,620	106,483	(23,393)
Cash flows from investing activities:			
Acquisitions, net of cash acquired	(128,198)	—	(209,183)
Capital expenditures	(48,439)	(31,708)	(24,833)
Proceeds from sale of assets	816	35	2,773
Investment in Laramie Energy, LLC	—	—	(55,000)
Net cash used in investing activities	(175,821)	(31,673)	(286,243)
Cash flows from financing activities:			
Proceeds from sale of common stock, net of offering costs	19,318	—	49,044
Proceeds from borrowings	118,741	616,706	354,682
Repayments of borrowings	(118,751)	(603,770)	(202,165)
Net borrowings (repayments) on deferred payment arrangement	27,264	(2,198)	8,027
Payment of deferred loan costs	(379)	(10,064)	(6,892)
Contingent consideration settlements	—	—	(11,980)
Payments for early termination of financing agreements	—	(4,432)	—
Payments for commitment costs	(3,390)	—	—
Other financing activities, net	(860)	(993)	(598)
Net cash provided by (used in) financing activities	41,943	(4,751)	190,118
Net increase (decrease) in cash, cash equivalents, and restricted cash	(43,258)	70,059	(119,518)
Cash, cash equivalents, and restricted cash at beginning of period	119,077	49,018	168,536
Cash, cash equivalents, and restricted cash at end of period	<u>\$ 75,819</u>	<u>\$ 119,077</u>	<u>\$ 49,018</u>
Supplemental cash flow information:			
Net cash paid for:			
Interest	\$ (28,186)	\$ (23,873)	\$ (13,217)
Taxes	(49)	(1,478)	589
Non-cash investing and financing activities:			

Accrued capital expenditures	\$	6,199	\$	2,926	\$	4,907
Value of warrants and debt reclassified to equity		—		—		3,084
Capital lease additions		1,678		165		1,575

See accompanying notes to consolidated financial statements.

PAR PACIFIC HOLDINGS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(in thousands)

	Common Stock		Additional	Accumulated	Accumulated Other Comprehensive	Total
	Shares	Amount	Paid-In Capital	Deficit	Income	Equity
Balance, January 1, 2016	41,010	\$ 410	\$ 515,165	\$ (174,964)	\$ —	\$ 340,611
Issuance of common stock, net of offering costs of \$1.0 million	4,075	41	49,003	—	—	49,044
Stock-based compensation	218	3	6,622	—	—	6,625
Equity component of 5.00% Convertible Senior Notes due 2021, net of tax of \$8.6 million	—	—	13,526	—	—	13,526
Conversion of Bridge Notes	273	2	3,338	—	—	3,340
Purchase of common stock for retirement	(42)	(1)	(597)	—	—	(598)
Other comprehensive income	—	—	—	—	2,196	2,196
Net loss	—	—	—	(45,835)	—	(45,835)
Balance, December 31, 2016	45,534	455	587,057	(220,799)	2,196	368,909
Stock-based compensation	303	4	7,200	—	—	7,204
Purchase of common stock for retirement	(61)	(1)	(962)	—	—	(963)
Other comprehensive loss	—	—	—	—	(52)	(52)
Net income	—	—	—	72,621	—	72,621
Balance, December 31, 2017	45,776	458	593,295	(148,178)	2,144	447,719
Issuance of common stock in connection with acquisition	1,108	11	19,307	—	—	19,318
Stock-based compensation	147	1	6,195	—	—	6,196
Purchase of common stock for retirement	(47)	—	(860)	—	—	(860)
Other comprehensive income	—	—	—	—	529	529
Net income	—	—	—	39,427	—	39,427
Balance, December 31, 2018	46,984	\$ 470	\$ 617,937	\$ (108,751)	\$ 2,673	\$ 512,329

See accompanying notes to consolidated financial statements.

PAR PACIFIC HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements
For the Years Ended December 31, 2018 , 2017 , and 2016

Note 1—Overview

Par Pacific Holdings, Inc. and its wholly owned subsidiaries (“Par” or the “Company”) owns and operates market-leading energy and infrastructure businesses. Our strategy is to acquire and develop businesses in logistically-complex markets. Currently, we operate in three primary business segments:

1) **Refining** - We own and operate three refineries with total throughput capacity of over 200 Mbpd. Our refinery in Kapolei, Hawaii, produces ultra-low sulfur diesel (“ULSD”), gasoline, jet fuel, marine fuel, low sulfur fuel oil (“LSFO”), and other associated refined products primarily for consumption in Hawaii. Our refinery in Newcastle, Wyoming , produces gasoline, ULSD, jet fuel, and other associated refined products that are primarily marketed in Wyoming and South Dakota. Our refinery in Tacoma, Washington, acquired in January 2019, produces distillate, gasoline, asphalt, and other associated refined products primarily marketed in the Pacific Northwest.

2) **Retail** - We operate 124 retail outlets in Hawaii, Washington, and Idaho. Our retail outlets in Hawaii sell gasoline, diesel, and retail merchandise throughout the islands of Oahu, Maui, Hawaii, and Kauai. Our Hawaii retail network includes Hele and “ 76 ” branded retail sites, company-operated convenience stores, 7-Eleven operated convenience stores, other sites operated by third parties, and unattended cardlock stations. During 2018 , we completed the rebranding of 24 of our 34 company-operated convenience stores in Hawaii to “nomnom,” a new proprietary brand. Our retail outlets in Washington and Idaho sell gasoline, diesel, and retail merchandise and operate under the “ Cenex® ” and “ Zip Trip® ” brand names.

3) **Logistics** - We operate an extensive multi-modal logistics network spanning the Pacific, the Northwest, and the Rockies. We own and operate terminals, pipelines, a single-point mooring (“SPM”), and trucking operations to distribute refined products throughout the islands of Oahu, Maui, Hawaii, Molokai, and Kauai. We own and operate a crude oil pipeline gathering system, a refined products pipeline, storage facilities, and loading racks in Wyoming and a jet fuel storage facility and pipeline that serve Ellsworth Air Force Base in South Dakota. Beginning in January 2019, we own and operate logistics assets in Washington, including a marine terminal, a unit train-capable rail loading terminal, storage facilities, a truck rack, and a proprietary pipeline that serves McChord Air Force Base.

We also own a 46.0% equity investment in Laramie Energy, LLC (“ Laramie Energy ”), a joint venture entity operated by Laramie Energy II, LLC (“ Laramie ”) and focused on producing natural gas in Garfield, Mesa, and Rio Blanco Counties, Colorado.

Our Corporate and Other reportable segment primarily includes general and administrative costs.

Note 2—Summary of Significant Accounting Policies

Principles of Consolidation and Basis of Presentation

The consolidated financial statements include the accounts of Par Pacific Holdings, Inc. and its subsidiaries. All intercompany balances and transactions have been eliminated in consolidation.

Certain amounts previously reported in our consolidated financial statements for prior periods have been reclassified to conform to the current presentation.

Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles (“GAAP”) requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, and expenses and the related disclosures. Actual amounts could differ from these estimates.

Cash and Cash Equivalents

Cash and cash equivalents consist of all highly liquid investments with original maturities of three months or less. The carrying value of cash equivalents approximates fair value because of the short-term nature of these investments.

PAR PACIFIC HOLDINGS, INC. AND SUBSIDIARIES
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Restricted Cash

Restricted cash consists of cash not readily available for general purpose cash needs. Restricted cash relates to bankruptcy matters.

Allowance for Doubtful Accounts

We establish provisions for losses on trade receivables if it becomes probable that we will not collect all or part of the outstanding balances. We review collectibility and establish or adjust our allowance as necessary using the specific identification method. As of December 31, 2018 and 2017, we did not have a significant allowance for doubtful accounts.

Inventories

Commodity inventories are stated at the lower of cost or net realizable value using the first-in, first-out accounting method ("FIFO"). We value merchandise along with spare parts, materials, and supplies at average cost.

Our refining segment acquires all of its crude oil utilized at the Hawaii refinery from J. Aron & Company ("J.Aron") under the Supply and Offtake Agreements as described in Note 11—Inventory Financing Agreements. The crude oil remains in the legal title of J. Aron and is stored in our storage tanks governed by a storage agreement. Legal title to the crude oil passes to us at the tank outlet. After processing, J. Aron takes title to the refined products stored in our storage tanks until they are sold to our retail locations or to third parties. We record the inventory owned by J. Aron on our behalf as inventory with a corresponding obligation on our balance sheet because we maintain the risk of loss until the refined products are sold to third parties and are obligated to repurchase the inventory.

We enter into refined product and crude oil exchange agreements with other oil companies. Exchange receivables or payables are stated at cost and are presented within Trade accounts receivable and Accounts payable on our consolidated balance sheets.

Renewable Identification Numbers

Beginning in 2018, Inventories also include Renewable Identification Numbers ("RINs"). Our RINs assets, which include RINS purchased in the open market and RINs generated by blending biofuels as part of our refining process, are presented as Inventories on our consolidated balance sheets and stated at the lower of cost or net realizable value ("NRV") as of the end of the reporting period. Our RINs obligations to comply with RFS are presented as Other accrued liabilities on our consolidated balance sheets and measured at fair value as of the end of the reporting period. The net cost of RINs is recognized within Cost of revenues (excluding depreciation) in our consolidated statements of operations.

Investment in Laramie Energy, LLC

We account for our Investment in Laramie Energy, LLC using the equity method as we have the ability to exert significant influence, but do not control its operating and financial policies. Our proportionate share of net income (loss) of this entity is included in Equity earnings (losses) from Laramie Energy, LLC in the consolidated statements of operations. The investment is reviewed for impairment when events or changes in circumstances indicate that there has been an other than temporary decline in the value of the investment. Please read Note 3—Investment in Laramie Energy, LLC.

Property, Plant, and Equipment

We capitalize the cost of additions, major improvements, and modifications to property, plant, and equipment. The cost of repairs and normal maintenance of property, plant, and equipment is expensed as incurred. Major improvements and modifications of property, plant, and equipment are those expenditures that either extend the useful life, increase the capacity, or improve the operating efficiency of the asset or the safety of our operations. We compute depreciation of property, plant, and equipment using the straight-line method, based on the estimated useful life of each asset as follows:

Assets	Lives in Years
Refining	8 to 47
Logistics	3 to 30
Retail	3 to 30
Corporate	3 to 7
Software	3

PAR PACIFIC HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements
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We record property under capital leases at the lower of the present value of minimum lease payments using our incremental borrowing rate or the fair value of the leased property at the date of lease inception. We depreciate leasehold improvements and property acquired under capital leases over the shorter of the lease term or the economic life of the asset.

We review property, plant, and equipment and other long-lived assets whenever events or changes in business circumstances indicate the carrying value of the assets may not be recoverable. Impairment is indicated when the undiscounted cash flows estimated to be generated by those assets are less than the assets' carrying value. If this occurs, an impairment loss is recognized for the difference between the fair value and carrying value. Factors that indicate potential impairment include a significant decrease in the market value of the asset, operating or cash flow losses associated with the use of the asset, and a significant change in the asset's physical condition or use.

Asset Retirement Obligations

We record asset retirement obligations ("AROs") in the period in which we have a legal obligation, whether by government action or contractual arrangement, to incur these costs and can make a reasonable estimate of the liability. Our AROs arise from our refining, logistics, and retail operations, as well as plugging and abandonment of wells within our natural gas and crude oil operations. AROs are calculated based on the present value of the estimated removal and other closure costs using our credit-adjusted risk-free rate. When the liability is initially recorded, we capitalize the cost by increasing the book value of the related long-lived tangible asset. The liability is accreted to its estimated settlement value with accretion expense recognized in Depreciation, depletion, and amortization ("DD&A") on our consolidated statements of operations and the related capitalized cost is depreciated over the asset's useful life. The difference between the settlement amount and the recorded liability is recorded as a gain or loss on asset disposals in our consolidated statements of operations. We estimate settlement dates by considering our past practice, industry practice, contractual terms, management's intent, and estimated economic lives.

We cannot currently estimate the fair value for certain AROs primarily because we cannot estimate settlement dates (or range of dates) associated with these assets. These AROs include hazardous materials disposal (such as petroleum manufacturing by-products, chemical catalysts, and sealed insulation material containing asbestos) and removal or dismantlement requirements associated with the closure of our refining facilities, terminal facilities, or pipelines, including the demolition or removal of certain major processing units, buildings, tanks, pipelines, or other equipment.

Deferred Turnaround Costs

Refinery turnaround costs, which are incurred in connection with planned major maintenance activities at our refineries, are deferred and amortized on a straight-line basis over the period of time estimated until the next planned turnaround (generally three to five years). During 2016, we recognized deferred turnaround costs of approximately \$32.7 million. No deferred turnaround costs were recorded during 2018 and 2017. Deferred turnaround costs are presented within Other long-term assets on our consolidated balance sheets.

Goodwill and Other Intangible Assets

Goodwill represents the amount the purchase price exceeds the fair value of net assets acquired in a business combination. Goodwill is not amortized, but is tested for impairment annually on October 1. We assess the recoverability of the carrying value of goodwill during the fourth quarter of each year or whenever events or changes in circumstances indicate that the carrying amount of the goodwill of a reporting unit may not be fully recoverable. We first assess qualitative factors to determine whether it is more likely than not that the fair value of the reporting unit is less than its carrying value. If the qualitative assessment indicates that it is more likely than not that the carrying value of a reporting unit exceeds its estimated fair value, a quantitative test is required. Under the quantitative test, we compare the carrying value of the net assets of the reporting unit to the estimated fair value of the reporting unit. If the carrying value exceeds the estimated fair value of the reporting unit, an impairment loss is recorded.

Our intangible assets include relationships with customers, trade names, and trademarks. These intangible assets are amortized over their estimated useful lives on a straight-line basis. We evaluate the carrying value of our intangible assets when impairment indicators are present. When we believe impairment indicators may exist, projections of the undiscounted future cash flows associated with the use of and eventual disposition of the intangible assets are prepared. If the projections indicate that their carrying values are not recoverable, we reduce the carrying values to their estimated fair values.

Environmental Matters

We capitalize environmental expenditures that extend the life or increase the capacity of facilities as well as expenditures that prevent environmental contamination. We expense costs that relate to an existing condition caused by past operations and that do not contribute to current or future revenue generation. We record liabilities when environmental assessments and/or remedial

PAR PACIFIC HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements
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efforts are probable and can be reasonably estimated. Cost estimates are based on the expected timing and extent of remedial actions required by governing agencies, experience gained from similar sites for which environmental assessments or remediation have been completed, and the amount of our anticipated liability considering the proportional liability and financial abilities of other responsible parties. Usually, the timing of these accruals coincides with the completion of a feasibility study or our commitment to a formal plan of action. Estimated liabilities are not discounted to present value and are presented within Other liabilities on our consolidated balance sheets. Environmental expenses are recorded in Operating expense (excluding depreciation) on our consolidated statements of operations.

Derivatives and Other Financial instruments

We are exposed to commodity price risk related to crude oil and refined products. We manage this exposure through the use of various derivative commodity instruments. These instruments include exchange traded futures and over-the-counter ("OTC") swaps, forwards, and options.

For our forward contracts that are derivatives, we have elected the normal purchase normal sale exclusion, as it is our policy to fulfill or accept the physical delivery of the product and we will not net settle. Therefore, we did not recognize the unrealized gains or losses related to these contracts in our consolidated financial statements. We apply the accrual method of accounting to our forwards contracts.

All derivative instruments not designated as normal purchases or sales are recorded in the balance sheet as either assets or liabilities measured at their fair values. Changes in the fair value of these derivative instruments are recognized currently in earnings. We have not designated any derivative instruments as cash flow or fair value hedges and, therefore, do not apply hedge accounting treatment.

In addition, we may have other financial instruments, such as warrants or embedded debt features, that may be classified as liabilities when either (a) the holders possess rights to net cash settlement, (b) physical or net equity settlement is not in our control, or (c) the instruments contain other provisions that cause us to conclude that they are not indexed to our equity. Our embedded derivatives include: our obligation to repurchase crude oil and refined products from J.Aron at the termination of the Supply and Offtake Agreements and the redemption option and the related make-whole premium on our 5.00% Convertible Senior Notes . These liabilities were initially recorded at fair value and subsequently adjusted to fair value at the end of each reporting period through earnings.

Please read Note 13—Derivatives and Note 14—Fair Value Measurements for information regarding our derivatives and other financial instruments.

Income Taxes

We use the asset and liability method of accounting for income taxes. Under the asset and liability method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and net operating loss ("NOLs") and tax credit carry forwards. Deferred tax assets and liabilities are measured using enacted income tax rates expected to apply to taxable income in the years in which those differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in income tax rates is recognized in the results of operations in the period that includes the enactment date. The realizability of deferred tax assets is evaluated quarterly based on a "more likely than not" standard and, to the extent this threshold is not met, a valuation allowance is recorded.

We recognize the impact of an uncertain tax position only if it is more likely than not of being sustained upon examination by the relevant taxing authority based on the technical merits of the position. As a general rule, our open years for Internal Revenue Service ("IRS") examination purposes are 2015 , 2016 , and 2017 . However, since we have net operating loss carryforwards, the IRS has the ability to make adjustments to items that originate in a year otherwise barred by the statute of limitations in order to re-determine tax for an open year to which those items are carried. Therefore, in a year in which a net operating loss deduction is claimed, the IRS may examine the year in which the net operating loss was generated and adjust it accordingly for purposes of assessing additional tax in the year the net operating loss deductions was claimed. Any penalties or interest as a result of an examination will be recorded in the period assessed.

Stock-Based Compensation

We recognize the cost of share-based payments on a straight-line basis over the period the employee provides service, generally the vesting period, and include such costs in General and administrative expense (excluding depreciation) and Operating expense (excluding depreciation) in the consolidated statements of operations. The grant date fair value of restricted stock awards

PAR PACIFIC HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements
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are equal to the market price of our common stock on the date of grant. The fair value of stock options are estimated using the Black-Scholes option-pricing model as of the date of grant.

Revenue Recognition

On January 1, 2018, we adopted Accounting Standards Update (“ASU”) No. 2014-09, *Revenue from Contracts with Customers (Topic 606)* (“ASU 2014-09” or “ASC 606”), as amended by other ASUs, using the modified retrospective method applied to all contracts that were not completed as of January 1, 2018. As such, the comparative financial information for prior periods has not been adjusted and continues to be reported under Financial Accounting Standards Board (“FASB”) ASC Topic 605, *Revenue Recognition* (“ASC 605”). We did not identify any significant differences in our existing revenue recognition policies that require modification under the new standard; therefore, we did not recognize a cumulative adjustment on opening equity as of January 1, 2018.

Refining and Retail

Our refining and retail segment revenues are primarily associated with the sale of refined products. We recognize revenues upon physical delivery of refined products to a customer, which is the point in time at which control of the refined products is transferred to the customer. The refining segment’s contracts with its customers state the terms of the sale, including the description, quantity, delivery terms, and price of each product sold. Payments from customers are generally due in full within 2 to 30 days of product delivery or invoice date.

We account for certain transactions on a net basis under FASB ASC Topic 845, “Nonmonetary Transactions.” These transactions include nonmonetary crude oil and refined product exchange transactions, certain crude oil buy/sell arrangements, and sale and purchase transactions entered into with the same counterparty that are deemed to be in contemplation with one another.

Upon adoption of ASC 606, we made an accounting policy election to apply the sales tax practical expedient, whereby all taxes assessed by a governmental authority that are both imposed on and concurrent with a revenue-producing transaction and collected from our customers will be recognized on a net basis within Cost of revenues (excluding depreciation). This change in our accounting policy did not have a material impact on our consolidated financial information for the year ended December 31, 2018 .

Logistics

We recognize transportation and storage fees as services are provided to a customer. Substantially all of our logistics revenues represent intercompany transactions that are eliminated in consolidation.

Cost Classifications

Cost of revenues (excluding depreciation) includes the hydrocarbon-related costs of inventory sold, transportation costs of delivering product to customers, crude oil consumed in the refining process, costs to satisfy our RINs obligations, and certain hydrocarbon fees and taxes. Cost of revenues (excluding depreciation) also includes the unrealized gains (losses) on derivatives, inventory valuation adjustments, and certain direct operating expenses related to our logistics segment.

Operating expense (excluding depreciation) includes direct costs of labor, maintenance and services, energy and utility costs, property taxes, and environmental compliance costs as well as chemicals and catalysts and other direct operating expenses.

The following table summarizes depreciation expense excluded from each line item in our consolidated statements of operations (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Cost of revenues	\$ 6,722	\$ 6,029	\$ 4,604
Operating expense	28,037	22,861	16,340
General and administrative expense	4,233	2,929	2,108

Benefit Plans

We recognize an asset for the overfunded status or a liability for the underfunded status of our defined benefit pension plan. The funded status is recorded within Other long-term liabilities. Certain changes in the plan’s funded status are recognized in Other comprehensive income (loss) in the period the change occurs.

PAR PACIFIC HOLDINGS, INC. AND SUBSIDIARIES
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Fair Value Measurements

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (exit price). Fair value measurements are categorized with the highest priority given to unadjusted quoted prices in active markets for identical assets or liabilities and the lowest priority given to unobservable inputs. The three levels of the fair value hierarchy are as follows:

- Level 1 – Assets or liabilities for which the item is valued based on quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 – Assets or liabilities valued based on observable market data for similar instruments.
- Level 3 – Assets or liabilities for which significant valuation assumptions are not readily observable in the market; instruments valued based on the best available data, some of which is internally-developed and considers risk premiums that a market participant would require.

The level in the fair value hierarchy within which the fair value measurement is categorized is based on the lowest level input that is significant to the fair value measurement. Our assessment of the significance of a particular input to the fair value measurement requires judgment and may affect the valuation of the fair value of assets and liabilities and their placement within the fair value hierarchy levels. Our policy is to recognize transfers in and/or out of fair value hierarchy levels as of the end of the reporting period for which the event or change in circumstances caused the transfer. We have consistently applied these valuation techniques for the periods presented. The fair value of the J. Aron repurchase obligation derivative is measured using estimates of the prices and differentials assuming settlement at the end of the reporting period.

Income (Loss) Per Share

Basic income (loss) per share (“EPS”) is computed by dividing net income (loss) attributable to common stockholders by the sum of the weighted-average number of common shares outstanding and the weighted-average number of shares issuable under the warrants. The common stock warrants are included in the calculation of basic EPS because they are issuable for minimal consideration. Basic and diluted EPS are computed taking into account the effect of participating securities. Participating securities include restricted stock that has been issued but has not yet vested. Please read Note 18—Income (Loss) Per Share for further information.

Foreign Currency Transactions

We may, on occasion, enter into transactions denominated in currencies other than the U.S. dollar, which is our functional currency. Gains and losses resulting from changes in currency exchange rates between the functional currency and the currency in which a transaction is denominated are included in Other income (expense), net, in the accompanying consolidated statement of operations in the period in which the currency exchange rates change.

Accounting Principles Not Yet Adopted

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)* (“ASU 2016-02” or “ASC 842”). ASU 2016-02 requires lessees to recognize all leases, including operating leases, on the balance sheet as a right-of-use asset or lease liability. In July 2018, the FASB issued ASU No. 2018-11 (“ASU 2018-11”), which allows for an option to apply the transition provisions of ASC 842 at the adoption date versus at the earliest comparative period presented in the financial statements and an optional practical expedient that permits lessors to not separate non-lease components from the associated lease component if certain conditions are met. These ASUs and other amendments and technical corrections to ASC 842 are effective for interim periods and fiscal years beginning after December 15, 2018, and early application is permitted. We have adopted ASC 842 on January 1, 2019 under the modified retrospective approach and used the effective date as our initial application date. We have elected to apply the practical expedients package that allows us to not reassess our conclusions regarding lease identification, classification and initial direct costs for contracts that commenced prior to the effective date. We will also apply the short-term lease exception and the practical expedient that allows us not to bifurcate lease and non-lease components. We have substantially completed our evaluation of the amended lease guidance in ASC 842 for our existing leases as of December 31, 2018. Our existing lease contracts include leases related to retail facilities, railcars, barges, and other facilities used in the storage, transportation, and sale of crude oil and refined products. We are still evaluating lease contracts assumed in connection with our acquisition of U.S. Oil & Refining Co. Please read Note 22—Subsequent Events. As a result of the adoption of ASC 842, we expect to record lease assets and lease liabilities related to operating and finance leases in the approximate range of \$365 million to \$385 million on our consolidated balance sheet, including our preliminary estimate for U.S. Oil & Refining Co. leases. The new standard will also require additional disclosures for financing and operating leases beginning in the first quarter of 2019.

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In January 2017, the FASB issued ASU No. 2017-04, *Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment* (“ASU 2017-04”), which eliminates Step 2 from the current goodwill impairment test. Under ASU 2017-04, an entity is no longer required to determine goodwill impairment by calculating the implied fair value of goodwill by assigning the fair value of a reporting unit to all of its assets and liabilities as if that reporting unit had been acquired in a business combination. Under ASU 2017-04, an entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit’s fair value. The guidance in this ASU is effective for fiscal years and interim periods beginning after December 15, 2019, with early adoption permitted. This ASU should be applied prospectively from the date of adoption. This ASU will change the policy under which we perform our annual goodwill impairment assessment by eliminating Step 2 of the test.

In February 2018, the FASB issued ASU No. 2018-02, *Income Statement—Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income* (“ASU 2018-02”). This ASU permits entities to elect to reclassify to retained earnings the stranded effects in Accumulated Other Comprehensive Income related to the changes in the statutory tax rate that were charged to income from continuing operations under the requirements of ASC 740. The guidance in ASU 2018-02 is effective for fiscal years and interim periods beginning after December 15, 2018, with early adoption permitted. We do not expect the adoption of ASU 2018-02 to have a material impact on our financial condition, results of operations, and cash flows.

In August 2018, the FASB issued ASU No. 2018-13, *Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement* (“ASU 2018-13”). This ASU amends, adds, and removes certain disclosure requirements under FASB ASC Topic 820 “Fair Value Measurement.” The guidance in ASU 2018-13 is effective for fiscal years and interim periods beginning after December 15, 2019, with early adoption permitted. We are currently evaluating the impact of ASU 2018-13 on our disclosures.

In August 2018, the FASB issued ASU No. 2018-14, *Disclosure Framework—Changes to the Disclosure Requirements for Defined Benefit Plans* (“ASU 2018-14”). This ASU amends, adds, and removes certain disclosure requirements under FASB ASC Topic 715 “Compensation — Retirement Benefits.” The guidance in ASU 2018-14 is effective for fiscal years beginning after December 15, 2020, with early adoption permitted. We are currently evaluating the impact of ASU 2018-14 on our disclosures.

In August 2018, the FASB issued ASU No. 2018-15, *Customer’s Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That is a Service Contract* (“ASU 2018-15”). This ASU requires entities to account for implementation costs incurred in a cloud computing agreement that is a service contract under the guidance in FASB ASC Topic 350, “Goodwill and Intangible Assets,” which results in a capitalized and amortizable intangible asset. The guidance in ASU 2018-15 is effective for fiscal years and interim periods beginning after December 15, 2019, with early adoption permitted. We currently do not expect the adoption of ASU 2018-15 to have a material impact on our financial condition, results of operations, and cash flows.

Accounting Principles Adopted

On January 1, 2018, we adopted ASU No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*, as amended by other ASUs issued since May 2014 (“ASU 2014-09” or “ASC 606”), using the modified retrospective method as permitted. Under this method, the cumulative effect of initially applying ASU 2014-09 is recognized as an adjustment to the opening balance of retained earnings (or accumulated deficit) and revenues reported in the periods prior to the date of adoption are not changed. Because the adoption of ASU 2014-09 did not have a material impact on the amount or timing of revenues recognized for the sale of refined products, we did not make such an adjustment to retained earnings. Please read Note 5—Revenue Recognition for further information.

On January 1, 2018, we adopted ASU No. 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments* (“ASU 2016-15”) and ASU No. 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash* (“ASU 2016-18”). The primary purpose of ASU 2016-15 was to reduce the diversity in practice relating to 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 (including bank-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. ASU 2016-18 required that an entity include restricted cash and restricted cash equivalents within its statement of cash flows and in the reconciliation to the statement of operations. As the new guidance must be applied using a retrospective transition method, we have also retrospectively revised the comparative period statement of cash flows to reflect the adoption of these ASUs. The adoption of these ASUs did not have a material impact on our financial condition, results of operations, or cash flows.

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On January 1, 2018, we adopted ASU No. 2017-01, *Business Combinations (Topic 805): Clarifying the Definition of a Business* (“ASU 2017-01”). This ASU updated the definition of a business combination and provided a framework for determining whether a transaction involves an asset or a business. The adoption of this ASU changed the policy under which we perform our assessments and accounting for future acquisition or disposal transactions, including the Northwest Retail Acquisition and Hawaii Refinery Expansion. Please read Note 4—Acquisitions for further information.

On January 1, 2018, we adopted ASU 2017-07, *Compensation—Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost* (“ASU 2017-07”). This ASU required entities to (1) disaggregate the current-service-cost component from the other components of net benefit cost (the “other components”) and present it with other current compensation costs for related employees in the income statement and (2) present the other components elsewhere in the income statement and outside of income from operations if that subtotal is presented. In addition, the ASU required entities to disclose the income statement lines that contain the other components if they are not presented on appropriately described separate lines. As a result of the adoption of ASU 2017-07, we also retrospectively adjusted our 2017 and 2016 results of operations and disclosures, using the amounts disclosed in the benefit plan note for the estimation basis as a practical expedient. Operating income (loss) for the year ended December 31, 2016 was adjusted to reflect the reclassification of the curtailment gain of \$3.1 million from Operating expense (excluding depreciation) to a newly-defined line item within Total other income (expense), net, Gain on curtailment of pension obligation. For the years ended December 31, 2017 and 2016, other immaterial non-service-cost-related components of the net periodic benefit cost related to our defined benefit pension plan were reclassified from Operating expense (excluding depreciation) to Other income (expense), net.

On January 1, 2018, we adopted ASU 2017-09, *Compensation—Stock Compensation (Topic 718): Scope of Modification Accounting* (“ASU 2017-09”). The primary purpose of this ASU was to reduce the diversity in practice and cost and complexity in applying the guidance in Topic 718 related to the change to terms or conditions of a share-based payment award. The adoption of ASU 2017-09 did not have a material impact on our financial condition, results of operations, or cash flows.

In March 2018, the FASB issued ASU No. 2018-05, *Income Taxes (Topic 740): Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin No. 118* (“ASU 2018-05”). Under ASU 2018-05, an entity would estimate, to the extent possible, the impacts of the Tax Cut and Jobs Act enacted on December 22, 2017 (“U.S. tax reform”) and then adjust the estimates when better information is available or the amount becomes determinable over something similar to the measurement period under business combination guidance. This ASU was effective upon issuance. As of December 31, 2018, we believe the impacts of the U.S. tax reform have been reasonably estimated and recorded within our consolidated financial statements.

Note 3—Investment in Laramie Energy, LLC

We have a 46.0% ownership interest in Laramie Energy, a joint venture entity focused on developing and producing natural gas in Garfield, Mesa, and Rio Blanco Counties, Colorado. Laramie Energy has a \$400 million revolving credit facility secured by a lien on its natural gas and crude oil properties and related assets with a borrowing base currently set at \$240 million. As of December 31, 2018 and 2017, the balance outstanding on the revolving credit facility was approximately \$210.8 million and \$171.5 million, respectively. We are guarantors of Laramie Energy’s credit facility, with recourse limited to the pledge of our equity interest in our wholly owned subsidiary, Par Piceance Energy Equity, LLC. Under the terms of its credit facility, Laramie Energy is generally prohibited from making future cash distributions to its owners, including us.

On March 1, 2016, Laramie Energy acquired and assumed operatorship of certain properties in the Piceance Basin for \$152.1 million, subject to customary purchase price adjustments (“Laramie Purchase”). In connection with the Laramie Purchase, we acquired additional membership interests of Laramie Energy for an aggregate cash purchase price of \$55.0 million. As a result of this transaction, our ownership interest in Laramie Energy increased from 32.4% to 42.3%.

On February 28, 2018, Laramie Energy closed on a purchase and contribution agreement with an unaffiliated third party that contributed all of its oil and gas properties located in the Piceance Basin and a \$20.0 million cash payment, collectively with a fair market value of \$28.1 million, into Laramie Energy in exchange for 70,227 of Laramie Energy’s newly issued Class A Units. The unaffiliated third party also contributed a \$3.5 million cash payment for asset reclamation liabilities related to the properties conveyed. As a result of this transaction, our ownership interest in Laramie Energy decreased from 42.3% to 39.1%.

On October 18, 2018, Laramie Energy repurchased 138,795 of its Class A Units from certain unitholders for an aggregate purchase price of \$14.8 million. As a result of this transaction, our ownership interest in Laramie Energy increased from 39.1% to 46.0%.

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The change in our equity investment in Laramie Energy is as follows (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Beginning balance	\$ 127,192	\$ 108,823	\$ 76,203
Equity earnings (losses) from Laramie Energy	4,487	13,043	(28,198)
Accretion of basis difference	4,977	5,326	5,818
Investments	—	—	55,000
Ending balance	\$ 136,656	\$ 127,192	\$ 108,823

Summarized financial information for Laramie Energy is as follows (in thousands):

	December 31,	
	2018	2017
Current assets	\$ 28,569	\$ 18,757
Non-current assets	788,515	720,444
Current liabilities	41,681	42,149
Non-current liabilities	293,084	237,497

	Year Ended December 31,		
	2018	2017	2016
Natural gas and oil revenues	\$ 226,974	\$ 157,879	\$ 104,826
Income (loss) from operations	34,206	6,019	(27,325)
Net income (loss)	6,347	30,837	(61,849)

Laramie Energy's net income for the year ended December 31, 2018 includes \$66.6 million and \$4.1 million of DD&A expense and unrealized losses on derivative instruments, respectively. Laramie Energy's net income for the year ended December 31, 2017 includes \$50.3 million and \$46.2 million of DD&A expense and unrealized gains on derivative instruments, respectively. Laramie Energy's net loss for the year ended December 31, 2016 includes \$42.7 million and \$34.5 million of DD&A expense and unrealized losses on derivative instruments, respectively.

At December 31, 2018 and 2017, our equity in the underlying net assets of Laramie Energy exceeded the carrying value of our investment by approximately \$85.2 million and \$67.2 million, respectively. This difference arose primarily due to lack of control and marketability discounts and an other-than-temporary impairment of our equity investment in Laramie Energy. We attributed this difference to natural gas and crude oil properties and are amortizing the difference over 15 years based on the estimated timing of production of proved reserves.

Note 4—Acquisitions

Hawaii Refinery Expansion

On August 29, 2018, following the announcement by IES Downstream, LLC's ("IES") that it was ceasing refining operations in Hawaii, we entered into a Topping Unit Purchase Agreement with IES to purchase certain of IES's refining units and related assets in addition to certain hydrocarbon and non-hydrocarbon inventory (collectively, the "Hawaii Refinery Expansion"). On December 19, 2018, we completed the asset purchase for total consideration of approximately \$66.9 million, net of a \$4.3 million receivable related to net working capital adjustments. The purchase price consisted of \$47.6 million in cash and approximately 1.1 million shares of our common stock valued with a fair value of \$19.3 million.

We accounted for the Hawaii Refinery Expansion as an asset acquisition whereby the purchase price was allocated entirely to the assets acquired. Of the total purchase price of \$66.9 million, \$45.2 million was allocated to property, plant, and equipment, \$4.3 million to non-hydrocarbon inventory, and \$17.4 million to hydrocarbon inventory. With the completion of the Hawaii Refinery Expansion, the Hawaii refinery now has two facility locations that are approximately two miles from one another: Par East, our legacy refinery assets, and Par West, the recently-acquired assets.

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We incurred \$5.7 million of acquisition costs related to the Hawaii Refinery Expansion for the year ended December 31, 2018 . These costs are included in Acquisition and integration costs on our condensed consolidated statement of operations.

Northwest Retail Acquisition

On January 9, 2018 , we entered into an Asset Purchase Agreement with CHS, Inc. to acquire twenty-one (21) owned retail gasoline, convenience store facilities and twelve (12) leased retail gasoline, convenience store facilities, all at various locations in Washington and Idaho (collectively, “ Northwest Retail ”). On March 23, 2018 , we completed the acquisition for cash consideration of approximately \$74.5 million (the “ Northwest Retail Acquisition ”).

As part of the Northwest Retail Acquisition , Par and CHS, Inc. entered into a multi-year branded petroleum marketing agreement for the continued supply of Cenex® -branded refined products to the acquired Cenex® Zip Trip convenience stores. In addition, the parties also entered into a multi-year supply agreement pursuant to which Par supplies refined products to CHS, Inc. within the Rocky Mountain and Pacific Northwest markets.

We accounted for the acquisition of Northwest Retail as a business combination whereby the purchase price was allocated to the assets acquired and liabilities assumed based on their estimated fair values on the date of acquisition. Goodwill recognized in the transaction was attributable to opportunities expected to arise from combining our operations with Northwest Retail and utilization of our net operating loss carryforwards, as well as intangible assets that do not qualify for separate recognition. Goodwill recognized as a result of the Northwest Retail Acquisition is expected to be deductible for income tax reporting purposes.

A summary of the fair value of the assets acquired and liabilities assumed is as follows (in thousands):

Cash	\$ 200
Inventories	4,138
Prepaid and other current assets	243
Property, plant, and equipment	30,230
Goodwill (1)	46,210
Accounts payable and other current liabilities	(759)
Long-term capital lease obligations	(5,244)
Other non-current liabilities	(487)
Total	<u>\$ 74,531</u>

(1) The total goodwill balance of \$46.2 million was allocated to our retail segment.

As of December 31, 2018, we finalized the Northwest Retail Acquisition purchase price allocation. We incurred \$0.6 million of acquisition costs related to the Northwest Retail Acquisition for the year ended December 31, 2018 . These costs are included in Acquisition and integration costs on our condensed consolidated statement of operations.

Wyoming Refining Company Acquisition

On June 14, 2016 , Par Wyoming, LLC, a wholly owned subsidiary of Par, entered into a unit purchase agreement (the “Purchase Agreement”) with Black Elk Refining, LLC to purchase all of the issued and outstanding units representing the membership interests in Hermes Consolidated, LLC (d/b/a Wyoming Refining Company) and, indirectly, Wyoming Refining Company ’s wholly owned subsidiary, Wyoming Pipeline Company, LLC (collectively, “ Wyoming Refining ” or “ WRC ”) (the “ WRC Acquisition ”). Wyoming Refining owns and operates a refinery and related logistics assets in Newcastle, Wyoming .

On July 14, 2016 , we completed the WRC Acquisition for cash consideration of \$209.4 million , including a deposit of \$5.0 million paid in June 2016, and assumed debt consisting of term loans of \$58.0 million and revolving loans of \$10.1 million . The consideration was paid with funds received from the issuance of our 2.50% convertible subordinated bridge notes (the “Bridge Notes”), cash on hand, which included the net proceeds from our June 2016 issuance and sale of an aggregate of \$115 million principal amount of 5.00% convertible senior notes due 2021 (the “ 5.00% Convertible Senior Notes ”), and the issuance of a \$65 million secured term loan by Par Wyoming Holdings, LLC (the “ Par Wyoming Holdings Credit Agreement ”). Please read Note 12—Debt for further information on the 5.00% Convertible Senior Notes , the Bridge Notes, and the Par Wyoming Holdings Credit Agreement .

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We accounted for the WRC Acquisition as a business combination whereby the purchase price was allocated to the assets acquired and liabilities assumed based on their estimated fair values on the date of the acquisition. Goodwill recognized in the transaction was attributable to opportunities expected to arise from combining our operations with Wyoming Refining and utilization of our net operating loss carryforwards, as well as other intangible assets that do not qualify for separate recognition. Goodwill recognized as a result of the WRC Acquisition is expected to be deductible for income tax reporting purposes.

During the three months ended June 30, 2017, the purchase price allocation was adjusted to record an increase of \$2.0 million to our Wyoming refinery's environmental liability as a result of additional information obtained by management regarding estimated remediation costs at certain locations. The purchase price allocation was also adjusted to record an increase to inventory of \$0.5 million related to line fill inventory at our refined product pipelines. Goodwill increased \$1.5 million as a result of these adjusting entries recorded during the three months ended June 30, 2017. As of June 30, 2017, we finalized the WRC Acquisition purchase price allocation.

A summary of the fair value of the assets acquired and liabilities assumed is as follows (in thousands):

Cash	\$ 183
Accounts receivable	16,880
Inventories	28,402
Prepaid and other assets	1,304
Property, plant, and equipment	254,367
Goodwill (1)	66,449
Accounts payable and other current liabilities	(57,861)
Wyoming Refining Senior Secured Revolver	(10,100)
Wyoming Refining Senior Secured Term Loan	(58,036)
Other non-current liabilities	(32,222)
Total	\$ 209,366

(1) We allocated \$39.8 million and \$26.6 million of goodwill to our refining and logistics segments, respectively.

We incurred \$0.7 million of acquisition costs related to the WRC Acquisition for the year ended December 31, 2016. These costs are included in acquisition and integration costs on our consolidated statement of operations.

The results of operations of Wyoming Refining were included in our results beginning July 14, 2016. For the year ended December 31, 2016, our results of operations included revenues of \$174.6 million and net income of \$0.7 million related to Wyoming Refining. The following unaudited pro forma financial information presents our consolidated revenues and net income (loss) as if the WRC Acquisition had been completed on January 1, 2015 (in thousands):

	Year Ended December 31, 2016
Revenues	\$ 2,026,237
Net (loss)	(51,239)
(Loss) per share	
Basic	\$ (1.21)
Diluted	\$ (1.21)

Note 5—Revenue Recognition

As of December 31, 2018 and December 31, 2017, receivables from contracts with customers were \$148.4 million and \$112.3 million, respectively. Our refining segment recognizes deferred revenues when cash payments are received in advance of delivery of products to the customer. Deferred revenue was \$6.7 million and \$9.5 million as of December 31, 2018 and December 31, 2017, respectively. We have elected to apply a practical expedient not to disclose the value of unsatisfied performance.

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obligations for (i) contracts with an original expected duration of less than one year and (ii) contracts where the variable consideration has been allocated entirely to our unsatisfied performance obligation.

The following table provides information about disaggregated revenue by major product line and includes a reconciliation of the disaggregated revenue with reportable segments (in thousands):

Year Ended December 31, 2018	Refining	Logistics	Retail
<u>Product or service:</u>			
Gasoline	\$ 981,090	\$ —	\$ 317,434
Distillates (1)	1,770,381	—	39,835
Other refined products (2)	458,596	—	—
Merchandise	—	—	83,771
Transportation and terminalling services	—	125,743	—
Total segment revenues (3)	\$ 3,210,067	\$ 125,743	\$ 441,040

(1) Distillates primarily include diesel and jet fuel.

(2) Other refined products include fuel oil, gas oil, and naphtha.

(3) Refer to Note 20—Segment Information for the reconciliation of segment revenues to total consolidated revenues.

Note 6—Inventories

Inventories at December 31, 2018 and 2017 consist of the following (in thousands):

	Titled Inventory	Supply and Offtake Agreements (1)	Total
December 31, 2018			
Crude oil and feedstocks	\$ 7,000	\$ 117,877	\$ 124,877
Refined products and blendstock	62,401	100,175	162,576
Warehouse stock and other (2)	34,612	—	34,612
Total	\$ 104,013	\$ 218,052	\$ 322,065
December 31, 2017			
Crude oil and feedstocks	\$ 93,970	\$ 56,014	\$ 149,984
Refined products and blendstock	63,505	108,917	172,422
Warehouse stock and other	22,951	—	22,951
Total	\$ 180,426	\$ 164,931	\$ 345,357

(1) Please read Note 11—Inventory Financing Agreements for further information.

(2) Includes \$5.0 million of RINs and environmental credits.

There was a \$3.8 million reserve for the lower of cost or net realizable value of inventory as of December 31, 2018 . There was no reserve for the lower of cost or net realizable value of inventory as of December 31, 2017 .

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Note 7—Prepaid and Other Current Assets

Prepaid and other current assets at December 31, 2018 and 2017 consist of the following (in thousands):

	December 31,	
	2018	2017
Collateral posted with broker for derivative instruments (1)	\$ 2,759	\$ 215
Prepaid insurance	7,727	7,547
Derivative assets	5,164	4,296
Other	12,720	5,221
Total	\$ 28,370	\$ 17,279

(1) Our cash margin that is required as collateral deposits on our commodity derivatives cannot be offset against the fair value of open contracts except in the event of default. Please read Note 13—Derivatives for further information.

Note 8—Property, Plant, and Equipment

Major classes of property, plant, and equipment consist of the following (in thousands):

	December 31,	
	2018	2017
Land	\$ 117,559	\$ 79,330
Buildings and equipment	512,870	433,977
Other	18,939	15,931
Total property, plant, and equipment	649,368	529,238
Proved oil and gas properties	400	400
Less accumulated depreciation and depletion	(111,507)	(79,622)
Property, plant, and equipment, net	\$ 538,261	\$ 450,016

Depreciation expense was approximately \$39.0 million, \$31.8 million, and \$23.1 million for the years ended December 31, 2018, 2017, and 2016, respectively.

Note 9—Asset Retirement Obligations

The table below summarizes the changes in our recorded asset retirement obligations (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Beginning balance	\$ 9,103	\$ 9,042	\$ 8,909
Obligations acquired	487	—	—
Accretion expense	395	369	362
Liabilities settled during period	—	(308)	(229)
Ending balance	\$ 9,985	\$ 9,103	\$ 9,042

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Note 10—Goodwill and Intangible Assets

During the years ended December 31, 2018 and 2017, the change in the carrying amount of goodwill was as follows (in thousands):

Balance at January 1, 2017	\$ 105,732
Wyoming Refining acquisition purchase price allocation adjustment (1)	1,455
Balance at December 31, 2017	107,187
Acquisition of Northwest Retail (1)	46,210
Balance at December 31, 2018	<u>\$ 153,397</u>

(1) Please read Note 4—Acquisitions for further discussion.

Intangible assets consist of the following (in thousands):

	December 31,	
	2018	2017
Intangible assets:		
Railcar leases	\$ 3,249	\$ 3,249
Trade names and trademarks	6,267	6,267
Customer relationships	32,064	32,064
Total intangible assets	<u>41,580</u>	<u>41,580</u>
Accumulated amortization:		
Railcar leases	(3,249)	(3,249)
Trade name and trademarks	(5,037)	(4,951)
Customer relationships	(9,347)	(6,776)
Total accumulated amortization	<u>(17,633)</u>	<u>(14,976)</u>
Net:		
Railcar leases	—	—
Trade name and trademarks	1,230	1,316
Customer relationships	22,717	25,288
Total intangible assets, net	<u>\$ 23,947</u>	<u>\$ 26,604</u>

Amortization expense was approximately \$2.7 million, \$3.3 million, and \$4.5 million for the years ended December 31, 2018, 2017, and 2016, respectively. Our intangible assets related to customer relationships and trade names have an average useful life of 13.5 years. Expected amortization expense for each of the next five years and thereafter is as follows (in thousands):

Year Ended	Amount
2019	\$ 2,658
2020	2,658
2021	2,658
2022	2,658
2023	2,658
Thereafter	10,657
	<u>\$ 23,947</u>

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Note 11—Inventory Financing Agreements

Supply and Offtake Agreements

On June 1, 2015, we entered into several agreements with J. Aron to support the operations of our Hawaii refinery (the “Supply and Offtake Agreements”). On May 8, 2017, we and J. Aron amended the Supply and Offtake Agreements and extended the term through May 31, 2021 with a one -year extension option upon mutual agreement of the parties. As part of this amendment, J. Aron may enter into agreements with third parties whereby J. Aron will remit payments to these third parties for refinery procurement contracts for which we will become immediately obligated to reimburse J. Aron. As of December 31, 2018, we had no obligations due to J. Aron under this letter of credit agreement. On December 21, 2017, in connection with the issuance of the 7.75% Senior Secured Notes, we amended and restated the Supply and Offtake Agreements to update the terms of the collateral. On June 27, 2018, we and J. Aron amended the Supply and Offtake Agreements to increase the amount that we may defer under the deferred payment arrangement. Prior to June 27, 2018, we had the right to defer payments owed to J. Aron up to the lesser of \$125 million or 85% of eligible accounts receivable and inventory. Effective June 27, 2018, we have the right to defer payments owed to J. Aron up to the lesser of \$165 million or 85% of eligible accounts receivable and inventory. On December 5, 2018, we amended the Supply and Offtake Agreements to account for additional processing capacity expected to be provided through the Hawaii Refinery Expansion. The December 5, 2018 amendment to the Supply and Offtake Agreements also (i) requires us to increase our margin requirements by an aggregate \$2.5 million by making certain additional margin payments on December 19, 2018, March 1, 2019, and June 3, 2019, and (ii) only allows dividends, payments, or other distributions with respect to any equity interests in Par Hawaii Refining, LLC (“PHR”) in limited and restricted circumstances.

During the term of the Supply and Offtake Agreements, we and J. Aron will identify mutually acceptable contracts for the purchase of crude oil from third parties. Per the Supply and Offtake Agreements, J. Aron will provide up to 150 Mbpd of crude oil to our Hawaii refinery. Additionally, we agreed to sell and J. Aron agreed to buy, at market prices, refined products produced at our Hawaii refinery. We will then repurchase the refined products from J. Aron prior to selling the refined products to our retail operations or to third parties. The agreements also provide for the lease of crude oil and certain refined product storage facilities to J. Aron. Following expiration or termination of the Supply and Offtake Agreements, we are obligated to purchase the crude oil and refined product inventories then owned by J. Aron and located at the leased storage facilities at then-current market prices.

Though title to the crude oil and certain refined product inventories resides with J. Aron, the Supply and Offtake Agreements are accounted for similar to a product financing arrangement; therefore, the crude oil and refined products inventories will continue to be included on our consolidated balance sheets until processed and sold to a third party. Each reporting period, we record a liability in an amount equal to the amount we expect to pay to repurchase the inventory held by J. Aron based on current market prices.

For the years ended December 31, 2018, 2017, and 2016, we incurred approximately \$21.5 million, \$13.7 million, and \$7.8 million in handling fees related to the Supply and Offtake Agreements, respectively, which are included in Cost of revenues (excluding depreciation) on our consolidated statements of operations. For the years ended December 31, 2018, 2017, and 2016, Interest expense and financing costs, net on our consolidated statements of operations includes approximately \$4.5 million, \$2.3 million, and \$3.2 million of expenses related to the Supply and Offtake Agreements, respectively.

The Supply and Offtake Agreements also include a deferred payment arrangement (“Deferred Payment Arrangement”) whereby we can defer payments owed under the agreements up to the lesser of \$165 million or 85% of the eligible accounts receivable and inventory. Upon execution of the Supply and Offtake Agreements, we paid J. Aron a deferral arrangement fee of \$1.3 million. The deferred amounts under the Deferred Payment Arrangement will bear interest at a rate equal to three-month LIBOR plus 3.50% per annum. We also agreed to pay a deferred payment availability fee equal to 0.75% of the unused capacity under the Deferred Payment Arrangement. Amounts outstanding under the Deferred Payment Arrangement are included in Obligations under inventory financing agreements on our consolidated balance sheets. Changes in the amount outstanding under the Deferred Payment Arrangement are included within Cash flows from financing activities on the consolidated statements of cash flows. As of December 31, 2018 and 2017, the capacity of the Deferred Payment Arrangement was \$77.4 million and \$83.1 million, respectively, and we had \$68.4 million and \$41.1 million outstanding, respectively.

Under the Supply and Offtake Agreements, we pay or receive certain fees from J. Aron based on changes in market prices over time. In February 2016, we fixed the market fee for the period from December 1, 2016 through May 31, 2018 of the Supply and Offtake Agreements for an additional \$14.6 million to be settled in eighteen equal monthly payments. In 2017, we fixed the market fee for the period from June 1, 2018 through May 2021 for an additional aggregate \$2.2 million. The receivable from J. Aron was recorded as a reduction to our Obligations under inventory financing agreements pursuant to our Master Netting Agreement. As of December 31, 2018 and 2017, the receivable was \$2.5 million and \$7.1 million, respectively.

The agreements also provide us with the ability to economically hedge price risk on our inventories and crude oil purchases. Please read Note 13—Derivatives for further information.

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Note 12—Debt

The following table summarizes our outstanding debt as of December 31, 2018 and 2017 (in thousands):

	December 31,	
	2018	2017
5.00% Convertible Senior Notes due 2021	\$ 115,000	\$ 115,000
7.75% Senior Secured Notes due 2025	300,000	300,000
ABL Credit Facility	—	—
Mid Pac Term Loan	1,466	—
Principal amount of long-term debt	416,466	415,000
Less: unamortized discount and deferred financing costs	(23,826)	(30,188)
Total debt, net of unamortized discount and deferred financing costs	392,640	384,812
Less: current maturities	(33)	—
Long-term debt, net of current maturities	\$ 392,607	\$ 384,812

Annual maturities of our long-term debt for the next five years and thereafter are as follows (in thousands):

Year Ended	Amount Due
2019	\$ 33
2020	34
2021	115,036
2022	37
2023	39
Thereafter	301,287
Total	\$ 416,466

Additionally, as of December 31, 2018, we had approximately \$13.5 million in letters of credit outstanding under the ABL Credit Facility.

Our debt is subject to various affirmative and negative covenants. As of December 31, 2018, we were in compliance with all debt covenants. Under the ABL Credit Facility and the indenture governing the 7.75% Senior Secured Notes, our subsidiaries are restricted from paying dividends or making other equity distributions, subject to certain exceptions.

7.75% Senior Secured Notes Due 2025

On December 21, 2017, Par Petroleum, LLC and Par Petroleum Finance Corp. (collectively, the “Issuers”), both our wholly owned subsidiaries, completed the issuance and sale of \$300 million in aggregate principal amount of 7.75% Senior Secured Notes in a private placement under Rule 144A and Regulation S of the Securities Act of 1933, as amended. The net proceeds of \$289.2 million (net of financing costs and original issue discount of 1%) from the sale were used to repay the Hawaii Retail Credit Facilities, the Wyoming Refining Credit Facilities, the Par Wyoming Holdings Credit Agreement, and the J. Aron Forward Sale, and for general corporate purposes.

The 7.75% Senior Secured Notes bear interest at a rate of 7.750% per year beginning December 21, 2017 (payable semi-annually in arrears on June 15 and December 15 of each year, beginning on June 15, 2018) and will mature on December 15, 2025.

The indenture governing the 7.75% Senior Secured Notes contains restrictive covenants limiting the ability of Par Petroleum, LLC and its Restricted Subsidiaries (as defined in the indenture) to, among other things, incur additional indebtedness, issue certain preferred shares, create liens on certain assets to secure debt, sell or otherwise dispose of all or substantially all assets, or pay dividends.

The 7.75% Senior Secured Notes are secured by first priority liens (subject to the relative priority of permitted liens) on substantially all of the property and assets of the Issuers and the subsidiary guarantors, including but not limited to, material real property now owned or hereafter acquired by the Issuers or subsidiary guarantors and their equipment, intellectual property, and equity interests, but excluding certain property which is collateral under the ABL Credit Facility and collateral under the Supply

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and Offtake Agreements. The 7.75% Senior Secured Notes are fully and unconditionally guaranteed on a senior secured basis, jointly and severally, by each of Par Petroleum, LLC 's existing wholly owned subsidiaries (other than Par Petroleum Finance Corp.), and are guaranteed on a senior unsecured basis only as to the payment of principal and interest by Par Pacific Holdings, Inc. In the future, the 7.75% Senior Secured Notes will be guaranteed on a senior secured basis by additional subsidiaries of Par Petroleum, LLC that guarantee material indebtedness of the Issuers or otherwise become obligated with respect to material indebtedness under a credit facility, subject to certain exceptions.

ABL Credit Facility

On December 21, 2017, in connection with the issuance of the 7.75% Senior Secured Notes, Par Petroleum, LLC, Par Hawaii, Inc., Mid Pac Petroleum, LLC, HIE Retail, LLC, and WRC (collectively, the "ABL Borrowers"), entered into a Loan and Security Agreement dated as of December 21, 2017 (the "ABL Credit Facility") with certain lenders and Bank of America, N.A., as administrative agent and collateral agent. The ABL Credit Facility provides for a revolving credit facility that provides for revolving loans and for the issuance of letters of credit (the "ABL Revolver"). On July 24, 2018, we amended the ABL Credit Facility to increase the maximum principal amount at any time outstanding of the ABL Revolver by \$10 million to \$85 million, subject to a borrowing base. The ABL Revolver had no outstanding balance as of December 31, 2018 and had a borrowing base of approximately \$54.7 million at December 31, 2018.

The revolving loans under the ABL Revolver bear interest at a fluctuating rate per annum equal to (i) during the periods such revolving loan is a base rate loan, the base rate plus the applicable margin in effect from time to time, and (ii) during the periods such revolving loan is a LIBOR Loan, at LIBOR for the applicable interest period plus the applicable margin in effect from time to time. The base rate is equal to (i) daily LIBOR ("LIBOR Daily Floating Rate") or (ii) if the LIBOR Daily Floating Rate is unavailable for any reason, a rate as calculated per the agreement (the "Prime Rate") for such day. The maturity date of the ABL Revolver is December 21, 2022, on which date all revolving loans will be due and payable in full. The average effective interest rate for 2018 on the ABL Revolver loan was 4.3%.

The applicable margins for the ABL Credit Facility and advances under the ABL Revolver are as specified below:

Level	Arithmetic Mean of Daily Availability (as a percentage of the borrowing base)	Applicable Margin for LIBOR Loans and Base Rate Loans Subject to LIBOR Daily Floating Rate	Applicable Margin for Base Rate Loans Subject to the Prime Rate
1	>50%	1.75%	0.75%
2	>30% but ≤ 50%	2.00%	1.00%
3	≤ 30%	2.25%	1.25%

The obligations of the ABL Borrowers are guaranteed by Par and Par Petroleum, LLC 's existing and future direct or indirect domestic subsidiaries that are not borrowers under the ABL Credit Facility. The loans and letters of credit issued under the ABL Credit Facility are secured by a first-priority security interest in and lien on certain assets of the borrowers and the guarantors, including cash and cash equivalents and inventory, and excluding the assets of PHR.

Mid Pac Term Loan

On September 27, 2018, Mid Pac Petroleum, LLC, our wholly owned subsidiary, entered into the Mid Pac Term Loan with American Savings Bank, FSB, which provided a term loan of up to \$1.5 million, the proceeds of which were received and used for the October 18, 2018 purchase of retail property. The Mid Pac Term Loan is scheduled to mature on October 18, 2028.

The Mid Pac Term Loan is payable monthly, bears interest an annual rate of 4.375%, is secured by a first-priority lien on the real property purchased with the funds, including leases and rents on the property and the property's fixed assets and fixtures, and is guaranteed by Par Petroleum, LLC.

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J. Aron Forward Sale

As part of the May 8, 2017 amendment to the Supply and Offtake Agreements, we also entered into a \$30 million forward sale of jet fuel to be delivered to J. Aron over the amended term (“J. Aron Forward Sale”). The proceeds from the J. Aron Forward Sale were used to pay a portion of the outstanding balance on the Term Loan (as defined below). The cost of the J. Aron Forward Sale was based upon an annual interest rate of 7%.

Upon issuance of the 7.75% Senior Secured Notes on December 21, 2017, we repaid in full and terminated the J. Aron Forward Sale and recognized \$0.3 million of costs associated with the termination of the agreement, which is included within Debt extinguishment and commitment costs on our consolidated statement of operations for the year ended December 31, 2017.

Par Wyoming Holdings Credit Agreement

On July 14, 2016, in connection with the WRC Acquisition, Par Wyoming Holdings, LLC, our indirect wholly owned subsidiary, entered into the Par Wyoming Holdings Credit Agreement with certain lenders and Chambers Energy Management, LP, as agent, which provided for a single advance secured term loan to our subsidiary in the amount of \$65.0 million (the “Par Wyoming Holdings Term Loan”) at the closing of the WRC Acquisition. The proceeds of the Par Wyoming Holdings Term Loan were used to pay a portion of the consideration for the WRC Acquisition, to pay certain fees and closing costs, and for general corporate purposes. The Par Wyoming Holdings Term Loan was originally scheduled to mature on July 14, 2021.

The Par Wyoming Holdings Term Loan bore interest at a rate equal to three-month LIBOR plus an applicable interest margin. With respect to cash interest, the applicable interest margin was at a rate per annum equal to 9.5%. With respect to paid-in-kind (“PIK”) interest, the applicable interest margin was at a rate per annum equal to 13%. Interest was payable in arrears on (a) the last day of each fiscal quarter, (b) the maturity date, and (c) the date of any repayment or prepayment of the Par Wyoming Holdings Term Loan.

Upon issuance of the 7.75% Senior Secured Notes on December 21, 2017, we repaid in full and terminated the Par Wyoming Holdings Credit Agreement and recognized \$5.2 million of costs associated with the termination of the agreement, which is included within Debt extinguishment and commitment costs on our consolidated statement of operations for the year ended December 31, 2017.

Wyoming Refining Credit Facilities

Wyoming Refining Company and its wholly owned subsidiary, Wyoming Pipeline Company LLC, were borrowers (the “Wyoming Refining Credit Facility Borrowers”) under a Third Amended and Restated Loan Agreement dated as of April 30, 2015 (as amended, the “Wyoming Refining Credit Facilities”), with Bank of America, N.A., as the lender. The Wyoming Refining Credit Facilities remained in place following the consummation of the WRC Acquisition.

On July 14, 2016, and in connection with the consummation of the WRC Acquisition, the Wyoming Refining Credit Facilities were amended pursuant to a Third Amendment to Third Amended and Restated Loan Agreement (the “Third Loan Amendment”) and a Fourth Amendment to Third Amended and Restated Loan Agreement (the “Fourth Loan Amendment”). Pursuant to the Third Loan Amendment, which was entered into immediately prior to the consummation of the WRC Acquisition, Black Elk Refining, LLC was released from all of its obligations under the Wyoming Refining Credit Facilities and Par Wyoming, LLC joined and became a party to the Wyoming Refining Credit Facilities and the applicable security agreement and guaranteed all obligations of the borrowers under the Wyoming Refining Credit Facilities. The Fourth Loan Amendment was entered into immediately following the consummation of the WRC Acquisition and amended certain covenants in the Wyoming Refining Credit Facilities applicable to Par Wyoming, LLC and the Wyoming Refining Credit Facility Borrowers. On August 7, 2017, we entered into an amendment to the Wyoming Refining Credit Facilities to extend the maturity date from April 30, 2018 until June 30, 2019.

The Wyoming Refining Credit Facilities originally provided for (a) a revolving credit facility in the maximum principal amount at any time outstanding of \$30 million (“Wyoming Refining Senior Secured Revolver”), subject to a borrowing base, which provided for revolving loans and for the issuance of letters of credit and (b) certain term loans that are fully advanced (“Wyoming Refining Senior Secured Term Loan”). The Wyoming Refining Senior Secured Term Loan bore interest at a rate equal to monthly LIBOR plus 3.0%. The Wyoming Refining Senior Secured Term Loan required quarterly principal payments of \$2.3 million.

Upon issuance of the 7.75% Senior Secured Notes on December 21, 2017, we repaid in full and terminated the Wyoming Refining Credit Facilities and recognized \$0.1 million of costs associated with the termination of the agreement, which is included within Debt extinguishment and commitment costs on our consolidated statement of operations for the year ended December 31, 2017.

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5.00% Convertible Senior Notes Due 2021

In June 2016, we completed the issuance and sale of \$115 million in aggregate principal amount of the 5.00% Convertible Senior Notes in a private placement under Rule 144A (the “Notes Offering”). The Notes Offering included the exercise in full of an option to purchase an additional \$15 million in aggregate principal amount of the 5.00% Convertible Senior Notes granted to the initial purchasers. The net proceeds of \$111.6 million (net of original issue discount of 3%) from the sale of the 5.00% Convertible Senior Notes were used to finance a portion of the WRC Acquisition, to repay \$5 million in principal amount of the Term Loan (as defined below), and for general corporate purposes.

The 5.00% Convertible Senior Notes bear interest at a rate of 5.00% per year beginning June 21, 2016 (payable semi-annually in arrears on June 15 and December 15 of each year, beginning on December 15, 2016) and will mature on June 15, 2021. The initial conversion rate for the notes is 55.5556 shares of common stock per \$1,000 principal amount of the 5.00% Convertible Senior Notes (or a total amount of 6,388,894 shares), which is equivalent to an initial conversion price of approximately \$18.00 per share of common stock, subject to adjustment upon the occurrence of certain events. Conversions of the 5.00% Convertible Senior Notes will be settled in cash, shares of common stock, or a combination thereof at our election. The holders of the 5.00% Convertible Senior Notes may exercise their conversion rights at any time prior to the close of business on the business day immediately preceding the maturity date under certain circumstances.

The 5.00% Convertible Senior Notes are not redeemable by us prior to June 20, 2019. On or after June 20, 2019, we may redeem all or any portion of the 5.00% Convertible Senior Notes if the last reported sales price of our common stock is at least 140% of the conversion price then in effect (i) on the trading day immediately preceding the date on which we provide notice of redemption and (ii) for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading day period ending on, and including, the trading day immediately preceding the date on which we provide notice of redemption at a redemption price equal to 100% of the principal amount of the 5.00% Convertible Senior Notes to be redeemed, plus accrued and unpaid interest and a make-whole premium, which is equal to the present value of the remaining scheduled payments of interest on the 5.00% Convertible Senior Notes to be redeemed from the relevant redemption date to the maturity date of June 15, 2021. We have determined that the redemption option and the related make-whole premium represent an embedded derivative that is not clearly and closely related to the 5.00% Convertible Senior Notes. Please read Note 13—Derivatives for further information on embedded derivatives.

We separately account for the liability and equity components of the 5.00% Convertible Senior Notes. The fair value of the liability component was calculated using a discount rate of an identical debt instrument without a conversion feature. Based on this borrowing rate, the fair value of the liability component of the 5.00% Convertible Senior Notes on the issuance date was \$89.3 million. The carrying amount of the equity component was determined to be \$22.2 million by deducting the fair value of the liability component from the \$111.6 million net proceeds of the 5.00% Convertible Senior Notes. The deferred financing costs of \$0.6 million related to 5.00% Convertible Senior Notes were allocated on a proportionate basis between Long-term debt and Additional paid-in capital on the consolidated balance sheet. As of December 31, 2018, the if-converted value did not exceed the outstanding principal amount of the 5.00% Convertible Senior Notes.

As of December 31, 2018, the outstanding principal amount of the 5.00% Convertible Senior Notes was \$115.0 million, the unamortized discount and deferred financing cost was \$14.6 million and the carrying amount of the liability component was \$100.4 million. The unamortized discount and deferred financing costs will be amortized to Interest expense and financing costs, net over the term of the 5.00% Convertible Senior Notes.

Hawaii Retail Credit Facilities

On December 17, 2015, we entered into the Hawaii Retail Credit Facilities in the form of a revolving credit facility up to \$5 million (“Hawaii Retail Revolving Credit Facilities”) that provided for revolving loans and for the issuance of letters of credit and term loans (“Hawaii Retail Term Loans”) in the aggregate principal amount of \$110 million. The proceeds of the Hawaii Retail Term Loans were used to repay in full existing indebtedness under the previous credit facilities, to pay transaction fees and expenses, to repay a portion of existing indebtedness under the Term Loan (as defined below), and to facilitate a cash distribution to Par.

The Hawaii Retail Term Loans originally matured on December 17, 2022 and required principal payments of \$2.75 million on the last business day of each fiscal quarter. The Hawaii Retail Revolving Credit Facilities originally matured on December 17, 2020.

The Hawaii Retail Term Loans and advances under the Hawaii Retail Revolving Credit Facilities bore interest at a fluctuating rate (i) during the periods such revolving loan or term loan, as applicable, equal to a Base Rate Loan, the Base Rate plus an applicable margin ranging from 1.50% to 2.25%, and (ii) during the periods such revolving loan or term loan, as applicable,

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equal to a Eurodollar Loan, the relevant Adjusted Eurodollar Rate for such Eurodollar Loan for the applicable interest period plus an applicable margin ranging from 2.50% to 3.25% . The effective interest rate for 2017 on the outstanding loan was 4.0% .

Upon issuance of the 7.75% Senior Secured Notes on December 21, 2017 , we repaid in full and terminated the Hawaii Retail Credit Facilities and recognized \$1.2 million of costs associated with the termination of the agreement, which is included within Debt extinguishment and commitment costs on our consolidated statement of operations for the year ended December 31, 2017.

Bridge Notes

On July 14, 2016 , we issued approximately \$52.6 million in aggregate principal amount of bridge notes in a private offering pursuant to the terms of a note purchase agreement (the “Bridge Notes”) entered into among the purchasers of the Bridge Notes and us. On September 22, 2016 , we completed a registered pro-rata subscription rights offering of approximately 4 million shares of our common stock (the “Rights Offering”). The Rights Offering resulted in gross proceeds, before expenses, of approximately \$49.9 million . We used the net proceeds from the Rights Offering to repay all accrued and unpaid interest and a portion of the outstanding principal amount on the Bridge Notes. The remaining \$3.1 million aggregate principal amount and \$0.3 million unpaid interest of the Bridge Notes was mandatorily converted into 272,733 shares of our common stock based on a conversion price of \$12.25 per share. In connection with our repayment of the Bridge Notes, we expensed \$3.0 million of financing costs, which are included within Interest expense and financing costs, net on our consolidated statements of operations for the year ended December 31, 2016.

Term Loan

On July 11, 2014 , we and certain subsidiaries entered into a Delayed Draw Term Loan and Bridge Loan Credit Agreement (“Credit Agreement”), amending and restating a previous borrowing arrangement with the lenders, to provide us with a term loan of up to \$50.0 million (“Term Loan”) and a bridge loan of up to \$75.0 million (“Bridge Loan”). The lenders under the Credit Agreement include ZCOF Par Petroleum Holdings, LLC, one of our significant stockholders. Proceeds from the Term Loan were used to fund a deposit per the Mid Pac merger agreement, to pay transaction costs, and for working capital and general corporate purposes.

On June 15, 2016 , the Credit Agreement was amended to permit (i) the issuance of the 5.00% Convertible Senior Notes , (ii) the issuance of our Bridge Notes, and (iii) the WRC Acquisition . We paid a consent fee of \$2.5 million in connection with this amendment, \$1.3 million of which was paid to an affiliate of Whitebox Advisors, LLC (“Whitebox”), one of our largest stockholders. On June 21, 2016 , we repaid \$5 million of the Term Loan pursuant to the terms of the amendment, \$3.3 million of which was allocated to an affiliate of Whitebox. Please read Note 21—Related Party Transactions for additional information.

The Term Loan originally matured on July 11, 2018 and bore interest at either 10% per annum if paid in cash or 12% per annum if paid in kind, at our election, and had an original issue discount of 5% .

On June 30, 2017, we fully repaid the Term Loan and terminated the Credit Agreement. A portion of the proceeds from the J. Aron Forward Sale and cash flows from operations were used to repay the full amount outstanding. We recorded a Debt extinguishment and commitment costs of approximately \$1.8 million related to unamortized deferred financing costs associated with the Term Loan in the year ended December 31, 2017.

Cross Default Provisions

Included within each of our debt instruments are customary cross default provisions that require the repayment of amounts outstanding on demand should an event of default occur and not be cured within the permitted grace period, if any. As of December 31, 2018 , we are in compliance with all of our debt instruments.

Guarantors

In connection with our shelf registration statement on Form S-3, which was filed with the SEC on February 6, 2019 and declared effective on February 15, 2019 (“Registration Statement”), we may sell non-convertible debt securities and other securities in one or more offerings with an aggregate initial offering price of up to \$750.0 million . Any non-convertible debt securities issued under the Registration Statement may be fully and unconditionally guaranteed (except for customary release provisions), on a joint and several basis, by some or all of our subsidiaries, other than subsidiaries that are “minor” within the meaning of Rule 3-10 of Regulation S-X (the “Guarantor Subsidiaries”). We have no “independent assets or operations” within the meaning of Rule 3-10 of Regulation S-X and certain of the Guarantor Subsidiaries are subject to restrictions on their ability to distribute funds to us, whether by cash dividends, loans, or advances.

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Note 13—Derivatives

Commodity Derivatives

We utilize commodity derivative contracts to manage our price exposure in our inventory positions, future purchases of crude oil, future sales and purchases of refined products, and crude oil consumption in our refining process. The derivative contracts that we execute to manage our price risk include exchange traded futures, options, and OTC swaps. Our futures, options, and OTC swaps are marked-to-market and changes in the fair value of these contracts are recognized within Cost of revenues (excluding depreciation) on our consolidated statements of operations.

We are obligated to repurchase the crude oil and refined products from J. Aron at the termination of the Supply and Offtake Agreements. We have determined that this obligation contains an embedded derivative, similar to forward purchase contracts of crude oil and refined products. As such, we have accounted for this embedded derivative at fair value with changes in the fair value recorded in Cost of revenues (excluding depreciation) on our consolidated statements of operations. We are also required under the Supply and Offtake Agreements to hedge the time spread between the period of crude oil cargo pricing and the month of delivery. We utilize OTC swaps to accomplish this.

We have entered into forward purchase contracts for crude oil and forward sales and purchases contracts of refined products. We elect the normal purchases normal sales (“NPNS”) exception for all forward contracts that meet the definition of a derivative and are not expected to net settle. Any gains and losses with respect to these forward contracts designated as NPNS are not reflected in earnings until the delivery occurs. Our open futures and OTC swaps expire at various dates through March 2019.

We elect to offset fair value amounts recognized for derivative instruments executed with the same counterparty under a master netting agreement. Our consolidated balance sheets present derivative assets and liabilities on a net basis. Please read Note 14—Fair Value Measurements for the gross fair value and net carrying value of our derivative instruments. Our cash margin that is required as collateral deposits cannot be offset against the fair value of open contracts except in the event of default.

At December 31, 2018 , our open commodity derivative contracts represented (in thousands of barrels):

Contract type	Long	Short	Net
Futures	305	(26)	279
Swaps	300	(804)	(504)
Total	605	(830)	(225)

Interest Rate Derivatives

We are exposed to interest rate volatility in the Supply and Offtake Agreements. We utilize interest rate swaps to manage our interest rate risk. As of December 31, 2018 , we had locked in an average fixed rate of 0.97% in exchange for a floating interest rate indexed to the three-month LIBOR on an aggregate notional amount of \$100 million . The interest rate swap matured in February 2019. In February 2018, we terminated a separate \$100 million floating interest rate swap originally maturing in March 2021 , which resulted in a realized gain of \$3.7 million .

In June 2016, we completed the issuance and sale of an aggregate of \$115.0 million principal amount of the 5.00% Convertible Senior Notes . Please read Note 12—Debt for further discussion. Upon redemption of our 5.00% Convertible Senior Notes on or after June 20, 2019 at our election, we are obligated to pay a make-whole premium equal to the present value of the remaining scheduled payments of interest on the 5.00% Convertible Senior Notes to be redeemed from the relevant redemption date to the maturity date of June 15, 2021 . We have determined that the redemption option and the related make-whole premium represent an embedded derivative that is not clearly and closely related to the 5.00% Convertible Senior Notes . As such, we have accounted for this embedded derivative at fair value with changes in the fair value recorded in Interest expense and financing costs, net on our consolidated statements of operations. As of December 31, 2018 , this embedded derivative was deemed to have a *de minimis* fair value.

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The following table provides information on the fair value amounts (in thousands) of these derivatives as of December 31, 2018 and 2017 and their placement within our consolidated balance sheets.

	Balance Sheet Location	December 31,	
		2018	2017
		<i>Asset (Liability)</i>	
Commodity derivatives (1)	Prepaid and other current assets	\$ 4,973	\$ 2,814
Commodity derivatives	Other accrued liabilities	(700)	(39)
J. Aron repurchase obligation derivative	Obligations under inventory financing agreements	4,085	(19,564)
Interest rate derivatives	Prepaid and other current assets	191	1,482
Interest rate derivatives	Other long-term assets	—	2,328

(1) Does not include cash collateral of \$2.7 million and \$0.2 million recorded in Prepaid and other current assets and \$8.3 million and \$7.0 million in Other long-term assets as of December 31, 2018 and 2017, respectively.

The following table summarizes the pre-tax gains (losses) recognized in Net income (loss) on our consolidated statements of operations resulting from changes in fair value of derivative instruments not designated as hedges charged directly to earnings (in thousands):

	Statement of Operations Classification	Year Ended December 31,		
		2018	2017	2016
Commodity derivatives	Cost of revenues (excluding depreciation)	\$ (3,420)	\$ (4,517)	\$ (1,338)
J. Aron repurchase obligation derivative	Cost of revenues (excluding depreciation)	23,649	436	(29,810)
Interest rate derivatives	Interest expense and financing costs, net	1,309	489	2,729

Note 14—Fair Value Measurements

Assets and Liabilities Measured at Fair Value on a Nonrecurring Basis

Purchase Price Allocation of Northwest Retail

The fair values of the assets acquired and liabilities assumed as a result of the Northwest Retail acquisition were estimated as of March 23, 2018, the date of the acquisition, using valuation techniques described in notes (1) through (5) described below.

	Fair Value	Valuation
	(in thousands)	Technique
Net working capital	\$ 3,822	(1)
Property, plant, and equipment	30,230	(2)
Goodwill	46,210	(3)
Long-term capital lease obligations	(5,244)	(4)
Other non-current liabilities	(487)	(5)
Total	\$ 74,531	

- (1) Current assets acquired and liabilities assumed were recorded at their net realizable value.
- (2) The fair value of property, plant, and equipment was estimated using the cost approach. Under the cost approach, the total replacement cost of the property is determined based on industry sources with adjustments for regional factors. The total cost is then adjusted for depreciation based on the physical age of the assets and obsolescence. The fair value of the land was estimated using the sales comparison approach. Under this approach, the sales prices of similar properties

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are adjusted to account for differences in land characteristics. We consider this to be a Level 3 fair value measurement. The fair value of capital lease assets was estimated using the income approach. Under the income approach, the annual lease market rental rate cash flow stream is estimated and then discounted to present value over the remaining life of the lease using a pre-tax discount rate based on expected return for the specific asset type and location.

- (3) The excess of the purchase price paid over the fair value of the identifiable assets acquired and liabilities assumed is allocated to goodwill.
- (4) Long-term capital lease obligations were estimated based on the present value of lease payments over the term of the lease.
- (5) Other non-current liabilities are primarily related to asset retirement obligations. AROs are calculated based on the present value of the estimated removal and other closure costs using our credit-adjusted risk-free rate.

Purchase Price Allocation of Wyoming Refining

The fair values of the assets acquired and liabilities assumed as a result of the Wyoming Refining acquisition were estimated as of July 14, 2016, the date of the acquisition, using valuation techniques described in notes (1) through (5) described below.

	Fair Value	Valuation
	(in thousands)	Technique
Net working capital	\$ (11,092)	(1)
Property, plant, and equipment	254,367	(2)
Goodwill	66,449	(3)
Long-term debt	(68,136)	(4)
Other non-current liabilities	(32,222)	(5)
Total	<u>\$ 209,366</u>	

- (1) Current assets acquired and liabilities assumed were recorded at their net realizable value.
- (2) The fair value of property, plant, and equipment was estimated using the cost approach. Under the cost approach, the total replacement cost of the property is determined based on industry sources with adjustments for regional factors. The total cost is then adjusted for depreciation based on the physical age of the assets and obsolescence. The fair value of the land was estimated using the sales comparison approach. Under this approach, the sales prices of similar properties are adjusted to account for differences in land characteristics. We consider this to be a Level 3 fair value measurement.
- (3) The excess of the purchase price paid over the fair value of the identifiable assets acquired and liabilities assumed is allocated to goodwill.
- (4) Long-term debt was recorded at carrying value. The carrying value of long-term debt approximated fair value due to its floating interest rate.
- (5) Other non-current liabilities include environmental liabilities and the underfunded status of the Wyoming Refining defined benefit plan. The underfunded status of the defined benefit plan represents the difference between the fair value of the plan's assets and the projected benefit obligations. Environmental liabilities are based on management's best estimates of probable future costs using current available information. We consider this to be a Level 3 fair value measurement.

Assets and Liabilities Measured at Fair Value on a Recurring Basis

Common stock warrants

As of December 31, 2018 and 2017, we had 354,350 common stock warrants outstanding. We estimate the fair value of our outstanding common stock warrants using the difference between the strike price of the warrant and the market price of our common stock, which is a Level 3 fair value measurement. As of December 31, 2018, the warrants had a weighted-average exercise price of \$0.09 and a remaining term of 3.67 years.

The estimated fair value of the common stock warrants was \$14.13 and \$19.21 per share as of December 31, 2018 and 2017, respectively. Increases in the value of our common stock will increase the value of the common stock warrants. Likewise, decreases in the value of our common stock will result in a decrease in the value of the common stock warrants.

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Derivative instruments

We utilize commodity derivative contracts to manage our price exposure in our inventory positions, future purchases of crude oil, future sales and purchases of refined products, and cost of crude oil consumed in the refining process. We utilize interest rate swaps to manage our interest rate risk. Please read Note 13—Derivatives for further information on derivatives.

We are obligated to repurchase the crude oil and refined products from J. Aron at the termination of the Supply and Offtake Agreements. We have determined that this obligation contains an embedded derivative, similar to forward purchase contracts of crude oil and refined products. As such, we have accounted for this embedded derivative at fair value with changes in the fair value recorded in Cost of revenues (excluding depreciation) on our consolidated statements of operations.

Upon redemption of our 5.00% Convertible Senior Notes on or after June 20, 2019 at our election, we are obligated to pay a make-whole premium equal to the present value of the remaining scheduled payments of interest on the 5.00% Convertible Senior Notes to be redeemed from the relevant redemption date to the maturity date of June 15, 2021. We have determined that the redemption option and the related make-whole premium represent an embedded derivative that is not clearly and closely related to the 5.00% Convertible Senior Notes. As of December 31, 2018 and 2017, this embedded derivative was deemed to have a *de minimis* fair value.

We classify financial assets and liabilities according to the fair value hierarchy. Financial assets and liabilities classified as Level 1 instruments are valued using quoted prices in active markets for identical assets and liabilities. These include our exchange traded futures. Level 2 instruments are valued using quoted prices for similar assets and liabilities in active markets and inputs other than quoted prices that are observable for the asset or liability. Our Level 2 instruments include OTC swaps and options. These commodity derivatives are valued using market quotations from independent price reporting agencies and commodity exchange price curves that are corroborated with market data. Level 3 instruments are valued using significant unobservable inputs that are not supported by sufficient market activity. The valuation of our J. Aron repurchase obligation derivative requires that we make estimates of the prices and differentials assuming settlement at the end of the reporting period. Estimates of the J. Aron settlement prices are based on observable inputs, such as Brent and WTI indices, and unobservable inputs, such as contractual price differentials as defined in the Supply and Offtake Agreements; therefore it is classified as a Level 3 instrument. We do not have other commodity derivatives classified as Level 3 at December 31, 2018 or 2017. Please read Note 13—Derivatives for further information on derivatives.

Contingent consideration

The cash consideration for our acquisition of PHR was subject to an earn-out provision. As of December 31, 2016, the earn-out measurement period was complete and our estimated liability no longer relied on forecasts and simulations. Prior to December 31, 2016, the liability was remeasured at the end of each reporting period using an estimate based on actual results to date and a Monte Carlo simulation analysis for future periods. Significant inputs used in the valuation model included estimated future gross margin, annual gross margin volatility, and a present value factor. We considered this to be a Level 3 fair value measurement. See Note 15—Commitments and Contingencies for further discussion.

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Financial Statement Impact

Fair value amounts by hierarchy level as of December 31, 2018 and 2017 are presented gross in the tables below (in thousands):

December 31, 2018						
	Level 1	Level 2	Level 3	Gross Fair Value	Effect of Counter-party Netting	Net Carrying Value on Balance Sheet (1)
Assets						
Commodity derivatives	\$ 170	\$ 5,234	\$ —	\$ 5,404	\$ (431)	\$ 4,973
Interest rate derivatives	—	191	—	191	—	191
Total	<u>\$ 170</u>	<u>\$ 5,425</u>	<u>\$ —</u>	<u>\$ 5,595</u>	<u>\$ (431)</u>	<u>\$ 5,164</u>
Liabilities						
Common stock warrants	\$ —	\$ —	\$ (5,007)	\$ (5,007)	\$ —	\$ (5,007)
Commodity derivatives	(870)	(261)	—	(1,131)	431	(700)
J. Aron repurchase obligation derivative	—	—	4,085	4,085	—	4,085
Total	<u>\$ (870)</u>	<u>\$ (261)</u>	<u>\$ (922)</u>	<u>\$ (2,053)</u>	<u>\$ 431</u>	<u>\$ (1,622)</u>
December 31, 2017						
	Level 1	Level 2	Level 3	Gross Fair Value	Effect of Counter-party Netting	Net Carrying Value on Balance Sheet (1)
Assets						
Commodity derivatives	\$ 557	\$ 21,907	\$ —	\$ 22,464	\$ (19,650)	\$ 2,814
Interest rate derivatives	—	3,810	—	3,810	—	3,810
Total	<u>\$ 557</u>	<u>\$ 25,717</u>	<u>\$ —</u>	<u>\$ 26,274</u>	<u>\$ (19,650)</u>	<u>\$ 6,624</u>
Liabilities						
Common stock warrants	\$ —	\$ —	\$ (6,808)	\$ (6,808)	\$ —	\$ (6,808)
Commodity derivatives	(596)	(19,093)	—	(19,689)	19,650	(39)
J. Aron repurchase obligation derivative	—	—	(19,564)	(19,564)	—	(19,564)
Total	<u>\$ (596)</u>	<u>\$ (19,093)</u>	<u>\$ (26,372)</u>	<u>\$ (46,061)</u>	<u>\$ 19,650</u>	<u>\$ (26,411)</u>

(1) Does not include cash collateral of \$10.9 million and \$7.2 million as of December 31, 2018 and 2017, respectively included on our consolidated balance sheets.

A roll forward of Level 3 derivative instruments measured at fair value on a recurring basis is as follows (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Beginning balance	\$ (26,372)	\$ (25,134)	\$ (25,867)
Settlements	—	—	16,810
Total unrealized income (loss) included in earnings	25,450	(1,238)	(16,077)
Ending balance	<u>\$ (922)</u>	<u>\$ (26,372)</u>	<u>\$ (25,134)</u>

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The carrying value and fair value of long-term debt and other financial instruments as of December 31, 2018 and 2017 is as follows (in thousands):

	<u>Carrying Value</u>	<u>Fair Value</u>
December 31, 2018		
5.00% Convertible Senior Notes due 2021 (1) (3)	\$ 100,411	\$ 121,488
7.75% Senior Secured Notes due 2025 (1)	290,763	270,000
Mid Pac Term Loan (2)	1,466	1,466
Common stock warrants (2)	5,007	5,007
December 31, 2017		
5.00% Convertible Senior Notes due 2021 (1) (3)	\$ 95,486	\$ 149,007
7.75% Senior Secured Notes due 2025 (1)	289,326	300,423
Common stock warrants (2)	6,808	6,808

- (1) The fair values of the 5.00% Convertible Senior Notes and the 7.75% Senior Secured Notes are considered Level 2 measurements as discussed below.
(2) The fair values of the common stock warrants and the Mid Pac Term Loan are considered a Level 3 measurement in the fair value hierarchy.
(3) The carrying value of the 5.00% Convertible Senior Notes excludes the fair value of the equity component, which was classified as equity upon issuance.

The fair value of the 5.00% Convertible Senior Notes was determined by aggregating the fair value of the liability and equity components of the notes. The fair value of the liability component of the 5.00% Convertible Senior Notes was determined using a discounted cash flow analysis in which the projected interest and principal payments were discounted at an estimated market yield for a similar debt instrument without the conversion feature. The equity component was estimated based on the Black-Scholes model for a call option with strike price equal to the conversion price, a term matching the remaining life of the 5.00% Convertible Senior Notes, and an implied volatility based on market values of options outstanding as of December 31, 2018. The fair value of the 5.00% Convertible Senior Notes is considered a Level 2 measurement in the fair value hierarchy.

The fair value of the 7.75% Senior Secured Notes was determined using a market approach based on quoted prices. Because the 7.75% Senior Secured Notes may not be actively traded, the inputs used to measure the fair value are classified as Level 2 inputs within the fair value hierarchy.

The fair value of all non-derivative financial instruments included in current assets, including cash and cash equivalents, restricted cash, and trade accounts receivable, current liabilities, and accounts payable approximate their carrying value due to their short term nature.

Note 15—Commitments and Contingencies

In the ordinary course of business, we are a party to various lawsuits and other contingent matters. We establish accruals for specific legal matters when we determine that the likelihood of an unfavorable outcome is probable and the loss is reasonably estimable. It is possible that an unfavorable outcome of one or more of these lawsuits or other contingencies could have a material impact on our financial condition, results of operations, or cash flows.

Tesoro Earn-out Dispute

On June 17, 2013, a wholly owned subsidiary of Par entered into a membership interest purchase agreement with Andeavor, formerly known as Tesoro Corporation (“Tesoro,” which changed its name to Andeavor Corporation before being purchased by Marathon Petroleum Company in October 2018), pursuant to which it purchased all of the issued and outstanding membership interests in Tesoro Hawaii, LLC, an entity that was renamed Hawaii Independent Energy, LLC, and thereafter renamed Par Hawaii Refining, LLC. The cash consideration for the acquisition was subject to an earn-out provision during the years 2014-2016, subject to, among other things, an annual earn-out cap of \$20 million and an overall cap of \$40 million. During 2016, we paid Tesoro a total of \$16.8 million to settle the 2014 and 2015 earn-out periods. Tesoro disputed our calculation of the 2015 and 2016 earn-out amounts and asserted that it was entitled to an additional earn-out amount of \$4.3 million for the 2015 earn-out period and a total

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earn-out amount of \$8.3 million for the 2016 earn-out period. On March 22, 2018, Tesoro agreed to settle the earn-out dispute and release and discharge any related claims in exchange for our payment of \$10.5 million.

Mid Pac Earn-out and Indemnity Dispute

Pursuant to a Stock Purchase Agreement dated August 3, 2011 and amended October 25, 2011 (the “SPA”), Mid Pac purchased all the issued and outstanding stock of Inter Island Petroleum, Inc. (“Inter Island”) from Brian J. and Wendy Barbata (collectively, the “Barbatas”). The SPA provided for an earn-out payment to be made to the Barbatas in an amount equal to four times the amount by which the average of Inter Island’s earnings before interest, taxes, depreciation, and amortization during the relevant earn-out period exceeds \$3.5 million. The earn-out payment was capped at a maximum of \$4.5 million. Mid Pac contended that there were no amounts owed to the Barbatas for the earn-out period, while the Barbatas contended they were entitled to \$4.5 million. In June 2018, Mid Pac and the Barbatas agreed to settle the earn-out dispute and release and discharge any related claims in exchange for our payment of \$350 thousand and our assumption of up to an aggregate \$300 thousand of certain environmental monitoring and remediation obligations.

United Steelworkers Union Dispute

A portion of our employees at the Hawaii refinery are represented by the United Steelworkers Union (“USW”). On March 23, 2015, the union ratified a four-year extension of the collective bargaining agreement. On January 13, 2016, the USW filed a claim against PHR before the United States National Labor Relations Board (the “NLRB”) alleging a refusal to bargain collectively and in good faith. On March 29, 2016, the NLRB deferred final determination on the USW charge to the grievance/arbitration process under the extant collective bargaining agreement. Arbitration was commenced and concluded on October 1, 2018. In a decision dated November 27, 2018, the arbitrator denied the grievance without prejudice to USW’s NLRB claim regarding retiree medical and short term disability benefits. PHR denies the USW’s allegations and intends to vigorously defend itself in connection with such claim in the grievance/arbitration process and any subsequent proceeding before the NLRB.

Environmental Matters

Like other companies in our industry, our operations are subject to extensive and periodically-changing federal and state environmental regulations governing air emissions, wastewater discharges, and solid and hazardous waste management activities. Many of these regulations are becoming increasingly stringent and the cost of compliance can be expected to increase over time.

Periodically, we receive communications from various federal, state, and local governmental authorities asserting violations of environmental laws and/or regulations. These governmental entities may also propose or assess fines or require corrective actions for these asserted violations. We intend to respond in a timely manner to all such communications and to take appropriate corrective action. Except as disclosed below, we do not anticipate that any such matters currently asserted will have a material impact on our financial condition, results of operations, or cash flows.

The Par East facility of our Hawaii refinery and our Wyoming refinery were each granted a one-year small refinery exemption for the compliance year 2017 from the U.S. Environmental Protection Agency (“EPA”). Owing primarily to the receipt of these small refinery exemptions, our net income for the year ended December 31, 2018 includes a \$1.1 million of RINs benefit.

Wyoming Refinery

Our Wyoming refinery is subject to a number of consent decrees, orders, and settlement agreements involving the EPA and/or the Wyoming Department of Environmental Quality, some of which date back to the late 1970s and several of which remain in effect, requiring further actions at the Wyoming refinery. The largest cost component arising from these various decrees relates to the investigation, monitoring, and remediation of soil, groundwater, surface water and sediment contamination associated with the facility’s historic operations. Investigative work by Wyoming Refining and negotiations with the relevant agencies as to remedial approaches remain ongoing on a number of aspects of the contamination, and, therefore, investigation, monitoring, and remediation costs are not reasonably estimable for some elements of these efforts. As of December 31, 2018, we have accrued \$17.3 million for the well-understood components of these efforts based on current information, approximately one-third of which we expect to incur in the next 5 years, with the remainder being incurred over approximately 30 years.

Additionally, we believe the Wyoming refinery will need to modify or close a series of wastewater impoundments in the next several years and replace those impoundments with a new wastewater treatment system. Based on preliminary information, reasonable estimates we have received suggest costs of approximately \$11.6 million to design and construct a new wastewater treatment system.

Finally, among the various historic consent decrees, orders, and settlement agreements into which Wyoming Refining has entered, there are several penalty orders associated with exceedances of permitted limits by the Wyoming refinery’s wastewater

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discharges. Although the frequency of these exceedances appears to be declining over time, Wyoming Refining may become subject to new penalty enforcement action in the next several years, which could involve penalties in excess of \$100,000.

Regulation of Greenhouse Gases

The EPA regulates greenhouse gases (“GHG”) under the federal Clean Air Act (“CAA”). New construction or material expansions that meet certain GHG emissions thresholds will likely require that, among other things, a GHG permit be issued in accordance with the federal CAA regulations and we will be required in connection with such permitting to undertake a technology review to determine appropriate controls to be implemented with the project in order to reduce GHG emissions.

Furthermore, the EPA is developing refinery-specific GHG regulations and performance standards that are expected to impose GHG emission limits and/or technology requirements. These control requirements may affect a wide range of refinery operations. Any such controls could result in material increased compliance costs, additional operating restrictions for our business, and an increase in the cost of the products we produce, which could have a material adverse effect on our financial condition, results of operations, or cash flows.

On September 29, 2015, the EPA announced a final rule updating standards that control toxic air emissions from petroleum refineries, addressing, among other things, flaring operations, fenceline air quality monitoring, and additional emission reductions from storage tanks and delayed coking units. Compliance with this rule has not had a material impact on our financial condition, results of operations, or cash flows to date.

In 2007, the State of Hawaii passed Act 234, which required that GHG emissions be rolled back on a statewide basis to 1990 levels by the year 2020. Although delayed, the Hawaii Department of Health has issued regulations that would require each major facility to reduce CO₂ emissions by 16% by 2020 relative to a calendar year 2010 baseline (the first year in which GHG emissions were reported to the EPA under 40 CFR Part 98). Those rules are pending final approval by the Hawaii State Government. The Hawaii refinery’s capacity to reduce fuel use and GHG emissions is limited. However, the state’s pending regulation allows, and the Hawaii refinery expects to be able to demonstrate, that additional reductions are not cost-effective or necessary in light of the state’s current GHG inventory and future year projections. The pending regulation allows for “partnering” with other facilities (principally power plants) that have already dramatically reduced greenhouse emissions or are on schedule to reduce CO₂ emissions in order to comply with the state’s Renewable Portfolio Standards.

Fuel Standards

In 2007, the U.S. Congress passed the Energy Independence and Security Act (“EISA”) which, among other things, set a target fuel economy standard of 35 miles per gallon for the combined fleet of cars and light trucks in the U.S. by model year 2020 and contained an expanded Renewable Fuel Standard (the “RFS2”). In August 2012, the EPA and National Highway Traffic Safety Administration (“NHTSA”) jointly adopted regulations that establish an average industry fuel economy of 54.5 miles per gallon by model year 2025. On August 8, 2018, the EPA and NHTSA jointly proposed to revise existing fuel economy standards for model years 2021-2025 and to set standards for 2026 for the first time. The agencies have not yet issued a final rule, but they are expected to do so in 2019. Although the revised fuel economy standards are expected to be less stringent than the initial standards for model years 2021-2025, it is uncertain whether the revised standards will increase year over year. Higher fuel economy standards have the potential to reduce demand for our refined transportation fuel products.

Under EISA, the RFS2 requires an increasing amount of renewable fuel to be blended into the nation's transportation fuel supply, up to 36.0 billion gallons by 2022. In the near term, the RFS2 will be satisfied primarily with fuel ethanol blended into gasoline. We, and other refiners subject to the RFS, may meet the RFS requirements by blending the necessary volumes of renewable fuels produced by us or purchased from third parties. To the extent that refiners will not or cannot blend renewable fuels into the products they produce in the quantities required to satisfy their obligations under the RFS program, those refiners must purchase renewable credits, referred to as Renewable Identification Numbers (“RINs”), to maintain compliance. To the extent that we exceed the minimum volumetric requirements for blending of renewable fuels, we generate our own RINs for which we have the option of retaining the RINs for current or future RFS compliance or selling those RINs on the open market. The RFS2 may present production and logistics challenges for both the renewable fuels and petroleum refining and marketing industries in that we may have to enter into arrangements with other parties or purchase D3 waivers from the EPA to meet our obligations to use advanced biofuels, including biomass-based diesel and cellulosic biofuel, with potentially uncertain supplies of these new fuels.

In October 2010, the EPA issued a partial waiver decision under the federal CAA to allow for an increase in the amount of ethanol permitted to be blended into gasoline from 10% (“E10”) to 15% (“E15”) for 2007 and newer light duty motor vehicles. In January 2011, the EPA issued a second waiver for the use of E15 in vehicles model years 2001-2006. In 2019, EPA is expected to conduct a rulemaking to allow year-round sales of E15. There are numerous issues, including state and federal regulatory issues,

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which need to be addressed before E15 can be marketed on a large scale for use in traditional gasoline engines; however, increased renewable fuel in the nation's transportation fuel supply could reduce demand for our refined products.

In March 2014, the EPA published a final Tier 3 gasoline standard that requires, among other things, that gasoline contain no more than 10 parts per million ("ppm") sulfur on an annual average basis and no more than 80 ppm sulfur on a per-gallon basis. The standard also lowers the allowable benzene, aromatics, and olefins content of gasoline. The effective date for the new standard is January 1, 2017, however, approved small volume refineries have until January 1, 2020 to meet the standard. Our Hawaii refinery is required to comply with Tier 3 gasoline standards within 30 months of June 21, 2016, the date our Hawaii refinery was disqualified from small volume refinery status. On March 19, 2015, the EPA confirmed the small refinery status of our Wyoming refinery. The Par East facility of our Hawaii refinery, our Wyoming refinery, and our Washington refinery, acquired in January 2019, were all granted small refinery status by the EPA for 2017. The EPA is expected to make small refinery status determinations for 2018 in the first quarter of 2019.

Beginning on June 30, 2014, new sulfur standards for fuel oil used by marine vessels operating within 200 miles of the U.S. coastline (which includes the entire Hawaiian Island chain) was lowered from 10,000 ppm (1%) to 1,000 ppm (0.1%). The sulfur standards began at the Hawaii refinery and were phased in so that by January 1, 2015, they were to be fully aligned with the International Marine Organization ("IMO") standards and deadline. The more stringent standards apply universally to both U.S. and foreign flagged ships. Although the marine fuel regulations provided vessel operators with a few compliance options such as installation of on-board pollution controls and demonstration unavailability, many vessel operators will be forced to switch to a distillate fuel while operating within the Emission Control Area ("ECA"). Beyond the 200 mile ECA, large ocean vessels are still allowed to burn marine fuel with up to 3.5% sulfur. Our Hawaii refinery is capable of producing the 1% sulfur residual fuel oil that was previously required within the ECA. Although our Hawaii refinery remains in a position to supply vessels traveling to and through Hawaii, the market for 0.1% sulfur distillate fuel and 3.5% sulfur residual fuel is much more competitive.

In addition to U.S. fuels requirements, the IMO has also adopted newer standards that further reduce the global limit on sulfur content in maritime fuels to 0.5% beginning in 2020 ("IMO 2020"). Like the rest of the refining industry, we are focused on meeting these standards and may incur costs in producing lower-sulfur fuels.

There will be compliance costs and uncertainties regarding how we will comply with the various requirements contained in the EISA, IMO 2020, and other fuel-related regulations. We may experience a decrease in demand for refined petroleum products due to an increase in combined fleet mileage or due to refined petroleum products being replaced by renewable fuels.

Environmental Agreement

On September 25, 2013, Par Petroleum, LLC (formerly Hawaii Pacific Energy, a wholly owned subsidiary of Par created for purposes of the PHR acquisition), Tesoro, and PHR entered into an Environmental Agreement ("Environmental Agreement") that allocated responsibility for known and contingent environmental liabilities related to the acquisition of PHR, including the Consent Decree as described below.

Consent Decree

On July 18, 2016, PHR and subsidiaries of Tesoro entered into a consent decree with the EPA, the U.S. Department of Justice ("DOJ"), and other state governmental authorities concerning alleged violations of the federal CAA related to the ownership and operation of multiple facilities owned or formerly owned by Tesoro and its affiliates ("Consent Decree"), including the Par East facility of our Hawaii refinery. As a result of the Consent Decree, PHR expanded its planned 2016 turnaround to undertake additional capital improvements to reduce emissions of air pollutants and to provide for certain nitrogen oxide and sulfur dioxide emission controls and monitoring required by the Consent Decree. Although the turnaround was completed during the third quarter of 2016, work related to the Consent Decree is ongoing. This work subjects us to risks associated with engineering, procurement, and construction of improvements and repairs to our facilities and related penalties and fines to the extent applicable deadlines under the Consent Decree are not satisfied, as well as risks related to the performance of equipment required by, or affected by, the Consent Decree. Each of these risks could have a material adverse effect on our business, financial condition, or results of operations.

Tesoro is responsible under the Environmental Agreement for directly paying, or reimbursing PHR, for all reasonable third-party capital expenditures incurred pursuant to the Consent Decree to the extent related to acts or omissions prior to the date of the closing of the PHR acquisition. Tesoro is obligated to pay all applicable fines and penalties related to the Consent Decree. Through December 31, 2018, Tesoro has reimbursed us for \$12.2 million of our total capital expenditures incurred in connection with the Consent Decree. As of December 31, 2018, all reimbursable capital expenditures incurred pursuant to the Consent Decree were collected. Net capital expenditures and reimbursements related to the Consent Decree for the year ended December 31, 2018 and 2017 are presented within Capital expenditures on our consolidated statement of cash flows for the related periods.

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Indemnification

In addition to its obligation to reimburse us for capital expenditures incurred pursuant to the Consent Decree, Tesoro agreed to indemnify us for claims and losses arising out of related breaches of Tesoro's representations, warranties, and covenants in the Environmental Agreement, certain defined "corrective actions" relating to pre-existing environmental conditions, third-party claims arising under environmental laws for personal injury or property damage arising out of or relating to releases of hazardous materials that occurred prior to the date of the closing of the PHR acquisition, any fine, penalty, or other cost assessed by a governmental authority in connection with violations of environmental laws by PHR prior to the date of the closing of the PHR acquisition, certain groundwater remediation work, fines, or penalties imposed on PHR by the Consent Decree related to acts or omissions of Tesoro prior to the date of the closing of the PHR acquisition, and claims and losses related to the Pearl City Superfund Site.

Tesoro's indemnification obligations are subject to certain limitations as set forth in the Environmental Agreement. These limitations include a deductible of \$1.0 million and a cap of \$15.0 million for certain of Tesoro's indemnification obligations related to certain pre-existing conditions as well as certain restrictions regarding the time limits for submitting notice and supporting documentation for remediation actions.

Recovery Trusts

We emerged from the reorganization of Delta Petroleum Corporation ("Delta") on August 31, 2012 ("Emergence Date") when the plan of reorganization ("Plan") was consummated. On the Emergence Date, we formed the Delta Petroleum General Recovery Trust ("General Trust"). The General Trust was formed to pursue certain litigation against third parties, including preference actions, fraudulent transfer and conveyance actions, rights of setoff and other claims, or causes of action under the U.S. Bankruptcy Code and other claims and potential claims that the Debtors hold against third parties. On February 27, 2018, the Bankruptcy Court entered its final decree closing the Chapter 11 bankruptcy cases of Delta and the other Debtors, discharging the trustee for the General Trust, and finding that all assets of the General Trust were resolved, abandoned, or liquidated and have been distributed in accordance with the requirements of the Plan. In addition, the final decree required the Company or the General Trust, as applicable, to maintain the current accruals owed on account of the remaining claims of the U.S. Government and Noble Energy, Inc.

As of December 31, 2018, two related claims totaling approximately \$22.4 million remained to be resolved by the trustee for the General Trust and we have accrued approximately \$0.5 million representing the estimated value of claims remaining to be settled which are deemed probable and estimable at period end.

One of the two remaining claims was filed by the U.S. Government for approximately \$22.4 million relating to ongoing litigation concerning a plugging and abandonment obligation in Pacific Outer Continental Shelf Lease OCS-P 0320, comprising part of the Sword Unit in the Santa Barbara Channel, California. The second unliquidated claim, which is related to the same plugging and abandonment obligation, was filed by Noble Energy Inc., the operator and majority interest owner of the Sword Unit. We believe the probability of issuing stock to satisfy the full claim amount is remote, as the obligations upon which such proof of claim is asserted are joint and several among all working interest owners and Delta, our predecessor, only owned an approximate 3.4% aggregate working interest in the unit.

The settlement of claims is subject to ongoing litigation and we are unable to predict with certainty how many shares will be required to satisfy all claims. Pursuant to the Plan, allowed claims are settled at a ratio of 54.4 shares per \$1,000 of claim.

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Capital Leases

Within our retail segment, we have capital lease obligations related primarily to the leases of 17 retail stations. Most leases include one or more options to renew, with renewal terms that can extend the lease term from one to 15 years or more. Certain leases include escalation clauses and/or purchase options. Minimum annual lease payments including interest, for capital leases are as follows (in thousands):

2019	\$	2,723
2020		2,264
2021		1,757
2022		1,512
2023		1,148
Thereafter		2,600
Total minimum lease payments		12,004
Less amount representing interest		1,865
Total minimum rental payments	\$	10,139

Operating Leases

We have various cancelable and noncancelable operating leases related to land, vehicles, office and retail facilities, railcars, barges, and other facilities used in the storage, transportation, and sale of crude oil and refined products. We have operating leases for most of our retail stations with an average of eight years remaining and generally containing renewal options and escalation clauses. Leases for facilities used in the storage, transportation, and sale of crude oil and refined products have various expiration dates extending to 2044 .

Minimum annual lease payments for operating leases to which we are legally obligated and having initial or remaining non-cancelable lease terms in excess of one year are as follows (in thousands):

2019	\$	62,589
2020		62,132
2021		39,821
2022		38,402
2023		38,827
Thereafter		191,717
Total minimum rental payments	\$	433,488

Rent expense for the years ended December 31, 2018 , 2017 , and 2016 was approximately \$41.6 million , \$41.2 million , and \$39.6 million , respectively.

Major Customers

For the year ended December 31, 2017 , we had one customer in our refining segment that accounted for 10% of our consolidated revenues. No other customers accounted for more than 10% of our consolidated revenues during the years ended December 31, 2018 , 2017 , and 2016 .

Note 16—Stockholders' Equity

Common Stock

Our certificate of incorporation contains restrictions on the transfer of certain of our securities in order to preserve the net operating loss carryovers, capital loss carryovers, general business credit carryovers, alternative minimum tax credit carryovers, and foreign tax credit carryovers, as well as any "net unrealized built-in loss" within the meaning of Section 382 of the Internal Revenue Service Code, of us or any direct or indirect subsidiary thereof. These restrictions include provisions regarding approval by our Board of Directors of transfers of common stock by holders of five percent or more of the outstanding common stock. Our debt agreements restrict the payment of dividends.

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On September 22, 2016, we issued approximately 4 million shares of our common stock to certain pre-existing investors and other investors in the Rights Offering at a purchase price of \$12.25 per share. The gross proceeds from the Rights Offering were approximately \$49.9 million, before deducting expenses of approximately \$0.9 million, for net proceeds of approximately \$49.0 million. The net proceeds from the Rights Offering were used to repay all accrued and unpaid interest and a portion of the outstanding principal amount on the Bridge Notes.

Registration Rights Agreements

In connection with our emergence from bankruptcy on August 31, 2012, we entered into a registration rights agreement (“Registration Rights Agreement”) providing the stockholders party thereto (“Stockholders”) with certain registration rights.

The Registration Rights Agreement states that at any time after the consummation of a qualified public offering, any Stockholder or group of Stockholders that, together with its or their affiliates, holds more than fifteen percent of the Registrable Shares (as defined in the Registration Rights Agreement), will have the right to require us to file with the SEC a registration statement for a public offering of all or part of its Registrable Shares (each a “Demand Registration”), by delivery of written notice to the company (each, a “Demand Request”).

Within 90 days after receiving the Demand Request, we must file with the SEC the registration statement with respect to the Demand Registration, subject to certain limitations as set forth in the Registration Rights Agreement. We are required to use commercially reasonable efforts to cause the registration statement to be declared effective as soon as practicable after such filing.

In addition, subject to certain exceptions, if we propose to register any class of common stock for sale to the public, we are required, subject to certain conditions, to include all Registrable Shares with respect to which we have received written requests for inclusion.

In connection with the closing of a private placement, we entered into an additional registration rights agreement with the purchasers of the shares. Under this registration rights agreement, we agreed to file a registration statement relating to the shares of common stock with the SEC within 60 days after the closing date of the sale which would be declared effective within 180 days of the closing date of the sale. We also agreed to use commercially reasonable efforts to keep the registration statement effective until the earliest to occur of (i) the disposition of all registrable securities, (ii) the availability under Rule 144 of the Securities Act of 1933, as amended, for each holder of registrable securities to immediately freely resell such registrable securities without volume restrictions, or (iii) the third anniversary of the effective date of the registration statement.

This registration rights agreement also provides the right for a holder or group of holders of more than \$50 million of registrable securities to demand that we conduct an underwritten public offering of the registrable securities. However, the demanding holders are limited to a total of three such underwritten offerings, with no more than one demand request for an underwritten offering made in any 365 day period. Additionally, this registration rights agreement contains customary indemnification rights and obligations for both us and the holders of registrable securities.

If this registration statement does not remain effective for the applicable effectiveness period described above then from that date until cured, we must pay, as liquidated damages and not as a penalty, an amount in cash equal to 0.25% of the purchaser’s allocated purchase price per calendar month, not to exceed 0.75% of the allocated purchase price.

The registration rights granted in each rights agreement are subject to customary indemnification and contribution provisions, as well as customary restrictions such as suspension periods and, if a registration is for an underwritten offering, limitations on the number of shares to be included in the underwritten offering imposed by the managing underwriter.

In connection with the completion of the Company’s private unregistered offering of its 5.00% Convertible Senior Notes, the Company entered into a Registration Rights Agreement (the “Convertible Notes Registration Rights Agreement”), dated as of June 21, 2016, with the initial purchasers in the offering of the 5.00% Convertible Senior Notes. The Convertible Notes Registration Rights Agreement requires the Company (i) to file with the SEC a shelf registration statement covering resales of the shares of common stock, if any, issuable upon conversion of the 5.00% Convertible Senior Notes and in respect of any make-whole premium, (ii) to use its best efforts to cause, if not a well-known seasoned issuer, such shelf registration statement to be declared effective by the SEC within 180 days after June 21, 2016, and (iii) to use its best efforts to keep such shelf registration statement effective until the earlier of (A) the 120th calendar day immediately following the maturity date of the 5.00% Convertible Senior Notes or (B) the date on which there are no longer outstanding any 5.00% Convertible Senior Notes or restricted shares of the common stock that have been received upon conversion of the 5.00% Convertible Senior Notes or in respect of any make-whole premium.

If the Company does not fulfill its obligations under the Convertible Notes Registration Rights Agreement, it will be required to pay the holders of the 5.00% Convertible Senior Notes liquidated damages in the form of additional interest on the

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5.00% Convertible Senior Notes. Such additional interest will accrue at a rate per year equal to: (i) 0.25% of the principal amount of the 5.00% Convertible Senior Notes to, and including, the 90th day following such registration default and (ii) 0.50% of the principal amount of the 5.00% Convertible Senior Notes from, and after, the 91st day following such registration default. In no event will the liquidated damages exceed 0.50% per year.

In connection with the issuance by the Company of its 2.50% convertible subordinated bridge notes (the "Bridge Notes"), the Company entered into a registration rights agreement (the "Bridge Notes Registration Rights Agreement"), dated as of July 14, 2016 with the purchasers of the Bridge Notes. The Bridge Notes Registration Rights Agreement required the Company to file with the SEC a shelf registration statement covering resales of the shares of common stock, if any, issuable upon conversion of the Bridge Notes, (ii) to use its commercially reasonable efforts to cause such shelf registration statement to be declared effective by the SEC no later than (A) the earlier of December 14, 2016 or 60 days after the filing deadline for the shelf registration statement or (B) if earlier, five business days after the date on which the SEC informs the Company that it will not review the shelf registration statement, and (iii) to use its commercially reasonable efforts to keep such shelf registration statement effective until the earlier of (A) the date on which all of such shares have been sold, (B) the date on which such shares may be sold without volume restrictions under Rule 144 of the Securities Act of 1933, as amended, or (C) the third anniversary of the effective date of such shelf registration statement.

If the Company does not fulfill its obligations under the Bridge Notes Registration Rights Agreement with respect to the filing deadline, effectiveness deadline, or effectiveness period of a registration statement, it will be required to pay the holders of the Bridge Notes liquidated damages in an amount in cash equal to 1.00% of such holder's "Allocated Purchase Price," which is the amount effectively paid by such holder for the Common Stock acquired upon conversion of the Bridge Notes, per calendar month or portion thereof prior to the cure of such event of default. The maximum payment of liquidated damages to any such holder associated with all events of default will not exceed 5.00% of such holder's Allocated Purchase Price.

In connection with the Hawaii Refinery Expansion, we entered into a registration rights agreement with IES (the "IES Registration Rights Agreement"). Under the IES Registration Rights Agreement, we agreed to file with the SEC within three (3) days after the closing date of the Hawaii Refinery Expansion and to use our commercially reasonable efforts to cause to become effective a registration statement relating to the resales of the common stock issued in connection with the Hawaii Refinery Expansion (the "IES Shares"), with an effectiveness deadline as promptly as practicable after filing of the prospectus relating to the registration statement, but in no event later than (i) ninety (90) days after the closing of the Hawaii Refinery Expansion, or (ii) if earlier, three (3) business days after the date on which the SEC informs us (A) that the SEC will not review the registration statement or (B) that we may request acceleration of the effectiveness of the registration statement. We also agreed to use our commercially reasonable efforts to keep the registration statement effective until the earliest to occur of (a) the disposition of the IES Shares, (b) the availability under Rule 144 for each holder of the IES Shares to immediately freely resell such IES Shares without notice, current information, manner of sale, or volume restrictions, or (c) the fifth anniversary of the effective date of the registration statement. The registration statement required by the IES Rights Agreement was filed with the SEC on December 21, 2018.

In connection with the Washington Refinery Acquisition (as defined in Note 22—Subsequent Events), we entered into a registration rights agreement with the seller of U.S. Oil (the "USOR Registration Rights Agreement"). Under the USOR Registration Rights Agreement, we agreed to file with the SEC within five (5) days after the closing date of the Washington Refinery Acquisition and to use our commercially reasonable efforts to cause to become effective a registration statement relating to the resales of 2,363,776 shares of our common stock issued in connection with the Washington Refinery Acquisition (the "USOR Shares"), with an effectiveness deadline as promptly as practicable after filing of the prospectus relating to the registration statement, but in no event later than (i) sixty (60) days after the closing of the Washington Refinery Acquisition, or (ii) if earlier, five (5) business days after the date on which the SEC informs us (A) that the SEC will not review the registration statement or (B) that we may request the effectiveness of the registration statement and we make such request. In addition, the USOR Registration Rights Agreement provides the holders of the USOR Shares with certain customary demand, shelf takedown, and piggyback registration rights, subject to certain exceptions and to certain customary limitations (including with respect to minimum offering size and maximum number of demands and underwritten shelf takedowns). The registration statement required by the USOR Registration Rights Agreement was filed with the SEC on January 16, 2019.

Incentive Plans

Our incentive compensation plans are described below.

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Long Term Incentive Plan

On December 20, 2012, our Board of Directors (“Board”) approved the Par Petroleum Corporation 2012 Long Term Incentive Plan (“Incentive Plan” or “LTIP”). Under the Incentive Plan, the Board, or a committee of the Board, may grant incentive stock options, nonstatutory stock options, restricted stock, and restricted stock units to directors and other employees or those of our subsidiaries. On February 16, 2016 and February 27, 2018, the Board approved the amendment and restatement of the Incentive Plan to increase the number of shares issuable under the Amended and Restated LTIP. The Company’s shareholders ratified the amended and restated Incentive Plan on June 2, 2016 and May 8, 2018, respectively. The maximum number of shares that may be granted under the LTIP is 6.0 million shares of common stock. At December 31, 2018, 2.3 million shares were available for future grants and awards under the LTIP.

Restricted stock and restricted stock units awarded under the Incentive Plan are subject to restrictions, terms, and conditions, including forfeitures, as may be determined by the Board. During the period in which such restrictions apply, unless specifically provided otherwise in accordance with the terms of the Incentive Plan, the recipient of the restricted stock would be the record owner of the shares and have all of the rights of a stockholder with respect to the shares, including the right to vote and the right to receive dividends or other distributions made or paid with respect to the shares. The recipient of restricted stock units shall not have any of the rights of a stockholder of the Company; the Compensation Committee of the Board shall be entitled to specify with respect to any restricted stock unit award that upon the payment of a dividend by the Company, the Company will hold in escrow an amount in cash equal to the dividend that would have been paid on the restricted stock units had they been converted into the same number of shares of common stock and held by the recipient on that date. Upon adjustment and vesting of the restricted stock unit, any cash payment due with respect to such dividends shall be made to the recipient. The fair value of the restricted stock and stock units is generally determined based upon the quoted market price of our common stock on the date of grant. Restricted stock awards generally vest ratably over a four -year period. Restricted stock units do not vest ratably, rather they vest in full at the end of three years.

Stock options are issued with an exercise price equal to the fair market value of our common stock on the date of grant and are subject to such other terms and conditions as may be determined by the Board. The options generally expire eight years from the grant date, unless granted by the Board for a shorter term. Option grants generally vest ratably over a four -year period.

Stock Purchase Plan

On June 12, 2014, the Board adopted a Stock Purchase Plan (as amended, the “SPP”) plan. The SPP is limited to the Company’s qualifying executive officers and directors who qualify as accredited investors under Rule 501(a) of the Securities Act of 1933, as amended. The SPP provides that each participant may, subject to compliance with securities laws and other regulations and only during “window periods” as described in our insider trading policy as in effect from time to time, until the later to occur of (a) December 31, 2015 or (b) the eighteen month anniversary of the date that the participant commenced his or her employment or service with us, purchase, in a single transaction, up to \$1 million of shares of our common stock (“the SPP Shares”) at a per share purchase price equal to the closing price of the common stock on the date of purchase. The sale or transfer of the SPP Shares by such participant would be limited for the earlier of (i) two years from the date of purchase or (ii) the termination of the participant’s service with us or any affiliates for any reason. Additionally, the SPP provides that each purchasing participant will be granted a number of shares of restricted common stock under the Incentive Plan equal to 20% of the SPP Shares purchased with 50% of the restricted common stock vesting on each of the two annual anniversaries of the date of grant. Each purchasing participant will also be granted nonstatutory stock options with a 5 -year term to purchase a number of shares of common stock under the Incentive Plan (with an exercise price equal to the Fair Market Value as defined in the Incentive Plan on the date of grant) equal to certain specified percentages of the SPP Shares purchased based on a Black-Scholes model with 50% of the options vesting on each of the two annual anniversaries of the date of grant. Such percentages are as follows: 50% for a non-employee chairman of the Board, 35% for non-employee members of the Board, and 50% - 70% for executive officers.

The following table summarizes our compensation costs recognized in General and administrative expense (excluding depreciation) and Operating expense (excluding depreciation) under the Incentive Plan and Stock Purchase Plan (in thousands):

	Years Ended December 31,		
	2018	2017	2016
Restricted Stock Awards	\$ 3,483	\$ 4,263	\$ 2,975
Restricted Stock Units	\$ 835	\$ 502	\$ 1,255
Stock Option Awards	\$ 1,878	\$ 2,439	\$ 2,352

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Employee Stock Purchase Plan

On February 27, 2018, our Board approved the Par Pacific Holdings, Inc. 2018 Employee Stock Purchase Plan (“ESPP”). Beginning in 2019, eligible employees may elect to purchase the Company's common stock at 85% of the market price on the purchase date. Eligible employees may invest from 0% to 10% of their annual income subject to a \$15 thousand annual maximum. The Board, or a committee of the Board, is authorized to set the market price discount percentages, any holding periods, and other purchasing terms and timing. The Company's shareholders ratified the ESPP on May 8, 2018. The maximum number of shares that may be granted under the ESPP is 500 thousand shares of common stock. As of December 31, 2018, no purchases had been made under the ESPP.

Restricted Stock Awards and Restricted Stock Units

The following table summarizes our restricted stock activity, including performance restricted stock units, (in thousands, except per share amounts):

	Shares	Weighted-Average Grant Date Fair Value
Unvested balance at December 31, 2017	543	\$ 16.23
Granted	309	\$ 17.45
Vested	(184)	\$ 17.62
Forfeited	(41)	\$ 17.39
Unvested balance at December 31, 2018	627	\$ 17.14

The total fair value of restricted stock and restricted stock units that vested during the years ended December 31, 2018, 2017, and 2016 was \$3.3 million, \$4.0 million, and \$3.6 million, respectively. The estimated weighted-average grant-date fair value per share of restricted stock and restricted stock units granted during the years ended December 31, 2018, 2017, and 2016 was \$17.45, \$15.25, and \$17.32, respectively.

As of December 31, 2018, 2017, and 2016, there was approximately \$5.8 million, \$5.7 million, and \$6.2 million, of total unrecognized compensation costs related to restricted stock awards and restricted stock units, which are expected to be recognized on a straight-line basis over a weighted-average period of 2.46 years, 2.39 years, and 2.50 years, respectively.

During the years ended December 31, 2018 and 2017, we granted 49 thousand and 45 thousand performance restricted stock units to executive officers, respectively. These performance restricted stock units had a fair value of approximately \$0.8 million and \$0.7 million, respectively, and are subject to certain annual performance targets as defined by our Board of Directors.

As of December 31, 2018, there were approximately \$0.9 million of total unrecognized compensation costs related to the performance restricted stock units, which are expected to be recognized on a straight-line basis over a weighted-average period of 1.87 years.

Stock Option Grants

The fair value of each option is estimated on the grant date using the Black-Scholes option pricing model. The expected term represents the period of time that options are expected to be outstanding and is based upon the term of the option. The expected volatility represents the extent to which our stock price is expected to fluctuate between the grant date and the expected term of the award. We do not use an expected dividend yield in our fair value measurement as we are restricted from payment of dividends. The risk-free rate is the implied yield available on U.S. Treasury securities with a remaining term equal to the expected term of the option at the date of grant. The weighted-average assumptions used to measure stock options granted during 2018, 2017, and 2016 are presented below.

	2018	2017	2016
Expected life from date of grant (years)	5.3	5.3	4.4
Expected volatility	36.2%	42.0%	39.8%
Expected dividend yield	—%	—%	—%
Risk-free interest rate	2.50%	1.97%	1.16%

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The following table summarizes our stock option activity (in thousands, except per share amounts):

	Number of Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term in Years	Aggregate Intrinsic Value
Outstanding balance at December 31, 2017	1,979	\$ 19.52	5.5	\$ 1,431
Issued	252	17.34		
Outstanding balance at December 31, 2018	2,231	\$ 19.27	4.8	\$ —
Exercisable, end of year	1,440	\$ 19.66	3.8	\$ —

The estimated weighted-average grant-date fair value per share of options granted during the year ended December 31, 2018 , 2017 , and 2016 was \$6.30 , \$5.81 , and \$3.79 , respectively.

As of December 31, 2018 and 2017 , there were approximately \$3.4 million and \$3.5 million , respectively, of total unrecognized compensation costs related to stock option awards, that are expected to be recognized on a straight-line basis over a weighted-average period of 2.32 and 1.74 years, respectively.

Note 17—Benefit Plans

Defined Contribution Plan

We maintain a defined contribution plan for our employees. All eligible employees may participate in this plan after thirty days of service. We match employee contributions up to a maximum of 6% of the employee’s eligible compensation, with the employer contributions vesting at 100% immediately. For the years ended December 31, 2018 , 2017 , and 2016 , we made contributions to the plans totaling approximately \$4.0 million , \$3.6 million , and \$3.2 million , respectively.

Defined Benefit Plan

We maintain a defined benefit pension plan (the “Benefit Plan”) covering substantially all our Wyoming Refining employees. Benefits are based on years of service and the employee’s highest average compensation received during five consecutive years of the last ten years of employment. Our funding policy is to contribute annually an amount equal to the pension expense, subject to the minimum funding requirements of the Employee Retirement Income Security Act of 1974 and the tax deductibility of such contributions.

In December 2016, the Benefit Plan was amended (the “Plan Amendment”) to freeze all future benefit accruals for salaried plan participants. The Plan Amendment reduced the projected benefit obligation by \$3.1 million as of December 31, 2016. The curtailment gain of \$3.1 million was recognized in Gain on curtailment of pension obligation in our consolidated statement of operations for the year ended December 31, 2016.

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The changes in the projected benefit obligation and the fair value of plan assets of our Benefit Plan for the years ended December 31, 2018 and 2017 were as follows (in thousands):

	2018	2017
Changes in projected benefit obligation:		
Projected benefit obligation as of the beginning of the period	\$ 30,877	\$ 28,914
Service cost	548	614
Interest cost	1,107	1,192
Actuarial (gain) loss	(2,917)	1,091
Benefits paid	(2,076)	(934)
Projected benefit obligation as of December 31	<u>\$ 27,539</u>	<u>\$ 30,877</u>
Changes in fair value of plan assets:		
Fair value of plan assets as of the beginning of the period	\$ 23,461	\$ 21,345
Actual return on plan assets	(1,131)	3,050
Benefits paid	(2,076)	(934)
Fair value of plan assets as of December 31	<u>\$ 20,254</u>	<u>\$ 23,461</u>

The underfunded status of our Benefit Plans is recorded within Other liabilities in our consolidated balance sheets. The reconciliation of the underfunded status of our Benefit Plans of December 31, 2018 and 2017 was as follows:

	2018	2017
Projected benefit obligation	\$ 27,539	\$ 30,877
Fair value of plan assets	20,254	23,461
Underfunded status	<u>\$ 7,285</u>	<u>\$ 7,416</u>
Gross amounts recognized in accumulated other comprehensive income: (1)		
Net actuarial gain	\$ 3,494	\$ 2,965

(1) As of December 31, 2018, we had \$0.1 million in accumulated other comprehensive income that is expected to be amortized into net periodic benefit cost in 2019.

Weighted-average assumptions used to measure our projected benefit obligation as of December 31, 2018 and 2017 and net periodic benefit costs for the years ended December 31, 2018 and 2017 and the period from July 14, 2016, the date of acquisition, to December 31, 2016 are as follows:

	2018	2017	2016
Projected benefit obligation:			
Discount rate (1)	4.20%	3.65%	4.20%
Rate of compensation increase	3.00%	3.00%	4.30%
Net periodic benefit costs:			
Discount rate (1)	3.65%	4.20%	3.80%
Expected long-term rate of return (2)	6.50%	6.25%	7.00%
Rate of compensation increase	3.00%	4.30%	4.03%

(1) In determining the discount rate, we use yields on high-quality fixed income investments with payments matched to the estimated distributions of benefits from our plans.

(2) The expected long-term rate of return is based on a blend of historic returns of equity and debt securities.

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The net periodic benefit cost (credit) for the years ended December 31, 2018 and 2017 and the period from July 14, 2016 to December 31, 2016 includes the following components:

	2018	2017	2016
Components of net periodic benefit cost (credit):			
Service cost	\$ 548	\$ 614	\$ 668
Interest cost	1,107	1,192	598
Expected return on plan assets	(1,258)	(1,189)	(686)
Plan amendment effect	—	—	(3,067)
Net periodic benefit cost (credit)	<u>\$ 397</u>	<u>\$ 617</u>	<u>\$ (2,487)</u>

The Interest cost and Expected return on plan assets components of net periodic benefit cost are included in Other income (expense), net in our consolidated statement of operations for the years ended December 31, 2018 , 2017 , and 2016 . The Service cost component of net periodic benefit cost is included in Operating expense (excluding depreciation) in our consolidated statement of operations for the years ended December 31, 2018 , 2017 , and 2016 .

The weighted-average asset allocation at December 31, 2018 is as follows:

	Target	Actual
Asset category:		
Equity securities	54%	54%
Debt securities	35%	33%
Real estate	11%	13%
Total	<u>100%</u>	<u>100%</u>

We have a long-term, risk-controlled investment approach using diversified investment options with minimal exposure to volatile investment options like derivatives. Our Benefit Plan assets are invested in pooled separate accounts administered by the Benefit Plan custodian. The underlying assets in the pooled separate accounts are invested in equity securities, debt securities, and real estate. The pooled separate accounts are valued based upon the fair market value of the underlying investments and are deemed to be Level 2.

We do not intend to make any contributions to the pension plan during 2019 . Based on current data and assumptions, the following benefit payments, which reflect expected future service, as appropriate, are expected to be paid over the next 10 years :

Year Ended	
2019	\$ 1,140
2020	1,260
2021	1,130
2022	1,200
2023	1,270
Thereafter	7,460
	<u>\$ 13,460</u>

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Note 18—Income (Loss) Per Share

Basic income (loss) per share is computed by dividing net income (loss) attributable to common stockholders by the sum of the weighted-average number of common shares outstanding and the weighted-average number of shares issuable under the common stock warrants, representing 354 thousand shares, 354 thousand shares, and 347 thousand shares for the years ended December 31, 2018, 2017, and 2016, respectively. The common stock warrants are included in the calculation of basic income (loss) per share because they are issuable for minimal consideration. The following table sets forth the computation of basic and diluted loss per share (in thousands, except per share amounts):

	Year Ended December 31,		
	2018	2017	2016
Net income (loss)	\$ 39,427	\$ 72,621	\$ (45,835)
Less: Undistributed income allocated to participating securities (1)	556	878	—
Net income (loss) attributable to common stockholders	38,871	71,743	(45,835)
Plus: Net income effect of convertible securities	—	—	—
Numerator for diluted income (loss) per common share	\$ 38,871	\$ 71,743	\$ (45,835)
Basic weighted-average common stock shares outstanding	45,726	45,543	42,349
Add dilutive effects of common stock equivalents (2)	29	40	—
Diluted weighted-average common stock shares outstanding	45,755	45,583	42,349
Basic income (loss) per common share	\$ 0.85	\$ 1.58	\$ (1.08)
Diluted income (loss) per common share	\$ 0.85	\$ 1.57	\$ (1.08)

(1) Participating securities includes restricted stock that has been issued but has not yet vested.

(2) Entities with a net loss from continuing operations are prohibited from including potential common shares in the computation of diluted per share amounts. We have utilized the basic shares outstanding to calculate both basic and diluted loss per share for the year ended December 31, 2016.

For the year ended December 31, 2018, our calculation of dilutive shares outstanding excluded 68 thousand shares of unvested restricted stock and 1.3 million stock options. For the year ended December 31, 2017, our calculation of dilutive shares outstanding excluded 65 thousand shares of unvested restricted stock and 1.3 million stock options. For the year ended December 31, 2016, our calculation of dilutive shares outstanding excluded 451 thousand shares of unvested restricted stock and 1.3 million stock options.

As discussed in Note 12—Debt, we have the option of settling the 5.00% Convertible Senior Notes issued in June 2016 in cash or shares of common stock, or any combination thereof, upon conversion. For the years ended December 31, 2018, 2017, and 2016, diluted income (loss) per share was determined using the if-converted method. Our calculation of diluted shares outstanding for years ended December 31, 2018, 2017, and 2016 excluded 6.4 million common stock equivalents, as the effect would be anti-dilutive.

Note 19—Income Taxes

We have approximately \$1.5 billion in net operating loss carryforwards (“NOL carryforwards”); however, we currently have a valuation allowance against this and substantially all of our other deferred taxed assets. In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Management considers the scheduled reversal of deferred tax liabilities, projected future results of operations, and tax planning strategies in making this assessment. On December 22, 2017, the Tax Cuts and Jobs Act was signed into law. Certain provisions of the Tax Cuts and Jobs Act may also limit our ability to utilize our net operating tax loss carryforwards. Based upon the level of historical taxable income, significant book losses during the prior periods, and projections for future results of operations over the periods in which the deferred tax assets are deductible, among other factors, management concluded that we did not meet the “more likely than not” requirement in order to recognize deferred

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tax assets and therefore, a valuation allowance has been recorded for substantially all of our net deferred tax assets at December 31, 2018 and 2017 .

In connection with our emergence from bankruptcy on August 31, 2012, we experienced an ownership change as defined under Section 382 of the Code. Section 382 generally places a limit on the amount of NOL carryforwards and other tax attributes arising before an ownership change that may be used to offset taxable income after an ownership change. We believe that we have qualified for an exception to the general limitation rules. This exception under Code Section 382(l)(5) provides for substantially less restrictive limitations on our NOL carryforwards; however, the NOL carryforwards would have been eliminated if we had experienced another ownership change within the two year period following our Bankruptcy. Our amended and restated certificate of incorporation places restrictions upon the ability of certain equity interest holders to transfer their ownership interest in us. These restrictions are designed to provide us with the maximum assurance that another ownership change does not occur that could adversely impact our NOL carryforwards.

During the years ended December 31, 2018 , 2017 , and 2016 , no adjustments were recognized for uncertain tax benefits.

Our net taxable income must be apportioned to various states based upon the income tax laws of the states in which we derive our revenue. Our NOL carryforwards will not always be available to offset taxable income apportioned to the various states.

The Tax Cuts and Jobs Act lowered the Federal corporate tax rate from 35% to 21% and made numerous other tax law changes. GAAP requires companies to recognize the effect of tax law changes in the period of enactment. During 2018, we recorded a benefit for the release of \$0.7 million of our valuation allowance to offset future temporary differences associated with the interest expense carryforwards available under the Tax Cuts and Jobs Act. During 2017, as a result of the change in rate, we remeasured our net deferred tax assets and the associated valuation allowance by \$207.7 million . We also released \$0.8 million of valuation allowance related to Alternative Minimum Tax ("AMT") credit carried forward from prior years that became refundable in connection with the Tax Cuts and Jobs Act. During 2016, we recorded a benefit for the release of \$8.6 million of our valuation allowance to offset future temporary differences associated with the 5.00% Convertible Senior Notes .

During 2019 and thereafter, we will continue to assess the realizability of our deferred tax assets based on consideration of actual and projected operating results and tax planning strategies. Should actual operating results improve, the amount of the deferred tax asset considered more likely than not to be realizable could be increased.

Income (loss) before income taxes related to our foreign operations was a loss of \$1.4 million for the year ended December 31, 2016. We had no income (loss) from foreign operations for the years ended December 31, 2018 and 2017 .

Income tax expense (benefit) consisted of the following (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Current:			
U.S.—Federal	\$ (328)	\$ —	\$ —
U.S.—State	—	2	23
Deferred:			
U.S.—Federal	426	(1,321)	(7,046)
U.S.—State	235	—	(889)
Total	<u>\$ 333</u>	<u>\$ (1,319)</u>	<u>\$ (7,912)</u>

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Income tax expense was different from the amounts computed by applying U.S. Federal income tax rate to pretax income as a result of the following:

	Year Ended December 31,		
	2018	2017	2016
Federal statutory rate	21.0 %	35.0 %	35.0 %
State income taxes, net of federal benefit	0.6 %	— %	1.6 %
Expiration of capital loss carryover	— %	— %	(17.6)%
Change in valuation allowance related to current activity	(21.3)%	(30.1)%	9.2 %
Change in valuation allowance related to change in tax rate	— %	(291.2)%	— %
Change in tax rate	— %	291.2 %	— %
Permanent items	1.3 %	1.1 %	(5.7)%
Provision to return adjustments and other	(0.8)%	(7.9)%	(7.8)%
Actual income tax rate	0.8 %	(1.9)%	14.7 %

Deferred tax assets (liabilities) are comprised of the following (in thousands):

	December 31,	
	2018	2017
Deferred tax assets:		
Net operating loss	\$ 396,033	\$ 388,317
Property and equipment	8,323	9,862
Intangible assets	444	—
Other	17,886	10,263
Total deferred tax assets	422,686	408,442
Valuation allowance	(394,196)	(383,253)
Net deferred tax assets	28,490	25,189
Deferred tax liabilities:		
Investment in Laramie Energy	26,981	18,140
Convertible notes	2,658	3,193
Intangible assets	—	3,978
Other	496	863
Total deferred tax liabilities	30,135	26,174
Total deferred tax liability, net	\$ (1,645)	\$ (985)

We have NOL carryforwards as of December 31, 2018 of \$1.5 billion for federal income tax purposes. If not utilized, the NOL carryforwards will expire during 2027 through 2036. As noted above, we also have AMT Credit Carryovers of \$1.4 million which are refundable under the U.S. tax reform legislation effective tax year 2018.

Note 20—Segment Information

We report the results for the following four business segments: (i) Refining, (ii) Retail, (iii) Logistics, and (iv) Corporate and Other. Beginning in the third quarter of 2016, the results of operations of Wyoming Refining are included in our refining and logistics segments, and, beginning in the first quarter of 2018, the results of operations of Northwest Retail are included in our retail segment.

We recast the segment information for the years ended December 31, 2016 to reflect the elimination of the Texadian segment as a reportable segment beginning in the first quarter of 2017. As of December 31, 2017, Texadian had ceased its business operations other than the disposal of certain assets and liquidation of inventory. Our Corporate and Other reportable segment now primarily includes general and administrative costs.

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Summarized financial information concerning reportable segments consists of the following (in thousands):

For the year ended December 31, 2018	Refining	Logistics	Retail	Corporate, Eliminations, and Other (1)	Total
Revenues	\$ 3,210,067	\$ 125,743	\$ 441,040	\$ (366,122)	\$ 3,410,728
Cost of revenues (excluding depreciation)	2,957,995	77,712	333,664	(366,255)	3,003,116
Operating expense (excluding depreciation)	146,320	7,782	61,182	—	215,284
Depreciation, depletion, and amortization	32,483	6,860	8,962	4,337	52,642
General and administrative expense (excluding depreciation)	—	—	—	47,426	47,426
Acquisition and integration costs	—	—	—	10,319	10,319
Operating income (loss)	\$ 73,269	\$ 33,389	\$ 37,232	\$ (61,949)	\$ 81,941
Interest expense and financing costs, net					(39,768)
Debt extinguishment and commitment costs					(4,224)
Other income, net					1,046
Change in value of common stock warrants					1,801
Change in value of contingent consideration					(10,500)
Equity earnings from Laramie Energy, LLC					9,464
Income before income taxes					39,760
Income tax expense					(333)
Net income					\$ 39,427
Total assets	\$ 968,623	\$ 130,138	\$ 201,848	\$ 160,125	\$ 1,460,734
Goodwill	53,264	37,373	62,760	—	153,397
Capital expenditures	25,601	13,055	6,101	3,682	48,439

(1) Includes eliminations of intersegment revenues and cost of revenues of \$365.5 million for the year ended December 31, 2018 .

For the year ended December 31, 2017	Refining	Logistics	Retail	Corporate, Eliminations, and Other (1)	Total
Revenues	\$ 2,319,638	\$ 121,470	\$ 326,076	\$ (324,118)	\$ 2,443,066
Cost of revenues (excluding depreciation)	2,062,804	66,301	249,097	(323,575)	2,054,627
Operating expense (excluding depreciation)	141,065	15,010	45,941	—	202,016
Depreciation, depletion, and amortization	29,753	6,166	6,338	3,732	45,989
General and administrative expense (excluding depreciation)	—	—	—	46,078	46,078
Acquisition and integration costs	—	—	—	395	395
Operating income (loss)	\$ 86,016	\$ 33,993	\$ 24,700	\$ (50,748)	\$ 93,961
Interest expense and financing costs, net					(31,632)
Debt extinguishment and commitment costs					(8,633)
Other income, net					911
Change in value of common stock warrants					(1,674)
Equity earnings from Laramie Energy, LLC					18,369
Income before income taxes					71,302
Income tax benefit					1,319
Net income					\$ 72,621
Total assets	\$ 949,588	\$ 118,304	\$ 128,966	\$ 150,549	\$ 1,347,407
Goodwill	53,264	37,373	16,550	—	107,187
Capital expenditures	10,433	8,836	7,073	5,366	31,708

(1) Includes eliminations of intersegment revenues and cost of revenues of \$325.2 million for the year ended December 31, 2017 .

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For the year ended December 31, 2016	Refining	Logistics	Retail	Corporate, Eliminations, and Other (1)	Total
Revenues	\$ 1,702,463	\$ 102,779	\$ 290,402	\$ (230,599)	\$ 1,865,045
Cost of revenues (excluding depreciation)	1,580,014	65,439	220,545	(229,659)	1,636,339
Operating expense (excluding depreciation)	115,818	11,239	41,291	1,023	169,371
Depreciation, depletion, and amortization	17,565	4,679	6,372	3,001	31,617
General and administrative expense (excluding depreciation)	—	—	—	42,073	42,073
Acquisition and integration costs	—	—	—	5,294	5,294
Operating income (loss)	\$ (10,934)	\$ 21,422	\$ 22,194	\$ (52,331)	\$ (19,649)
Interest expense and financing costs, net					(28,506)
Debt extinguishment and commitment costs					—
Gain on curtailment of pension obligation					3,067
Other expense, net					(10)
Change in value of common stock warrants					2,962
Change in value of contingent consideration					10,770
Equity losses from Laramie Energy, LLC					(22,381)
Loss before income taxes					(53,747)
Income tax benefit					7,912
Net loss					\$ (45,835)
Total assets	\$ 772,438	\$ 120,443	\$ 122,570	\$ 129,982	\$ 1,145,433
Goodwill	53,037	36,145	16,550	—	105,732
Capital expenditures	15,106	1,344	4,375	4,008	24,833

(1) Includes eliminations of intersegment revenues and cost of revenues of \$271.9 million for the year ended December 31, 2016 .

Note 21—Related Party Transactions

Term Loan

Certain of our stockholders, or affiliates of our stockholders, were the lenders under our Term Loan. In previous years, they received common stock warrants exercisable for shares of common stock in connection with the origination of the Term Loan. On June 15, 2016 , the Term Loan was amended to permit (i) the issuance of the 5.00% Convertible Senior Notes , (ii) the issuance of the Bridge Notes, and (iii) the WRC Acquisition . We paid a consent fee of \$2.5 million in connection with this amendment, \$1.3 million of which was paid to an affiliate of Whitebox, one of our largest stockholders. On June 21, 2016 , we repaid \$5 million of the Term Loan pursuant to the terms of the amendment, \$3.3 million of which was allocated to an affiliate of Whitebox.

On June 30, 2017, we fully repaid and terminated the Term Loan.

Convertible Notes Offering

In June 2016, we issued \$115 million in aggregate principal amount of our 5.00% Convertible Senior Notes in a private placement under Rule 144A in the Notes Offering. Please read Note 12—Debt for further discussion.

Prior to the Notes Offering, we also entered into a backstop convertible note commitment letter with funds managed by Highbridge Capital Management, LLC (“Highbridge”) and funds managed on behalf of Whitebox (collectively, the “Backstop Convertible Note Purchasers”), pursuant to which the Backstop Convertible Note Purchasers committed to purchase \$100 million aggregate principal amount of senior unsecured convertible notes due 2021, which would be issued in a private offering pursuant to an exemption from the registration requirements of the Securities Act.

The obligations of the Backstop Convertible Note Purchasers to purchase convertible notes automatically terminated upon the consummation of the Notes Offering, provided that each of the Back Up Convertible Note Purchasers and their respective affiliates were allocated the opportunity to purchase at least \$32.5 million of the 5.00% Convertible Senior Notes offered in the Notes Offering.

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Affiliates of Whitebox and Highbridge purchased an aggregate of \$47.5 million and \$40.4 million , respectively, principal amount of the 5.00% Convertible Senior Notes in the Notes Offering.

Equity Group Investments (“EGI”) - Service Agreement

On September 17, 2013, we entered into a letter agreement (“Services Agreement”) with EGI, an affiliate of Zell Credit Opportunities Fund, LP (“ZCOF”), which own 10% or more of our common stock directly or through affiliates. Pursuant to the Services Agreement, EGI agreed to provide us with ongoing strategic, advisory, and consulting services that may include (i) advice on financing structures and our relationship with lenders and bankers, (ii) advice regarding public and private offerings of debt and equity securities, (iii) advice regarding asset dispositions, acquisitions, or other asset management strategies, (iv) advice regarding potential business acquisitions, dispositions, or combinations involving us or our affiliates, or (v) such other advice directly related or ancillary to the above strategic, advisory, and consulting services as may be reasonably requested by us.

EGI does not receive a fee for the provision of the strategic, advisory, or consulting services set forth in the Services Agreement, but may be periodically reimbursed by us, upon request, for (i) travel and out-of-pocket expenses, provided that in the event that such expenses exceed \$50 thousand in the aggregate with respect to any single proposed matter, EGI will obtain our consent prior to incurring additional costs, and (ii) provided that we provide prior consent to their engagement with respect to any particular proposed matter, all reasonable fees and disbursements of counsel, accountants, and other professionals incurred in connection with EGI’s services under the Services Agreement. In consideration of the services provided by EGI under the Services Agreement, we agreed to indemnify EGI for certain losses relating to or arising out of the Services Agreement or the services provided thereunder.

The Services Agreement has a term of one year and will be automatically extended for successive one -year periods unless terminated by either party at least 60 days prior to any extension date. There were no significant costs incurred related to this agreement during the years ended December 31, 2018 , 2017 , or 2016 .

Bridge Notes Commitment and Issuance

On June 14, 2016 , we entered into a Bridge Notes commitment letter (the “Bridge Notes Commitment Letter”) with entities affiliated with EGI and Highbridge pursuant to which such parties committed to purchase an aggregate of up to \$52.6 million of Bridge Notes. We paid a fee, in the amount of 5.0% of their respective commitments, to each of the entities affiliated with EGI and Highbridge who had committed to purchasing Bridge Notes pursuant to the Bridge Notes Commitment Letter. This fee was deducted from the proceeds received at the Bridge Notes closing in July 2016. On September 22, 2016 , we repaid \$49 million of the outstanding interest and principal on the Bridge Notes and converted the remaining outstanding principal amount on the Bridge Notes into 272,733 shares of our common stock.

Note 22—Subsequent Events

Washington Refinery Acquisition

On November 26, 2018 , we entered into a Purchase and Sale Agreement to acquire U.S. Oil & Refining Co. and certain affiliated entities (collectively, “U.S. Oil ”), a privately-held downstream business, for \$358 million plus net working capital (the “ Washington Refinery Acquisition ”). The Washington Refinery Acquisition includes a 42 Mbpd refinery, a marine terminal, a unit train-capable rail loading terminal, and 2.9 MMBbbls of refined product and crude oil storage. The refinery and associated logistics system are strategically located in Tacoma, Washington, and currently serve the Pacific Northwest market. On January 11, 2019 , we completed the Washington Refinery Acquisition for a total purchase price of \$326.7 million , including acquired working capital, consisting of cash consideration of \$289.7 million and approximately 2.4 million shares of Par’s common stock issued to the seller of U.S. Oil. The cash consideration was funded in part through cash on hand, proceeds from borrowings under the GS Term Loan Facility (as defined below) of \$250.0 million and proceeds from borrowings under a term loan from the Bank of Hawaii of \$45.0 million . During December 2018 and January 2019, we incurred \$4.2 million and \$5.4 million of commitment fees associated with the funding of the Washington Refinery Acquisition , respectively. Such commitment fees are presented as Debt extinguishment and commitment costs on our consolidated statements of operations.

We will account for the Washington Refinery Acquisition as a business combination whereby the purchase price will be allocated to the assets acquired and liabilities assumed based on their estimated fair values on the date of the acquisition. We are in the process of developing an initial estimate of the fair value of the assets acquired and liabilities assumed as part of the Washington Refinery Acquisition .

On January 11, 2019 , in connection with the consummation of the Washington Refinery Acquisition , we entered into a new term loan facility with Goldman Sachs Bank USA, as administrative agent, and the lenders party thereto from time to time

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(the “GS Term Loan Facility”). Pursuant to the GS Term Loan Facility, the lenders made a term loan to the borrowers in the amount of \$250.0 million (the “GS Term Loan”) on the closing date. The net proceeds from the GS Term Loan totaled \$228.9 million after deducting the original issue discount, deferred financing costs, and commitment and other fees. Loans under the GS Term Loan will bear interest at a rate per annum equal to Adjusted LIBOR (as defined in the GS Term Loan Facility) plus an applicable margin of 6.75% or at a rate per annum equal to Alternate Base Rate (as defined in the GS Term Loan Facility) plus an applicable margin of 5.75%. The GS Term Loan matures on January 11, 2026.

On January 9, 2019, we entered into a loan agreement (the “Par Pacific Term Loan Agreement”) with Bank of Hawaii (“BOH”). Pursuant to the Par Pacific Term Loan Agreement, BOH made a loan to the Company in the amount of \$45.0 million (the “Par Pacific Term Loan”). During the term of the Par Pacific Term Loan, the interest rate on the outstanding principal balance will be a floating rate equal to 3.50% above the applicable LIBOR rate (as defined in the Par Pacific Term Loan Agreement) subject to an increased default interest rate in the event of a default. The unpaid principal balance of the Par Pacific Term Loan will be due and payable in full on July 9, 2019.

In connection with the consummation of the Washington Refinery Acquisition, we assumed an intermediation arrangement (the “Washington Refinery Intermediation Agreement”) with Merrill Lynch Commodities, Inc. (“MLC”) that provides a structured financing arrangement based on U.S. Oil’s crude oil and refined products inventories and associated accounts receivables. Under this arrangement, U.S. Oil purchases crude oil supplied from third-party suppliers, and MLC provides credit support for such crude oil purchases. MLC’s credit support can consist of either providing a payment guaranty or causing the issuance of a letter of credit from a third party issuing bank. U.S. Oil holds title to all crude oil and refined products inventories at all times and pledges such inventories, together with all receivables arising from the sales of same, exclusively to MLC. During the remaining term of the Washington Refinery Intermediation Agreement, MLC will make receivable advances to U.S. Oil based on an advance rate of 95% of eligible receivables, up to a total receivables advance maximum of \$90.0 million, and additional advances based on crude oil and products inventories. The Washington Refinery Intermediation Agreement expires on December 31, 2019.

On March 4, 2019, Laramie entered into a binding agreement to divest an insignificant amount of producing property for approximately \$17.5 million.

Note 23—Quarterly Financial Data (Unaudited)

Summarized quarterly data for the years ended December 31, 2018 and 2017 consist of the following (in thousands, except per share amounts):

Year Ended December 31, 2018				
	Q1	Q2	Q3	Q4
Revenues	\$ 765,439	\$ 856,396	\$ 909,781	\$ 879,112
Operating income	27,656	28,983	4,894	20,408
Net income (loss)	15,185	16,178	(5,822)	13,886
Net income (loss) per share				
Basic	\$ 0.33	\$ 0.35	\$ (0.13)	\$ 0.30
Diluted	\$ 0.33	\$ 0.35	\$ (0.13)	\$ 0.30

Year Ended December 31, 2017				
	Q1	Q2	Q3	Q4
Revenues	\$ 605,253	\$ 564,245	\$ 610,506	\$ 663,062
Operating income	29,189	16,451	26,716	21,605
Net income	27,786	7,006	18,824	19,005
Net income per share				
Basic	\$ 0.60	\$ 0.15	\$ 0.41	\$ 0.41
Diluted	\$ 0.58	\$ 0.15	\$ 0.41	\$ 0.41

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Note 24—Supplemental Oil and Gas Disclosures (Unaudited)

Capitalized costs related to oil and gas activities are as follows (in thousands):

	December 31,	
	2018	2017
Company		
Unproved properties	\$ —	\$ —
Proved properties	400	400
	<u>400</u>	<u>400</u>
Accumulated depreciation and depletion	(293)	(275)
Total	<u>\$ 107</u>	<u>\$ 125</u>
Company's share of Laramie Energy		
Unproved properties	\$ 16,379	\$ 13,728
Proved properties	473,763	382,789
	<u>490,142</u>	<u>396,517</u>
Accumulated depreciation, depletion, and amortization	(150,075)	(111,119)
Total	<u>\$ 340,067</u>	<u>\$ 285,398</u>

Costs incurred in oil and gas activities including costs associated with assets retirement obligations, are as follows (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Company			
Development costs—other	\$ —	\$ —	\$ —
Total	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>
Company's share of Laramie Energy			
Acquisition costs	\$ —	\$ —	\$ 65,324
Development costs—other	50,867	49,273	12,805
Total	<u>\$ 50,867</u>	<u>\$ 49,273</u>	<u>\$ 78,129</u>

For the years ended December 31, 2018 , 2017 , and 2016 , neither we nor Laramie Energy incurred exploratory well costs so no amounts were capitalized or expensed during these respective periods. Accordingly, there were no suspended exploratory well costs at December 31, 2018 , 2017 , and 2016 that were being evaluated.

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A summary of the results of operations for oil and gas producing activities, excluding general and administrative costs, is as follows (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Company			
Revenue			
Oil and gas revenues	\$ 51	\$ 288	\$ 190
Expenses			
Production costs	191	29	147
Depletion and amortization	17	66	69
Exploration	—	—	—
Abandoned and impaired properties	—	—	—
Results of operations of oil and gas producing activities	\$ (157)	\$ 193	\$ (26)
Company's share of Laramie Energy			
Revenue			
Oil and gas revenues	\$ 93,493	\$ 66,783	\$ 43,607
Expenses			
Production costs	42,706	32,606	27,750
Depletion, depreciation, and amortization	26,819	21,277	17,534
Results of operations of oil and gas producing activities	\$ 23,968	\$ 12,900	\$ (1,677)
Total results of operations of oil and gas producing activities	\$ 23,811	\$ 13,093	\$ (1,703)

Oil and Gas Reserve Information

There are numerous uncertainties inherent in estimating quantities of proved crude oil and natural gas reserves. Crude oil and natural gas reserve engineering is a subjective process of estimating underground accumulations of crude oil and natural gas that cannot be precisely measured. The accuracy of any reserve estimate is a function of the quality of available data and of engineering and geological interpretation and judgment. Results of drilling, testing, and production subsequent to the date of the estimate may justify revision of such estimate. Accordingly, reserve estimates are often different from the quantities of crude oil and natural gas that are ultimately recovered.

Estimates of our crude oil and natural gas reserves and present values as of December 31, 2018 , 2017 , and 2016 , were prepared by Netherland, Sewell & Associates, Inc., independent reserve engineers.

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A summary of changes in estimated quantities of proved reserves for the years ended December 31, 2018 , 2017 , and 2016 is as follows:

	Gas (MMcf)	Oil (Mbbbl)	NGLS (Mbbbl)	Total (MMcfe) (1)
Company				
Balance at January 1, 2016	188	6	—	224
Revisions of quantity estimate	196	3	8	262
Extensions and discoveries	—	—	—	—
Production	(54)	(2)	—	(66)
Balance at December 31, 2016	330	7	8	420
Revisions of quantity estimate	109	2	3	139
Extensions and discoveries	—	—	—	—
Production	(47)	(2)	—	(59)
Balance at December 31, 2017 (2)	392	7	11	500
Revisions of quantity estimate	(269)	(2)	(10)	(341)
Extensions and discoveries	—	—	—	—
Production	(34)	(1)	—	(40)
Balance at December 31, 2018 (3)	89	4	1	119
Company ' s share of Laramie Energy				
Balance at January 1, 2016, as revised	127,274	480	3,850	153,254
Revisions of quantity estimate	28,195	53	526	31,672
Extensions and discoveries	638	1	19	758
Acquisitions and divestitures	168,887	492	4,701	200,045
Production	(15,192)	(59)	(552)	(18,858)
Balance at December 31, 2016, as revised	309,802	967	8,544	366,871
Revisions of quantity estimate	1,344	211	(434)	3
Extensions and discoveries (2)	—	—	—	—
Acquisitions and divestitures	—	—	—	—
Production	(18,104)	(71)	(608)	(22,178)
Balance at December 31, 2017 (2)	293,042	1,107	7,502	344,696
Revisions of quantity estimate	47,871	732	5,602	85,875
Extensions and discoveries	—	—	—	—
Acquisitions and divestitures	22,391	12	191	23,609
Production	(25,513)	(106)	(712)	(30,421)
Balance at December 31, 2018 (3)	337,791	1,745	12,583	423,759
Total at December 31, 2018	337,880	1,749	12,584	423,878

(1) MMcfe is based on a ratio of 6 Mcf to 1 barrel.

(2) During 2017 , the Company's estimated proved reserves, inclusive of the Company's share of Laramie Energy's estimated proved reserves, decreased by 22,095 MMcfe or approximately 6% . Production volumes related to our share of Laramie Energy's estimated proved reserves resulted in a decrease of 22,178 MMcfe. Beginning in 2017, Par has decided to base its determination of Laramie Energy proved undeveloped reserves on only a two year drilling and three year completion time horizon, which has resulted in negative revisions to our proved reserves of 17,216 MMcfe during 2017. The Company's share of Laramie Energy's revisions of quantity estimate also includes 30,362 MMcfe of positive revisions associated with 44 probable locations that were converted to proved developed reserves during 2017. These 44 locations converted to proved reserves during 2017 were not considered extensions because they were drilled in proved areas that are slightly offset to other proved locations. The remaining decrease in estimated proved reserves was due to performance and other changes to the Company's share of Laramie Energy's proved developed producing and developed non-producing reserves.

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- (3) During 2018, the Company's estimated proved reserves, inclusive of the Company's share of Laramie Energy's estimated proved reserves, increased by 78,682 MMcfe or approximately 23%. The Company's share of Laramie Energy's revisions of quantity estimate increased primarily due to: 1) additions of 60,679 MMcfe of proved undeveloped reserves primarily located within Laramie Energy's northern acreage, 2) 11,614 MMcfe of positive revisions associated with 13 probable locations that were converted to proved developed reserves during 2018, and 3) 13,582 MMcfe of positive revisions due to performance improvements and other changes to the Company's share of Laramie Energy's proved developed and undeveloped reserves. Production volumes related to our share of Laramie Energy's estimated proved reserves resulted in a decrease of 30,421 MMcfe. During 2018, Laramie Energy closed on a purchase and contribution agreement with an unaffiliated third party that contributed 23,609 MMcfe of proved developed reserves in the Piceance Basin.

A summary of proved developed and undeveloped reserves for the years ended December 31, 2018, 2017, and 2016 is presented below:

	Gas (MMcf)	Oil (Mbbbl)	NGLS (Mbbbl)	Total (MMcfe) (1)
December 31, 2016				
Proved developed reserves				
Company	330	7	8	420
Company's share of Laramie Energy	159,500	516	4,349	188,690
Total	159,830	523	4,357	189,110
Proved undeveloped reserves				
Company	—	—	—	—
Company's share of Laramie Energy	150,302	451	4,195	178,181
Total	150,302	451	4,195	178,181
December 31, 2017				
Proved developed reserves				
Company	392	7	11	500
Company's share of Laramie Energy	174,464	658	4,589	205,946
Total	174,856	665	4,600	206,446
Proved undeveloped reserves				
Company	—	—	—	—
Company's share of Laramie Energy	118,578	449	2,913	138,750
Total	118,578	449	2,913	138,750
December 31, 2018				
Proved developed reserves				
Company	89	4	1	119
Company's share of Laramie Energy	256,363	1,420	8,868	318,091
Total	256,452	1,424	8,869	318,210
Proved undeveloped reserves				
Company	—	—	—	—
Company's share of Laramie Energy	81,428	325	3,715	105,668
Total	81,428	325	3,715	105,668

(1) MMcfe is based on a ratio of 6 Mcf to 1 barrel.

PAR PACIFIC HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements
For the Years Ended December 31, 2018, 2017, and 2016

	<u>Price per MMbtu</u>	<u>WTI per Bbl</u>
Base pricing, before adjustments for contractual differentials (Company and Laramie Energy): (1)		
December 31, 2016	\$ 2.29	\$ 42.75
December 31, 2017	2.68	51.34
December 31, 2018	2.47	65.56

(1) Proved reserves are required to be calculated based on the 12-month, first day of the month historical average price in accordance with SEC rules. The prices shown above are base index prices to which adjustments are made for contractual deducts and other factors.

Future net cash flows presented below are computed using applicable prices (as summarized above) and costs and are net of all overriding royalty revenue interests.

	December 31,		
	2018	2017	2016
	(in thousands)		
Company			
Future net cash flows	\$ 398	\$ 1,802	\$ 1,154
Future costs			
Production	123	902	713
Development and abandonment	35	—	2
Income taxes (1)	—	—	—
Future net cash flows	240	900	439
10% discount factor	(110)	(328)	(154)
Discounted future net cash flows	\$ 130	\$ 572	\$ 285
Company's share of Laramie Energy			
Future net cash flows	\$ 1,283,890	\$ 1,026,005	\$ 905,607
Future costs			
Production	583,112	491,748	462,684
Development and abandonment	93,546	109,248	136,224
Income taxes (1)	—	—	—
Future net cash flows	607,232	425,009	306,699
10% discount factor	(288,130)	(209,188)	(165,557)
Discounted future net cash flows	\$ 319,102	\$ 215,821	\$ 141,142
Total discounted future net cash flows	\$ 319,232	\$ 216,393	\$ 141,427

(1) No income tax provision is included in the standardized measure of discounted future net cash flows calculation shown above as we do not project to be taxable or pay cash income taxes based on its available tax assets and additional tax assets generated in the development of its reserves because the tax basis of its oil and gas properties and NOL carryforwards exceeds the amount of discounted future net earnings.

PAR PACIFIC HOLDINGS, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements
For the Years Ended December 31, 2018, 2017, and 2016

The principal sources of changes in the standardized measure of discounted net cash flows for the years ended December 31, 2018 , 2017 , and 2016 are as follows (in thousands):

	Company	Company's Share of Laramie Energy	Total
Balance at January 1, 2016	\$ 192	\$ 39,605	\$ 39,797
Sales of oil and gas production during the period, net of production costs	(62)	(7,979)	(8,041)
Acquisitions and divestitures	—	81,066	81,066
Net change in prices and production costs	(20)	2,994	2,974
Changes in estimated future development costs	14	(8,575)	(8,561)
Extensions, discoveries, and improved recovery	—	231	231
Revisions of previous quantity estimates, estimated timing of development and other	142	16,995	17,137
Previously estimated development and abandonment costs incurred during the period	—	12,805	12,805
Accretion of discount	19	4,000	4,019
Balance at December 31, 2016	285	141,142	141,427
Sales of oil and gas production during the period, net of production costs	(28)	(29,911)	(29,939)
Net change in prices and production costs	(60)	35,597	35,537
Revisions of previous quantity estimates, estimated timing of development and other	346	37,692	38,038
Previously estimated development and abandonment costs incurred during the period	—	17,187	17,187
Accretion of discount	29	14,114	14,143
Balance at December 31, 2017	572	215,821	216,393
Sales of oil and gas production during the period, net of production costs	(127)	(47,165)	(47,292)
Acquisitions and divestitures	—	35,182	35,182
Net change in prices and production costs	20	(1,365)	(1,345)
Revisions of previous quantity estimates, estimated timing of development and other	(392)	54,311	53,919
Previously estimated development and abandonment costs incurred during the period	—	40,736	40,736
Accretion of discount	57	21,582	21,639
Balance at December 31, 2018	\$ 130	\$ 319,102	319,232

SCHEDULE I - CONDENSED FINANCIAL INFORMATION OF REGISTRANT
PAR PACIFIC HOLDINGS, INC. (PARENT ONLY)
BALANCE SHEETS
(in thousands, except share data)

	December 31, 2018	December 31, 2017
ASSETS		
Current assets		
Cash and cash equivalents	\$ 28,701	\$ 65,615
Restricted cash	743	744
Total cash, cash equivalents, and restricted cash	29,444	66,359
Prepaid and other current assets	11,711	11,768
Due from subsidiaries	43,928	8,113
Total current assets	85,083	86,240
Property and equipment		
Property, plant, and equipment	18,939	15,773
Less accumulated depreciation and depletion	(9,034)	(6,226)
Property and equipment, net	9,905	9,547
Long-term assets		
Investment in subsidiaries	638,975	552,748
Other long-term assets	3,334	1,976
Total assets	\$ 737,297	\$ 650,511
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Accounts payable	\$ 8,312	\$ 4,510
Other accrued liabilities	12,349	12,913
Due to subsidiaries	96,963	82,524
Total current liabilities	117,624	99,947
Long-term liabilities		
Long-term debt	100,411	95,486
Common stock warrants	5,007	6,808
Long-term capital lease obligations	475	551
Other liabilities	1,451	—
Total liabilities	224,968	202,792
Stockholders' equity		
Preferred stock, \$0.01 par value: 3,000,000 shares authorized, none issued	—	—
Common stock, \$0.01 par value; 500,000,000 shares authorized at December 31, 2018 and December 31, 2017, 46,983,924 shares and 45,776,087 shares issued at December 31, 2018 and December 31, 2017, respectively	470	458
Additional paid-in capital	617,937	593,295
Accumulated deficit	(108,751)	(148,178)
Accumulated other comprehensive income	2,673	2,144
Total stockholders' equity	512,329	447,719
Total liabilities and stockholders' equity	\$ 737,297	\$ 650,511

This statement should be read in conjunction with the notes to consolidated financial statements.

SCHEDULE I - CONDENSED FINANCIAL INFORMATION OF REGISTRANT
PAR PACIFIC HOLDINGS, INC. (PARENT ONLY)
STATEMENTS OF OPERATIONS
(in thousands)

	Year Ended December 31,		
	2018	2017	2016
Operating expenses			
Depreciation and amortization	4,092	2,871	2,205
General and administrative expense (excluding depreciation)	20,721	18,922	15,618
Acquisition and integration costs	10,118	192	4,781
Total operating expenses	34,931	21,985	22,604
Operating loss	(34,931)	(21,985)	(22,604)
Other income (expense)			
Interest expense and financing costs, net	(10,867)	(13,709)	(18,246)
Debt extinguishment and commitment costs	—	(1,804)	—
Interest income from subsidiaries	—	—	583
Other income (expense), net	1,155	631	67
Change in value of common stock warrants	1,801	(1,674)	2,962
Equity in earnings (losses) of subsidiaries	81,942	111,162	(17,170)
Total other income (expense), net	74,031	94,606	(31,804)
Income (loss) before income taxes	39,100	72,621	(54,408)
Income tax benefit	327	—	8,573
Net income (loss)	\$ 39,427	\$ 72,621	\$ (45,835)

This statement should be read in conjunction with the notes to consolidated financial statements.

SCHEDULE I - CONDENSED FINANCIAL INFORMATION OF REGISTRANT
PAR PACIFIC HOLDINGS, INC. (PARENT ONLY)
STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(in thousands)

	Year Ended December 31,		
	2018	2017	2016
Net income (loss)	\$ 39,427	\$ 72,621	\$ (45,835)
Other comprehensive income (loss): (1)			
Other post-retirement benefits income (loss), net of tax	529	(52)	2,196
Total other comprehensive income (loss)	529	(52)	2,196
Comprehensive income (loss)	<u>\$ 39,956</u>	<u>\$ 72,569</u>	<u>\$ (43,639)</u>

(1) Other comprehensive income (loss) relates to benefit plans at our subsidiaries.

This statement should be read in conjunction with the notes to consolidated financial statements.

SCHEDULE I - CONDENSED FINANCIAL INFORMATION OF REGISTRANT
PAR PACIFIC HOLDINGS, INC. (PARENT ONLY)
STATEMENTS OF CASH FLOWS
(in thousands)

	Year Ended December 31,		
	2018	2017	2016
Cash flows from operating activities:			
Net income (loss)	\$ 39,427	\$ 72,621	\$ (45,835)
Adjustments to reconcile net loss to cash provided by (used in) operating activities:			
Depreciation and amortization	4,092	2,871	2,205
Non-cash interest expense	4,925	5,617	13,722
Non-cash interest income from subsidiary	—	—	(583)
Change in value of common stock warrants	(1,801)	1,674	(2,962)
Deferred taxes	—	—	(8,573)
Stock-based compensation	6,196	7,204	2,226
Equity in losses (income) of subsidiaries	(81,942)	(111,162)	17,170
Debt extinguishment and commitment costs	—	1,804	—
Net changes in operating assets and liabilities:			
Prepaid and other assets	(2,604)	(2,568)	23
Accounts payable and other accrued liabilities	5,601	3,088	381
Net cash used in operating activities	(26,106)	(18,851)	(22,226)
Cash flows from investing activities:			
Investments in subsidiaries	—	(2,072)	(264,163)
Distributions from subsidiaries	—	70,645	9,047
Note receivable from subsidiary	—	—	10,000
Capital expenditures	(3,682)	(5,366)	(4,321)
Due to (from) subsidiaries	(25,102)	80,762	(23,947)
Net cash provided by (used in) investing activities	(28,784)	143,969	(273,384)
Cash flows from financing activities:			
Proceeds from sale of common stock, net of offering costs	19,318	—	49,044
Proceeds from borrowings	10,770	—	172,282
Repayments of borrowings	(11,253)	(68,873)	(63,062)
Payment of deferred loan costs	—	—	(6,298)
Due to (from) subsidiaries	—	—	63,578
Other financing activities, net	(860)	(993)	(598)
Net cash provided by (used in) financing activities	17,975	(69,866)	214,946
Net increase (decrease) in cash, cash equivalents, and restricted cash	(36,915)	55,252	(80,664)
Cash, cash equivalents, and restricted cash at beginning of period	66,359	11,107	91,771
Cash, cash equivalents, and restricted cash at end of period	\$ 29,444	\$ 66,359	\$ 11,107
Supplemental cash flow information:			
Cash received (paid) for:			
Interest	\$ (5,750)	\$ (7,856)	\$ (4,557)
Taxes	(49)	(1,478)	—
Non-cash investing and financing activities:			
Accrued capital expenditures	\$ 714	\$ 370	\$ 361
Value of warrants and debt reclassified to equity	—	—	3,084
Capital leases	539	165	1,575

This statement should be read in conjunction with the notes to consolidated financial statements.

Item 16. FORM 10-K SUMMARY

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on March 11, 2019 .

PAR PACIFIC HOLDINGS, INC.

By: /s/ William Pate

William Pate

President and Chief Executive Officer

By: /s/ William Monteleone

William Monteleone

Chief Financial Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this Form 10-K has been signed below by the following persons on our behalf and in the capacities indicated and on March 11, 2019 .

<u>Signature</u>	<u>Title</u>
<u>/s/ WILLIAM PATE</u> William Pate	President and Chief Executive Officer (Principal Executive Officer)
<u>/s/ WILLIAM MONTELEONE</u> William Monteleone	Chief Financial Officer (Principal Financial Officer)
<u>/s/ IVAN GUERRA</u> Ivan Guerra	Chief Accounting Officer (Principal Accounting Officer)
<u>/s/ MELVYN N. KLEIN</u> Melvyn N. Klein	Chairman Emeritus
<u>/s/ ROBERT S. SILBERMAN</u> Robert S. Silberman	Chairman of the Board of Directors
<u>/s/ TIMOTHY CLOSSEY</u> Timothy Clossey	Director
<u>/s/ L. MELVIN COOPER</u> L. Melvin Cooper	Director
<u>/s/ CURTIS ANASTASIO</u> Curtis Anastasio	Director
<u>/s/ WALTER A. DODS, JR.</u> Walter A. Dods, Jr.	Director
<u>/s/ JOSEPH ISRAEL</u> Joseph Israel	Director
<u>/s/ KATHERINE HATCHER</u> Katherine Hatcher	Director

**AMENDMENT TO AMENDED AND RESTATED
SUPPLY AND OFFTAKE AGREEMENT**

This **AMENDMENT TO AMENDED AND RESTATED SUPPLY AND OFFTAKE AGREEMENT** (this “Amendment”) is made and entered into as of February 19, 2019, by and among Par Hawaii Refining, LLC f/k/a Hawaii Independent Energy, LLC (the “Company”), Par Petroleum, LLC (the “Guarantor”) and J. Aron & Company LLC (“Aron”) (each referred to individually as a “Party” and collectively, the “Parties”).

RECITALS

A. The Company owns and operates a crude oil refinery and related assets located in Kapolei, Hawaii (the “Refinery”) for the processing and refining of crude oil and other feedstocks and the recovery therefrom of refined products.

B. The Parties have entered into an Amended and Restated Supply and Offtake Agreement, dated as of December 21, 2017 (as from time to time amended, modified, supplemented, extended, renewed and/or restated, the “S&O Agreement”), pursuant and subject to which Aron has agreed to supply crude oil to the Company to be processed at the Refinery and purchase refined products from the Company produced at the Refinery.

C. The Parties have agreed to amend the S&O Agreement pursuant to the terms set forth herein.

AGREEMENTS

NOW, THEREFORE, in consideration of the foregoing premises, the mutual promises and covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties, subject to the terms and conditions hereinafter set forth, agree as follows:

Section 1 Definitions; Interpretation

Section 1.1 Defined Terms. All capitalized terms used in this Amendment (including in the Recitals hereto) and not otherwise defined herein shall have the meanings assigned to them in the S&O Agreement.

Section 1.2 Interpretation. The rules of construction set forth in Section 1.2 of the S&O Agreement shall be applicable to this Amendment and are incorporated herein by this reference.

SECTION 2 Amendment

Section 2.1 Amendment to S&O Agreement. Upon the effectiveness of this Amendment:

- (a) Section 1.1 of the S&O Agreement is hereby amended by inserting, in the appropriate alphabetical order, the following new definitions:

“Par East” means the storage tanks located at or adjacent to the Original Refinery.

“Par West” means the storage tanks located at or adjacent to the Topping Unit Refinery Assets.

(b) The definition of “Refinery” in Section 1.1 of the S&O Agreement is hereby amended and restated in its entirety to read as follows:

“Refinery” has the meaning specified in the recitals hereto; provided that from and after the Purchase Agreement Closing, (i) the term “Refinery” shall also include the Topping Unit Refinery Assets and (ii) the term “Original Refinery” shall not include the Topping Unit Refinery Assets.

(c) Section 30.9 of the S&O Agreement is hereby amended by adding the text “V,” immediately after the text “T,” in the second line thereof; and

(d) Article 30 of the S&O Agreement is hereby amended by adding a new Section 30.10 immediately after Section 30.9 thereof, which new Section 30.10 shall read in its entirety as follows:

30.10 The Parties agree that, notwithstanding anything to the contrary in Section 30.2 or otherwise herein, the Parties may confirm an “Agreed Roll Differential” executed pursuant to Schedule Y from time to time in accordance with the following procedures:

(a) Each Agreed Roll Differential executed by the Parties may be confirmed by an exchange of emails between the Parties which shall specifically reference (i) the calendar month(s) for which the Agreed Roll Differential shall apply, (ii) the product group and corresponding Agreed Roll Volumes, (iii) the amount per barrel of such Agreed Roll Differential and (iv) the calendar month for which such amount shall be incorporated in the Monthly Market Structure Roll Fee for purposes of calculating the Monthly True-up Amount. Either Party may initiate this email exchange, but such email exchange shall only be effective to bind the Parties once the second Party has responded via email in a manner sufficient to confirm its agreement to the Agreed Roll Differential reflected in the initial email.

(b) An exchange of emails complying with the terms of this Section 30.10 shall (notwithstanding anything to the contrary herein) constitute confirmation of an Agreed Roll Differential for all purposes hereunder.

(e) The S&O Agreement is hereby amended by replacing each reference therein to “Kapolei Refinery” with a reference to “Par East”.

(f) The S&O Agreement is hereby amended by replacing each reference therein to “Kapolei Refinery West” with a reference to “Par West”.

(g) The Schedules attached to the S&O Agreement are hereby amended by replacing (i) the Schedule C attached to the S&O Agreement with the Schedule C attached hereto; (ii) the

Schedule E attached to the S&O Agreement with the Schedule E attached hereto; (iii) the Schedule H attached to the S&O Agreement with the Schedule H attached hereto; and (iv) the Schedule U attached to the S&O Agreement with the Schedule U attached hereto

Section 2.2 References Within S&O Agreement. Each reference in the S&O Agreement to “this Agreement” and the words “hereof,” “hereto,” “herein,” “hereunder,” or words of like import, and each reference in any other Transaction Document to “the S&O Agreement” and the words “thereof,” “thereto,” “therein,” “thereunder” or words of like import, in each case, shall mean and be a reference to the S&O Agreement as heretofore amended and as amended by this Amendment.

SECTION 3 Representations and Warranties

To induce the other Party to enter into this Amendment, each Party hereby represents and warrants that (i) it has the corporate, governmental or other legal capacity, authority and power to execute this Amendment, to deliver this Amendment and to perform its obligations under the S&O Agreement, as amended hereby, and has taken all necessary action to authorize the foregoing; (ii) the execution, delivery and performance of this Amendment does not violate or conflict with any law applicable to it, any provision of its constitutional documents, any order or judgment of any court or Governmental Authority applicable to it or any of its assets or subject; (iii) all governmental and other consents required to have been obtained by it with respect to this Amendment have been obtained and are in full force and effect; (iv) its obligations under the S&O Agreement, as amended hereby, constitute its legal, valid and binding obligations, enforceable in accordance with its terms (subject to applicable bankruptcy, reorganization, insolvency, moratorium or similar laws affecting creditors’ rights generally and subject, as to enforceability, to equitable principles of general application regardless of whether enforcement is sought in a proceeding in equity or at law) and (v) no Event of Default with respect to it has occurred and is continuing.

SECTION 4 Reaffirmation

All of the terms and provisions of the S&O Agreement shall, as amended and modified hereby, remain in full force and effect. Each of the Company and the Guarantor hereby agrees that the amendments and modifications herein contained shall in no manner affect (other than expressly provided herein) or impair the Obligations or the Liens securing the payment and performance thereof. Each of the Company and the Guarantor hereby ratifies and confirms all of its respective obligations and liabilities under the Transaction Documents to which it is a party, as expressly modified herein, and the Guarantor ratifies and confirms that such obligations and liabilities extend to and continue in effect with respect to, and continue to guarantee the Obligations of the Company under the Transaction Documents, as expressly modified herein.

SECTION 5 Miscellaneous

Section 5.1 S&O Agreement Otherwise Not Affected. Except for the amendments pursuant hereto, the S&O Agreement remains unchanged. As amended pursuant hereto, the S&O Agreement remains in full force and effect and is hereby ratified and confirmed in all respects. The execution and delivery of, or acceptance of, this Amendment and any other documents and instruments in

connection herewith by either Party shall not be deemed to create a course of dealing or otherwise create any express or implied duty by it to provide any other or further amendments, consents or waivers in the future. For all purposes of the S&O Agreement and the other Transaction Documents, this Amendment shall constitute a "Transaction Document."

Section 5.2 No Reliance. Each Party hereby acknowledges and confirms that it is executing this Amendment on the basis of its own investigation and for its own reasons without reliance upon any agreement, representation, understanding or communication by or on behalf of any other Person.

Section 5.3 Binding Effect. This Amendment shall be binding upon, inure to the benefit of and be enforceable by the Company, Aron and their respective successors and assigns.

Section 5.4 Governing Law. THIS AMENDMENT SHALL BE GOVERNED BY, CONSTRUED AND ENFORCED UNDER THE LAWS OF THE STATE OF NEW YORK WITHOUT GIVING EFFECT TO ITS CONFLICTS OF LAW PRINCIPLES THAT WOULD REQUIRE THE APPLICATION OF THE LAWS OF ANOTHER STATE.

Section 5.5 Amendments. This Amendment may not be modified, amended or otherwise altered except by written instrument executed by the Parties' duly authorized representatives.

Section 5.6 Effectiveness; Counterparts. This Amendment shall be binding on the Parties as of the date on which it has been fully executed by the Parties. This Amendment may be executed in any number of counterparts and by different Parties hereto in separate counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute but one and the same agreement.

Section 5.7 Interpretation. This Amendment is the result of negotiations between the Parties and has been reviewed by counsel to each of the Parties, and is the product of all Parties hereto. Accordingly, this Amendment shall not be construed against either Party merely because of such Party's involvement in the preparation hereof.

[REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF , each Party hereto has caused this Amendment to be executed by its duly authorized representative as of the date first above written.

J. ARON & COMPANY LLC

By: /s/ Harsha V. Rajamani
Name: Harsha V. Rajamani
Title: Managing Director

PAR HAWAII REFINING, LLC

By: /s/ James Matthew Vaughn
Name: James Matthew Vaughn
Title: Vice President

PAR PETROLEUM, LLC

By: /s/ James Matthew Vaughn
Name: James Matthew Vaughn
Title: Vice President

Schedule C

(See attached.)

Schedule E

(See attached.)

Schedule H

(See attached.)

Schedule U

(See attached.)

SUBSIDIARIES OF THE REGISTRANT

<u>Name</u>	<u>Jurisdiction</u>
Hermes Consolidated, LLC	Delaware
HIE Retail, LLC	Hawaii
Mid Pac Petroleum, LLC	Delaware
Par Hawaii, Inc.	Hawaii
Par Hawaii Refining, LLC	Hawaii
Par Hawaii Shared Services, LLC	Delaware
Par Petroleum Finance Corp.	Delaware
Par Petroleum, LLC	Delaware
Par Piceance Energy Equity, LLC	Delaware
Par Wyoming, LLC	Delaware
Par Wyoming Holdings, LLC	Delaware
Wyoming Pipeline Company, LLC	Wyoming
Laramie Energy, LLC (46.0% interest)	Delaware

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement Nos. 333-185612, 333-208575, 333-216518 and 333-225054 on Form S-8 and Registration Statement Nos. 333-192519, 333-195662, 333-204597, 333-212107, 333-213471, 333-214593, 333-228933, 333-229278 and 333-229528 on Form S-3 of our reports dated March 11, 2019, relating to the consolidated financial statements and financial statement schedule of Par Pacific Holdings, Inc. and subsidiaries and the effectiveness of Par Pacific Holdings, Inc.'s internal control over financial reporting, appearing in this Annual Report on Form 10-K of Par Pacific Holdings, Inc. for the year ended December 31, 2018.

/s/ DELOITTE & TOUCHE LLP

Houston, Texas

March 11, 2019

CONSENT OF INDEPENDENT AUDITORS

We consent to the incorporation by reference in Registration Statement Nos. 333-185612, 333-208575, 333-216518 and 333-225054 on Form S-8 and Registration Statement Nos. 333-192519, 333-195662, 333-204597, 333-212107, 333-213471, 333-214593, 333-228933, 333-229278 and 333-229528 on Form S-3 of Par Pacific Holdings, Inc. of our report dated February 23, 2019 related to the financial statements of Laramie Energy, LLC as of December 31, 2018 and 2017, and for the three years ended December 31, 2018, appearing in this Annual Report on Form 10-K of Par Pacific Holdings, Inc. for the year ended December 31, 2018.

/s/ DELOITTE & TOUCHE LLP

Denver, Colorado
March 11, 2019

CONSENT OF INDEPENDENT PETROLEUM ENGINEERS AND GEOLOGISTS

We hereby consent to the inclusion in this Annual Report on Form 10-K of Par Pacific Holdings, Inc. for the year ended December 31, 2018, of our report dated March 7, 2019, with respect to estimates of reserves and future net revenue of Par Pacific Holdings, Inc. ("Par Pacific"), as of December 31, 2018, and to all references to our firm included in this Annual Report. We also hereby consent to the incorporation by reference of the references to our firm, in the context in which they appear, and of our reserves report as of December 31, 2018, and references thereto, into Par Pacific's Registration Statement Nos. 333-185612, 333-208575, 333-216518, and 333-225054 on Form S-8 and Nos. 333-192519, 333-195662, 333-204597, 333-212107, 333-213471, 333-214593, 333-228933, 333-229278, and 333-229528 on Form S-3.

NETHERLAND, SEWELL & ASSOCIATES, INC.

/s/ C.H. (Scott) Rees III

By:

C.H. (Scott) Rees III, P.E.
Chairman and Chief Executive Officer

Dallas, Texas
March 11, 2019

Please be advised that the digital document you are viewing is provided by Netherland, Sewell & Associates, Inc. (NSAI) as a convenience to our clients. The digital document is intended to be substantively the same as the original signed document maintained by NSAI. The digital document is subject to the parameters, limitations, and conditions stated in the original document. In the event of any differences between the digital document and the original document, the original document shall control and supersede the digital document.

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER PURSUANT TO RULE 13a-14(a)/15d-14(a) PROMULGATED UNDER THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED

I, William Pate, certify that:

1. I have reviewed this annual report on Form 10-K of Par Pacific Holdings, Inc.;
 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
 4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)), for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
 5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
-

- a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
- b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 11, 2019

/s/ William Pate

William Pate

President and Chief Executive Officer

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER PURSUANT TO RULE 13a-14(a)/15d-14(a) PROMULGATED UNDER THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED

I, William Monteleone, certify that:

1. I have reviewed this annual report on Form 10-K of Par Pacific Holdings, Inc.;
 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
 4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)), for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
 5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
-

- a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
- b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 11, 2019

/s/ William Monteleone

William Monteleone

Chief Financial Officer

**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Par Pacific Holdings, Inc. (the “Company”) on Form 10-K for the period ended December 31, 2018 (the “Report”), as filed with the Securities and Exchange Commission on the date hereof, I, William Pate, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ William Pate

William Pate

President and Chief Executive Officer

March 11, 2019

**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Par Pacific Holdings, Inc. (the “Company”) on Form 10-K for the period ended December 31, 2018 (the “Report”), as filed with the Securities and Exchange Commission on the date hereof, I, William Monteleone, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ William Monteleone

William Monteleone

Chief Financial Officer

March 11, 2019

March 7, 2019

Mr. Will Monteleone
Par Pacific Holdings, Inc.
825 Town & Country Lane, Suite 1500
Houston, Texas 77024

Dear Mr. Monteleone:

In accordance with your request, we have estimated the proved reserves and future revenue, as of December 31, 2018, to the Par Pacific Holdings, Inc. (Par) interest in certain oil and gas properties located in Colorado and New Mexico. We completed our evaluation on or about the date of this letter. It is our understanding that the proved reserves estimated in this report constitute all of the proved reserves owned by Par. The estimates in this report have been prepared in accordance with the definitions and regulations of the U.S. Securities and Exchange Commission (SEC) and, with the exception of the exclusion of future income taxes, conform to the FASB Accounting Standards Codification Topic 932, Extractive Activities—Oil and Gas. Definitions are presented immediately following this letter. This report has been prepared for Par's use in filing with the SEC; in our opinion the assumptions, data, methods, and procedures used in the preparation of this report are appropriate for such purpose.

We estimate the net reserves and future net revenue to the Par interest in these properties, as of December 31, 2018, to be:

Category	Net Reserves			Future Net Revenue (M\$)	
	Oil (MBBL)	NGL (MBBL)	Gas (MMCF)	Total	Present Worth at 10%
Proved Developed Producing	1,424.2	8,869.4	256,452.1	469,373.8	268,566.0
Proved Undeveloped	324.8	3,714.9	81,428.0	138,099.7	50,665.6
Total Proved	1,749.0	12,584.3	337,880.0	607,473.5	319,231.6

Totals may not add because of rounding.

The oil volumes shown include crude oil and condensate. Oil and natural gas liquids (NGL) volumes are expressed in thousands of barrels (MBBL); a barrel is equivalent to 42 United States gallons. Gas volumes are expressed in millions of cubic feet (MMCF) at standard temperature and pressure bases.

Reserves categorization conveys the relative degree of certainty; reserves subcategorization is based on development and production status. Our study indicates that as of December 31, 2018, there are no proved developed non-producing reserves for these properties. As requested, probable and possible reserves that exist for these properties have not been included. The estimates of reserves and future revenue included herein have not been adjusted for risk. This report does not include any value that could be attributed to interests in undeveloped acreage beyond those tracts for which undeveloped reserves have been estimated.

Gross revenue is Par's share of the gross (100 percent) revenue from the properties prior to any deductions. Future net revenue is after deductions for Par's share of production taxes, ad valorem taxes, capital costs, abandonment costs, and operating expenses but before consideration of any income taxes. The future net revenue has been discounted at an annual rate of 10 percent to determine its present worth, which is shown to indicate the effect of time

on the value of money. Future net revenue presented in this report, whether discounted or undiscounted, should not be construed as being the fair market value of the properties.

Prices used in this report are based on the 12-month unweighted arithmetic average of the first-day-of-the-month price for each month in the period January through December 2018. For oil and NGL volumes, the average West Texas Intermediate spot price of \$65.56 per barrel is adjusted for quality, transportation fees, and market differentials. For gas volumes, the average CIG Rocky Mountains spot price of \$2.466 per MMBTU is adjusted for energy content, transportation fees, and market differentials. For the properties in the Summit gathering area, the fees associated with the Laramie Energy, LLC (Laramie) TransColorado firm transportation contract are included as a deduction to gas revenue. All prices are held constant throughout the lives of the properties. The average adjusted product prices weighted by production over the remaining lives of the properties are \$61.44 per barrel of oil, \$22.40 per barrel of NGL, and \$2.649 per MCF of gas.

Operating costs used in this report are based on operating expense records of Par and of Laramie, the operator of most of the properties. These costs include the per-well overhead expenses allowed under joint operating agreements along with estimates of costs to be incurred at and below the district and field levels. Operating costs have been divided into field-level costs, per-well costs, and per-unit-of-production costs. Since all properties are nonoperated, headquarters general and administrative overhead expenses of Par are not included. An economic projection is included in the proved developed producing category to account for demand fees associated with the current terms of the ETC Canyon Pipeline, LLC Gathering Agreement for the properties in the Summit gathering area. For all other areas, we have made no specific investigation of any firm transportation contracts that may be in place and our estimates of future revenue include the effects of such contracts only to the extent that the associated fees are accounted for in the historical field- and lease-level accounting statements. Operating costs are not escalated for inflation.

Capital costs used in this report were provided by Laramie and are based on authorizations for expenditure and actual costs from recent activity. Capital costs are included as required for new development wells and production equipment. Based on our understanding of future development plans, a review of the records provided to us, and our knowledge of similar properties, we regard these estimated capital costs to be reasonable. Abandonment costs used in this report are Laramie's estimates of the costs to abandon the wells and production facilities, net of any salvage value. Capital costs and abandonment costs are not escalated for inflation.

For the purposes of this report, we did not perform any field inspection of the properties, nor did we examine the mechanical operation or condition of the wells and facilities. We have not investigated possible environmental liability related to the properties; therefore, our estimates do not include any costs due to such possible liability.

We have made no investigation of potential volume and value imbalances resulting from overdelivery or underdelivery to the Par interest. Therefore, our estimates of reserves and future revenue do not include adjustments for the settlement of any such imbalances; our projections are based on Par receiving its net revenue interest share of estimated future gross production.

The reserves shown in this report are estimates only and should not be construed as exact quantities. Proved reserves are those quantities of oil and gas which, by analysis of engineering and geoscience data, can be estimated with reasonable certainty to be economically producible; probable and possible reserves are those additional reserves which are sequentially less certain to be recovered than proved reserves. Estimates of reserves may increase or decrease as a result of market conditions, future operations, changes in regulations, or actual reservoir performance. In addition to the primary economic assumptions discussed herein, our estimates are based on certain assumptions including, but not limited to, that the properties will be developed consistent with current development plans as provided to us by Laramie, that the properties will be operated in a prudent manner, that no governmental regulations or controls will be put in place that would impact the ability of the interest owner to recover the reserves, and that our projections of future production will prove consistent with actual performance. If the reserves are recovered, the revenues therefrom and the costs related thereto could be more or less than the estimated amounts. Because of governmental policies

and uncertainties of supply and demand, the sales rates, prices received for the reserves, and costs incurred in recovering such reserves may vary from assumptions made while preparing this report.

For the purposes of this report, we used technical and economic data including, but not limited to, well logs, geologic maps, well test data, production data, historical price and cost information, and property ownership interests. The reserves in this report have been estimated using deterministic methods; these estimates have been prepared in accordance with the Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information promulgated by the Society of Petroleum Engineers (SPE Standards). We used standard engineering and geoscience methods, or a combination of methods, including performance analysis and analogy, that we considered to be appropriate and necessary to categorize and estimate reserves in accordance with SEC definitions and regulations. As in all aspects of oil and gas evaluation, there are uncertainties inherent in the interpretation of engineering and geoscience data; therefore, our conclusions necessarily represent only informed professional judgment.

The data used in our estimates were obtained from Par, Laramie, public data sources, and the nonconfidential files of Netherland, Sewell & Associates, Inc. (NSAI) and were accepted as accurate. Supporting work data are on file in our office. We have not examined the titles to the properties or independently confirmed the actual degree or type of interest owned. The technical persons primarily responsible for preparing the estimates presented herein meet the requirements regarding qualifications, independence, objectivity, and confidentiality set forth in the SPE Standards. Benjamin W. Johnson, a Licensed Professional Engineer in the State of Texas, has been practicing consulting petroleum engineering at NSAI since 2007 and has over 2 years of prior industry experience. John G. Hattner, a Licensed Professional Geoscientist in the State of Texas, has been practicing consulting petroleum geoscience at NSAI since 1991 and has over 11 years of prior industry experience. We are independent petroleum engineers, geologists, geophysicists, and petrophysicists; we do not own an interest in these properties nor are we employed on a contingent basis.

Sincerely,

NETHERLAND, SEWELL & ASSOCIATES, INC.

Texas Registered Engineering Firm F-2699

/s/ C.H. (Scott) Rees III

By:

C.H. (Scott) Rees III, P.E.

Chairman and Chief Executive Officer

/s/ Benjamin W. Johnson

By:

Benjamin W. Johnson, P.E. 124738

Vice President

/s/ John G. Hattner

By:

John G. Hattner, P.G. 559

Senior Vice President

Date Signed: March 7, 2019

Date Signed: March 7, 2019

BWJ:BWY

Please be advised that the digital document you are viewing is provided by Netherland, Sewell & Associates, Inc. (NSAI) as a convenience to our clients. The digital document is intended to be substantively the same as the original signed document maintained by NSAI. The digital document is subject to the parameters, limitations, and conditions stated in the original document. In the event of any differences between the digital document and the original document, the original document shall control and supersede the digital document.

DEFINITIONS OF OIL AND GAS RESERVES

Adapted from U.S. Securities and Exchange Commission Regulation S-X Section 210.4-10(a)

The following definitions are set forth in U.S. Securities and Exchange Commission (SEC) Regulation S-X Section 210.4-10(a). Also included is supplemental information from (1) the 2018 Petroleum Resources Management System approved by the Society of Petroleum Engineers, (2) the FASB Accounting Standards Codification Topic 932, Extractive Activities—Oil and Gas, and (3) the SEC's Compliance and Disclosure Interpretations.

(1) *Acquisition of properties*. Costs incurred to purchase, lease or otherwise acquire a property, including costs of lease bonuses and options to purchase or lease properties, the portion of costs applicable to minerals when land including mineral rights is purchased in fee, brokers' fees, recording fees, legal costs, and other costs incurred in acquiring properties.

(2) *Analogous reservoir*. Analogous reservoirs, as used in resources assessments, have similar rock and fluid properties, reservoir conditions (depth, temperature, and pressure) and drive mechanisms, but are typically at a more advanced stage of development than the reservoir of interest and thus may provide concepts to assist in the interpretation of more limited data and estimation of recovery. When used to support proved reserves, an "analogous reservoir" refers to a reservoir that shares the following characteristics with the reservoir of interest:

- (i) Same geological formation (but not necessarily in pressure communication with the reservoir of interest);
- (ii) Same environment of deposition;
- (iii) Similar geological structure; and
- (iv) Same drive mechanism.

Instruction to paragraph (a)(2): Reservoir properties must, in the aggregate, be no more favorable in the analog than in the reservoir of interest.

(3) *Bitumen*. Bitumen, sometimes referred to as natural bitumen, is petroleum in a solid or semi-solid state in natural deposits with a viscosity greater than 10,000 centipoise measured at original temperature in the deposit and atmospheric pressure, on a gas free basis. In its natural state it usually contains sulfur, metals, and other non-hydrocarbons.

(4) *Condensate*. Condensate is a mixture of hydrocarbons that exists in the gaseous phase at original reservoir temperature and pressure, but that, when produced, is in the liquid phase at surface pressure and temperature.

(5) *Deterministic estimate*. The method of estimating reserves or resources is called deterministic when a single value for each parameter (from the geoscience, engineering, or economic data) in the reserves calculation is used in the reserves estimation procedure.

(6) *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.

Supplemental definitions from the 2018 Petroleum Resources Management System:

Developed Producing Reserves – Expected quantities to be recovered from completion intervals that are open and producing at the effective date of the estimate. Improved recovery Reserves are considered producing only after the improved recovery project is in operation.

Developed Non-Producing Reserves – Shut-in and behind-pipe Reserves. Shut-in Reserves are expected to be recovered from (1) completion intervals that are open at the time of the estimate but which have not yet started producing, (2) wells which 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 re-completion before start of production with minor cost to access these reserves. In all cases, production can be initiated or restored with relatively low expenditure compared to the cost of drilling a new well.

(7) *Development costs*. Costs incurred to obtain access to proved reserves and to provide facilities for extracting, treating, gathering and storing the oil and gas. More specifically, development costs, including depreciation and applicable operating costs of support equipment and facilities and other costs of development activities, are costs incurred to:

- (i) Gain access to and prepare well locations for drilling, including surveying well locations for the purpose of determining specific development drilling sites, clearing ground, draining, road building, and relocating public roads, gas lines, and power lines, to the extent necessary in developing the proved reserves.
- (ii) Drill and equip development wells, development-type stratigraphic test wells, and service wells, including the costs of platforms and of well equipment such as casing, tubing, pumping equipment, and the wellhead assembly.

DEFINITIONS OF OIL AND GAS RESERVES

Adapted from U.S. Securities and Exchange Commission Regulation S-X Section 210.4-10(a)

- (iii) Acquire, construct, and install production facilities such as lease flow lines, separators, treaters, heaters, manifolds, measuring devices, and production storage tanks, natural gas cycling and processing plants, and central utility and waste disposal systems.
- (iv) Provide improved recovery systems.

(8) *Development project* . A development project is the means by which petroleum resources are brought to the status of economically producible. As examples, the development of a single reservoir or field, an incremental development in a producing field, or the integrated development of a group of several fields and associated facilities with a common ownership may constitute a development project.

(9) *Development well* . A well drilled within the proved area of an oil or gas reservoir to the depth of a stratigraphic horizon known to be productive.

(10) *Economically producible* . The term economically producible, as it relates to a resource, means a resource which generates revenue that exceeds, or is reasonably expected to exceed, the costs of the operation. The value of the products that generate revenue shall be determined at the terminal point of oil and gas producing activities as defined in paragraph (a)(16) of this section.

(11) *Estimated ultimate recovery (EUR)* . Estimated ultimate recovery is the sum of reserves remaining as of a given date and cumulative production as of that date.

(12) *Exploration costs* . Costs incurred in identifying areas that may warrant examination and in examining specific areas that are considered to have prospects of containing oil and gas reserves, including costs of drilling exploratory wells and exploratory-type stratigraphic test wells. Exploration costs may be incurred both before acquiring the related property (sometimes referred to in part as prospecting costs) and after acquiring the property. Principal types of exploration costs, which include depreciation and applicable operating costs of support equipment and facilities and other costs of exploration activities, are:

- (i) Costs of topographical, geographical and geophysical studies, rights of access to properties to conduct those studies, and salaries and other expenses of geologists, geophysical crews, and others conducting those studies. Collectively, these are sometimes referred to as geological and geophysical or "G&G" costs.
- (ii) Costs of carrying and retaining undeveloped properties, such as delay rentals, ad valorem taxes on properties, legal costs for title defense, and the maintenance of land and lease records.
- (iii) Dry hole contributions and bottom hole contributions.
- (iv) Costs of drilling and equipping exploratory wells.
- (v) Costs of drilling exploratory-type stratigraphic test wells.

(13) *Exploratory well* . An exploratory well is a well drilled to find a new field or to find a new reservoir in a field previously found to be productive of oil or gas in another reservoir. Generally, an exploratory well is any well that is not a development well, an extension well, a service well, or a stratigraphic test well as those items are defined in this section.

(14) *Extension well* . An extension well is a well drilled to extend the limits of a known reservoir.

(15) *Field* . An area consisting of a single reservoir or multiple reservoirs all grouped on or related to the same individual geological structural feature and/or stratigraphic condition. There may be two or more reservoirs in a field which are separated vertically by intervening impervious strata, or laterally by local geologic barriers, or by both. Reservoirs that are associated by being in overlapping or adjacent fields may be treated as a single or common operational field. The geological terms "structural feature" and "stratigraphic condition" are intended to identify localized geological features as opposed to the broader terms of basins, trends, provinces, plays, areas-of-interest, etc.

(16) *Oil and gas producing activities* .

- (i) Oil and gas producing activities include:
 - (A) The search for crude oil, including condensate and natural gas liquids, or natural gas ("oil and gas") in their natural states and original locations;
 - (B) The acquisition of property rights or properties for the purpose of further exploration or for the purpose of removing the oil or gas from such properties;
 - (C) The construction, drilling, and production activities necessary to retrieve oil and gas from their natural reservoirs, including the acquisition, construction, installation, and maintenance of field gathering and storage systems, such as:
 - (1) Lifting the oil and gas to the surface; and
 - (2) Gathering, treating, and field processing (as in the case of processing gas to extract liquid hydrocarbons); and

DEFINITIONS OF OIL AND GAS RESERVES

Adapted from U.S. Securities and Exchange Commission Regulation S-X Section 210.4-10(a)

- (D) Extraction of saleable hydrocarbons, in the solid, liquid, or gaseous state, from oil sands, shale, coalbeds, or other nonrenewable natural resources which are intended to be upgraded into synthetic oil or gas, and activities undertaken with a view to such extraction.

Instruction 1 to paragraph (a)(16)(i) : The oil and gas production function shall be regarded as ending at a "terminal point", which is the outlet valve on the lease or field storage tank. If unusual physical or operational circumstances exist, it may be appropriate to regard the terminal point for the production function as:

- a. The first point at which oil, gas, or gas liquids, natural or synthetic, are delivered to a main pipeline, a common carrier, a refinery, or a marine terminal; and
- b. In the case of natural resources that are intended to be upgraded into synthetic oil or gas, if those natural resources are delivered to a purchaser prior to upgrading, the first point at which the natural resources are delivered to a main pipeline, a common carrier, a refinery, a marine terminal, or a facility which upgrades such natural resources into synthetic oil or gas.

Instruction 2 to paragraph (a)(16)(i): For purposes of this paragraph (a)(16), the term *saleable hydrocarbons* means hydrocarbons that are saleable in the state in which the hydrocarbons are delivered.

- (ii) Oil and gas producing activities do not include:

- (A) Transporting, refining, or marketing oil and gas;
- (B) Processing of produced oil, gas, or natural resources that can be upgraded into synthetic oil or gas by a registrant that does not have the legal right to produce or a revenue interest in such production;
- (C) Activities relating to the production of natural resources other than oil, gas, or natural resources from which synthetic oil and gas can be extracted; or
- (D) Production of geothermal steam.

(17) *Possible reserves*. Possible reserves are those additional reserves that are less certain to be recovered than probable reserves.

- (i) When deterministic methods are used, the total quantities ultimately recovered from a project have a low probability of exceeding proved plus probable plus possible reserves. When probabilistic methods are used, there should be at least a 10% probability that the total quantities ultimately recovered will equal or exceed the proved plus probable plus possible reserves estimates.
- (ii) Possible reserves may be assigned to areas of a reservoir adjacent to probable reserves where data control and interpretations of available data are progressively less certain. Frequently, this will be in areas where geoscience and engineering data are unable to define clearly the area and vertical limits of commercial production from the reservoir by a defined project.
- (iii) Possible reserves also include incremental quantities associated with a greater percentage recovery of the hydrocarbons in place than the recovery quantities assumed for probable reserves.
- (iv) The proved plus probable and proved plus probable plus possible reserves estimates must be based on reasonable alternative technical and commercial interpretations within the reservoir or subject project that are clearly documented, including comparisons to results in successful similar projects.
- (v) Possible reserves may be assigned where geoscience and engineering data identify directly adjacent portions of a reservoir within the same accumulation that may be separated from proved areas by faults with displacement less than formation thickness or other geological discontinuities and that have not been penetrated by a wellbore, and the registrant believes that such adjacent portions are in communication with the known (proved) reservoir. Possible reserves may be assigned to areas that are structurally higher or lower than the proved area if these areas are in communication with the proved reservoir.
- (vi) Pursuant to paragraph (a)(22)(iii) of this section, where direct observation has defined a highest known oil (HKO) elevation and the potential exists for an associated gas cap, proved oil reserves should be assigned in the structurally higher portions of the reservoir above the HKO only if the higher contact can be established with reasonable certainty through reliable technology. Portions of the reservoir that do not meet this reasonable certainty criterion may be assigned as probable and possible oil or gas based on reservoir fluid properties and pressure gradient interpretations.

(18) *Probable reserves*. Probable reserves are those additional reserves that are less certain to be recovered than proved reserves but which, together with proved reserves, are as likely as not to be recovered.

- (i) When deterministic methods are used, it is as likely as not that actual remaining quantities recovered will exceed the sum of estimated proved plus probable reserves. When probabilistic methods are used, there should be at least a 50% probability that the actual quantities recovered will equal or exceed the proved plus probable reserves estimates.

DEFINITIONS OF OIL AND GAS RESERVES

Adapted from U.S. Securities and Exchange Commission Regulation S-X Section 210.4-10(a)

- (ii) Probable reserves may be assigned to areas of a reservoir adjacent to proved reserves where data control or interpretations of available data are less certain, even if the interpreted reservoir continuity of structure or productivity does not meet the reasonable certainty criterion. Probable reserves may be assigned to areas that are structurally higher than the proved area if these areas are in communication with the proved reservoir.
- (iii) Probable reserves estimates also include potential incremental quantities associated with a greater percentage recovery of the hydrocarbons in place than assumed for proved reserves.
- (iv) See also guidelines in paragraphs (a)(17)(iv) and (a)(17)(vi) of this section.

(19) *Probabilistic estimate*. The method of estimation of reserves or resources is called probabilistic when the full range of values that could reasonably occur for each unknown parameter (from the geoscience and engineering data) is used to generate a full range of possible outcomes and their associated probabilities of occurrence.

(20) *Production costs* .

- (i) Costs incurred to operate and maintain wells and related equipment and facilities, including depreciation and applicable operating costs of support equipment and facilities and other costs of operating and maintaining those wells and related equipment and facilities. They become part of the cost of oil and gas produced. Examples of production costs (sometimes called lifting costs) are:
 - (A) Costs of labor to operate the wells and related equipment and facilities.
 - (B) Repairs and maintenance.
 - (C) Materials, supplies, and fuel consumed and supplies utilized in operating the wells and related equipment and facilities.
 - (D) Property taxes and insurance applicable to proved properties and wells and related equipment and facilities.
 - (E) Severance taxes.
- (ii) Some support equipment or facilities may serve two or more oil and gas producing activities and may also serve transportation, refining, and marketing activities. To the extent that the support equipment and facilities are used in oil and gas producing activities, their depreciation and applicable operating costs become exploration, development or production costs, as appropriate. Depreciation, depletion, and amortization of capitalized acquisition, exploration, and development costs are not production costs but also become part of the cost of oil and gas produced along with production (lifting) costs identified above.

(21) *Proved area*. The part of a property to which proved reserves have been specifically attributed.

(22) *Proved oil and gas reserves*. Proved oil and gas reserves are those quantities of oil and gas, which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible—from a given date forward, from known reservoirs, and under existing economic conditions, operating methods, and government regulations—prior to the time at which contracts providing the right to operate expire, unless evidence indicates that renewal is reasonably certain, regardless of whether deterministic or probabilistic methods are used for the estimation. The project to extract the hydrocarbons must have commenced or the operator must be reasonably certain that it will commence the project within a reasonable time.

- (i) The area of the reservoir considered as proved includes:
 - (A) The area identified by drilling and limited by fluid contacts, if any, and
 - (B) Adjacent undrilled portions of the reservoir that can, with reasonable certainty, be judged to be continuous with it and to contain economically producible oil or gas on the basis of available geoscience and engineering data.
- (ii) In the absence of data on fluid contacts, proved quantities in a reservoir are limited by the lowest known hydrocarbons (LKH) as seen in a well penetration unless geoscience, engineering, or performance data and reliable technology establishes a lower contact with reasonable certainty.
- (iii) Where direct observation from well penetrations has defined a highest known oil (HKO) elevation and the potential exists for an associated gas cap, proved oil reserves may be assigned in the structurally higher portions of the reservoir only if geoscience, engineering, or performance data and reliable technology establish the higher contact with reasonable certainty.
- (iv) Reserves which can be produced economically through application of improved recovery techniques (including, but not limited to, fluid injection) are included in the proved classification when:
 - (A) Successful testing by a pilot project in an area of the reservoir with properties no more favorable than in the reservoir as a whole, the operation of an installed program in the reservoir or an analogous reservoir, or other evidence using reliable technology establishes the reasonable certainty of the engineering analysis on which the project or program was based; and

DEFINITIONS OF OIL AND GAS RESERVES

Adapted from U.S. Securities and Exchange Commission Regulation S-X Section 210.4-10(a)

(B) The project has been approved for development by all necessary parties and entities, including governmental entities.

- (v) Existing economic conditions include prices and costs at which economic producibility from a reservoir is to be determined. The price shall be the average price during the 12-month period prior to the ending date of the period covered by the report, determined as an unweighted arithmetic average of the first-day-of-the-month price for each month within such period, unless prices are defined by contractual arrangements, excluding escalations based upon future conditions.

(23) *Proved properties.* Properties with proved reserves.

(24) *Reasonable certainty.* If deterministic methods are used, reasonable certainty means a high degree of confidence that the quantities will be recovered. If probabilistic methods are used, there should be at least a 90% probability that the quantities actually recovered will equal or exceed the estimate. A high degree of confidence exists if the quantity is much more likely to be achieved than not, and, as changes due to increased availability of geoscience (geological, geophysical, and geochemical), engineering, and economic data are made to estimated ultimate recovery (EUR) with time, reasonably certain EUR is much more likely to increase or remain constant than to decrease.

(25) *Reliable technology.* Reliable technology is a grouping of one or more technologies (including computational methods) that has been field tested and has been demonstrated to provide reasonably certain results with consistency and repeatability in the formation being evaluated or in an analogous formation.

(26) *Reserves.* Reserves are estimated remaining quantities of oil and gas and related substances anticipated to be economically producible, as of a given date, by application of development projects to known accumulations. In addition, there must exist, or there must be a reasonable expectation that there will exist, the legal right to produce or a revenue interest in the production, installed means of delivering oil and gas or related substances to market, and all permits and financing required to implement the project.

Note to paragraph (a)(26) : Reserves should not be assigned to adjacent reservoirs isolated by major, potentially sealing, faults until those reservoirs are penetrated and evaluated as economically producible. Reserves should not be assigned to areas that are clearly separated from a known accumulation by a non-productive reservoir (i.e., absence of reservoir, structurally low reservoir, or negative test results). Such areas may contain prospective resources (i.e., potentially recoverable resources from undiscovered accumulations).

Excerpted from the FASB Accounting Standards Codification Topic 932, Extractive Activities—Oil and Gas:

932-235-50-30 A standardized measure of discounted future net cash flows relating to an entity's interests in both of the following shall be disclosed as of the end of the year:

- a. Proved oil and gas reserves (see paragraphs 932-235-50-3 through 50-11B)
- b. Oil and gas subject to purchase under long-term supply, purchase, or similar agreements and contracts in which the entity participates in the operation of the properties on which the oil or gas is located or otherwise serves as the producer of those reserves (see paragraph 932-235-50-7).

The standardized measure of discounted future net cash flows relating to those two types of interests in reserves may be combined for reporting purposes.

932-235-50-31 All of the following information shall be disclosed in the aggregate and for each geographic area for which reserve quantities are disclosed in accordance with paragraphs 932-235-50-3 through 50-11B:

- a. Future cash inflows. These shall be computed by applying prices used in estimating the entity's proved oil and gas reserves to the year-end quantities of those reserves. Future price changes shall be considered only to the extent provided by contractual arrangements in existence at year-end.
- b. Future development and production costs. These costs shall be computed by estimating the expenditures to be incurred in developing and producing the proved oil and gas reserves at the end of the year, based on year-end costs and assuming continuation of existing economic conditions. If estimated development expenditures are significant, they shall be presented separately from estimated production costs.
- c. Future income tax expenses. These expenses shall be computed by applying the appropriate year-end statutory tax rates, with consideration of future tax rates already legislated, to the future pretax net cash flows relating to the entity's proved oil and gas reserves, less the tax basis of the properties involved. The future income tax expenses shall give effect to tax deductions and tax credits and allowances relating to the entity's proved oil and gas reserves.
- d. Future net cash flows. These amounts are the result of subtracting future development and production costs and future income tax expenses from future cash inflows.

DEFINITIONS OF OIL AND GAS RESERVES

Adapted from U.S. Securities and Exchange Commission Regulation S-X Section 210.4-10(a)

e. Discount. This amount shall be derived from using a discount rate of 10 percent a year to reflect the timing of the future net cash flows relating to proved oil and gas reserves.

f. Standardized measure of discounted future net cash flows. This amount is the future net cash flows less the computed discount.

(27) **Reservoir.** A porous and permeable underground formation containing a natural accumulation of producible oil and/or gas that is confined by impermeable rock or water barriers and is individual and separate from other reservoirs.

(28) **Resources.** Resources are quantities of oil and gas estimated to exist in naturally occurring accumulations. A portion of the resources may be estimated to be recoverable, and another portion may be considered to be unrecoverable. Resources include both discovered and undiscovered accumulations.

(29) **Service well.** A well drilled or completed for the purpose of supporting production in an existing field. Specific purposes of service wells include gas injection, water injection, steam injection, air injection, salt-water disposal, water supply for injection, observation, or injection for in-situ combustion.

(30) **Stratigraphic test well.** A stratigraphic test well is a drilling effort, geologically directed, to obtain information pertaining to a specific geologic condition. Such wells customarily are drilled without the intent of being completed for hydrocarbon production. The classification also includes tests identified as core tests and all types of expendable holes related to hydrocarbon exploration. Stratigraphic tests are classified as "exploratory type" if not drilled in a known area or "development type" if drilled in a known area.

(31) **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.

- (i) Reserves on undrilled acreage shall be limited to those directly offsetting development spacing areas that are reasonably certain of production when drilled, unless evidence using reliable technology exists that establishes reasonable certainty of economic producibility at greater distances.
- (ii) Undrilled locations can be classified as having undeveloped reserves only if a development plan has been adopted indicating that they are scheduled to be drilled within five years, unless the specific circumstances, justify a longer time.

From the SEC's Compliance and Disclosure Interpretations (October 26, 2009):

Although several types of projects — such as constructing offshore platforms and development in urban areas, remote locations or environmentally sensitive locations — by their nature customarily take a longer time to develop and therefore often do justify longer time periods, this determination must always take into consideration all of the facts and circumstances. No particular type of project per se justifies a longer time period, and any extension beyond five years should be the exception, and not the rule.

Factors that a company should consider in determining whether or not circumstances justify recognizing reserves even though development may extend past five years include, but are not limited to, the following:

- *The company's level of ongoing significant development activities in the area to be developed (for example, drilling only the minimum number of wells necessary to maintain the lease generally would not constitute significant development activities);*
- *The company's historical record at completing development of comparable long-term projects;*
- *The amount of time in which the company has maintained the leases, or booked the reserves, without significant development activities;*
- *The extent to which the company has followed a previously adopted development plan (for example, if a company has changed its development plan several times without taking significant steps to implement any of those plans, recognizing proved undeveloped reserves typically would not be appropriate); and*
- *The extent to which delays in development are caused by external factors related to the physical operating environment (for example, restrictions on development on Federal lands, but not obtaining government permits), rather than by internal factors (for example, shifting resources to develop properties with higher priority).*

- (iii) Under no circumstances shall estimates for undeveloped reserves be attributable to any acreage for which an application of fluid injection or other improved recovery technique is contemplated, unless such techniques have been proved effective by actual projects in the same reservoir or an analogous reservoir, as defined in paragraph (a)(2) of this section, or by other evidence using reliable technology establishing reasonable certainty.

(32) **Unproved properties.** Properties with no proved reserves.



LARAMIE ENERGY, LLC

**Financial Statements
and
Independent Auditors' Report
December 31, 2018,
2017 and 2016**

LARAMIE ENERGY, LLC

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**Deloitte & Touche LLP**

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USA

INDEPENDENT AUDITORS' REPORT

To the Members of
Laramie Energy, LLC
Denver, Colorado

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We have audited the accompanying financial statements of Laramie Energy, LLC (the "Company"), which comprise the balance sheets as of December 31, 2018 and 2017, and the related statements of operations, members' equity, and cash flows for the three years ended December 31, 2018, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Company's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Laramie Energy, LLC as of December 31, 2018 and 2017, and the results of its operations and its cash flows for the three years ended December 31, 2018 in accordance with accounting principles generally accepted in the United States of America.

/s/ DELOITTE & TOUCHE LLP

February 23, 2019

LARAMIE ENERGY, LLC

Balance Sheets

	December 31,	
	2018	2017
Assets		
Current assets		
Cash and cash equivalents	\$ 802,496	\$ 285,111
Accounts receivable	23,200,099	14,070,484
Prepaid expenses and other current assets	2,049,002	1,418,237
Derivative instruments	2,517,353	2,983,243
Total current assets	28,568,950	18,757,075
Property and equipment		
Oil and gas properties, successful efforts method		
Proved properties	1,029,918,623	904,939,398
Unproved properties	35,607,425	32,453,628
Real estate and ranch property	45,138,625	40,284,743
Office furniture, equipment, and other	3,018,161	3,867,973
	1,113,682,834	981,545,742
Less: accumulated depletion, depreciation, and amortization	(326,249,867)	(262,692,951)
Total property and equipment, net	787,432,967	718,852,791
Debt issue costs, net of amortization of \$2,410,222 and \$1,845,758 at December 31, 2018 and 2017, respectively	1,082,071	1,591,308
Total assets	<u>\$ 817,083,988</u>	<u>\$ 739,201,174</u>
Liabilities and Members' Equity		
Current liabilities		
Accounts payable	\$ 10,476,878	\$ 14,908,628
Oil and gas sales payable	5,385,917	3,959,226
Accrued liabilities	22,204,683	23,264,364
Derivative instruments	3,613,133	16,811
Total current liabilities	41,680,611	42,149,029
Non-current liabilities		
Notes payable	210,800,000	171,500,000
Redeemable Preferred A units	40,310,600	35,341,697
Accrued liabilities	11,152,447	3,668,530
Asset retirement obligation	30,820,667	26,986,294
Total non-current liabilities	293,083,714	237,496,521
Total liabilities	334,764,325	279,645,550
Commitments and contingencies (Note 8)		
Members' equity		
Members' equity	562,520,442	546,103,029
Accumulated deficit	(80,200,779)	(86,547,405)
Total members' equity	482,319,663	459,555,624
Total liabilities and members' equity	<u>\$ 817,083,988</u>	<u>\$ 739,201,174</u>

See notes to financial statements.

LARAMIE ENERGY, LLC

Statements of Operations

	For the Years Ended December 31,		
	2018	2017	2016
Operating revenues			
Natural gas sales	\$ 166,741,809	\$ 120,448,493	\$ 84,073,533
Condensate sales	14,430,009	7,510,195	5,356,238
Natural gas liquids sales	45,433,557	28,774,463	15,395,959
Other revenues	368,538	1,146,167	—
Total revenues	<u>226,973,913</u>	<u>157,879,318</u>	<u>104,825,730</u>
Operating expenses			
Lease operating expenses	28,132,102	25,773,674	21,687,357
Gathering, transportation and processing	62,488,333	43,584,801	39,104,224
Production and property taxes	9,381,298	5,788,033	4,084,776
Depletion, depreciation, amortization and accretion	68,116,822	51,586,780	43,736,701
Abandoned property and expired leases	4,018,895	1,936,784	2,080,839
General and administrative	20,629,982	23,190,296	21,456,875
Total operating expenses	<u>192,767,432</u>	<u>151,860,368</u>	<u>132,150,772</u>
Income (loss) from operations	<u>34,206,481</u>	<u>6,018,950</u>	<u>(27,325,042)</u>
Other income (expense)			
(Loss) gain on derivative instruments	(13,426,153)	35,530,531	(27,728,211)
Interest expense and other financing costs	(10,570,524)	(6,458,928)	(4,367,136)
Gain on disposal of assets	808,757	50,855	656,777
Surface land operating expense	(108,031)	(327,276)	(154,009)
Preferred dividend	(4,688,995)	(4,166,112)	(3,193,820)
Miscellaneous income	125,091	189,193	262,791
Total other (expense) income	<u>(27,859,855)</u>	<u>24,818,263</u>	<u>(34,523,608)</u>
Net income (loss)	<u>\$ 6,346,626</u>	<u>\$ 30,837,213</u>	<u>\$ (61,848,650)</u>

See notes to financial statements.

LARAMIE ENERGY, LLC

**Statements of Members' Equity
For the Years Ended December 31, 2018, 2017 and 2016**

	Class A Units		Class B Units		Accumulated	Total Members'
	Units	Amount	Units	Amount	Deficit	Equity
Balances, January 1, 2016	657,612	\$ 458,903,741	13,025	\$ 2,567,408	\$ (55,535,968)	\$ 405,935,181
Net contributions of Class A Unitholders	208,522	71,886,073	—	—	—	71,886,073
Class B unit issuance and compensation	—	—	1,570	6,550,573	—	6,550,573
Net loss	—	—	—	—	(61,848,650)	(61,848,650)
Balances, December 31, 2016	866,134	530,789,814	14,595	9,117,981	(117,384,618)	422,523,177
Class B unit issuance and compensation, net of forfeitures	—	—	(360)	6,195,234	—	6,195,234
Net income	—	—	—	—	30,837,213	30,837,213
Balances, December 31, 2017	866,134	530,789,814	14,235	15,313,215	(86,547,405)	459,555,624
Net contributions of Class A Unitholders	70,227	28,048,043	—	—	—	28,048,043
Redemptions of Class A Units	(139,319)	(14,878,715)	—	—	—	(14,878,715)
Class B unit issuance and compensation, net of forfeitures	—	—	—	3,248,085	—	3,248,085
Net income	—	—	—	—	6,346,626	6,346,626
Balances, December 31, 2018	<u>797,042</u>	<u>\$ 543,959,142</u>	<u>14,235</u>	<u>\$ 18,561,300</u>	<u>\$ (80,200,779)</u>	<u>\$ 482,319,663</u>

See notes to financial statements.

LARAMIE ENERGY, LLC

Statements of Cash Flows

	For the Years Ended December 31,		
	2018	2017	2016
Cash flows from operating activities			
Net income (loss)	\$ 6,346,626	\$ 30,837,213	\$ (61,848,650)
Adjustments to reconcile net income (loss) to net cash provided by operating activities			
Depreciation, depletion, amortization and accretion	68,116,822	51,586,780	43,736,701
Abandoned property and expired leases	4,018,895	1,936,784	2,080,839
Settlement of asset retirement obligation	(1,909,520)	(667,554)	(141,260)
Non-cash interest costs	844,372	810,748	432,270
Share-based compensation expense	3,248,085	6,195,234	6,550,573
Preferred dividend	4,688,995	4,166,112	3,193,820
Unrealized loss (gain) on derivative instruments	4,062,212	(46,241,453)	34,452,084
Gain on disposal of assets	(808,757)	(50,855)	(656,777)
Changes in operating assets and liabilities			
Accounts receivable	(9,129,615)	(3,219,811)	(8,321,252)
Prepaid expenses and other assets	(630,765)	(147,434)	(632,888)
Accounts payable	783,484	(2,497,286)	695,129
Oil and gas sales payable	1,426,691	696,511	2,405,983
Accrued liabilities	10,329,720	122,771	5,238,846
Net cash provided by operating activities	91,387,245	43,527,760	27,185,418
Cash flows from investing activities			
Proceeds from sale of fixed assets	1,577,844	919,738	1,187,828
Additions to property and equipment	(136,761,805)	(98,141,833)	(167,435,240)
Net cash used in investing activities	(135,183,961)	(97,222,095)	(166,247,412)
Cash flows from financing activities			
Proceeds from notes payable	127,250,000	205,350,000	150,250,000
Payments on notes payable	(87,950,000)	(151,350,000)	(110,000,000)
Debt issue costs	(55,227)	(211,087)	(1,485,493)
Members' contributions	20,000,000	—	100,000,000
Redemptions of Class A Units	(14,878,715)	—	—
Costs of raising capital	(51,957)	—	(423,992)
Net cash provided by financing activities	44,314,101	53,788,913	138,340,515
Increase (decrease) in cash and cash equivalents	517,385	94,578	(721,479)
Cash and cash equivalents, beginning of period	285,111	190,533	912,012
Cash and cash equivalents, end of period	\$ 802,496	\$ 285,111	\$ 190,533

(Continued on the following page)

See notes to financial statements.

LARAMIE ENERGY, LLC

Statements of Cash Flows

(Continued from the previous page)

Supplemental disclosure of activity:

Cash paid for interest in 2018, 2017 and 2016 was \$9,120,335, \$5,106,566 and \$3,651,018, respectively.

Supplemental disclosure of non-cash activity:

During the years ended December 31, 2018, 2017 and 2016, the Company recorded an asset retirement cost and related obligation of \$2,606,259, \$2,039,180 and \$15,587,862, respectively.

During the year ended December 31, 2018 the Company recorded a non-cash property contribution of \$10,689,900 and assumed liabilities of \$2,589,900 from an equity investor pursuant to an acquisition of a business.

During the year ended December 31, 2016, the Company recorded a non-cash property addition of \$15.75 million from a deposit on acquisition.

During the year ended December 31, 2018, asset retirement obligation liabilities of \$284,609 were settled and offset abandoned property expenses.

During the year ended December 31, 2017, asset retirement obligation liabilities of \$211,849 were settled and offset abandoned property expenses. In addition, asset retirement costs and related obligation liabilities of \$29,515 were written off.

During the year ended December 31, 2016, asset retirement obligation liabilities of \$40,631 were settled and offset abandoned property expenses.

Capital expenditures of \$5,306,100 and \$6,398,133 were unpaid and included in accrued liabilities and accounts payable, respectively, at December 31, 2018. Capital expenditures of \$11,801,484 and \$11,613,368 were unpaid and included in accrued liabilities and accounts payable, respectively, at December 31, 2017. Capital expenditures of \$4,069,400 and \$1,003,568 were unpaid and included in accrued liabilities and accounts payable, respectively, at December 31, 2016.

LARAMIE ENERGY, LLC

Notes to Financial Statements

Note 1 - Description of Business and Summary of Significant Accounting Policies

Laramie Energy, LLC (the “Company”) a Delaware limited liability company, was formed on May 10, 2012 by Laramie Energy II, LLC (“Laramie II”) for the primary purpose of acquiring, owning, operating, and disposing of oil and gas properties in the continental United States of America. On August 31, 2012, Laramie II and Par Pacific Holdings, Inc. (“Par”), formerly named Par Petroleum Corporation, in connection with the Contribution Agreement (“Contribution Agreement”) between Laramie II, Par, and the Company dated August 31, 2012, contributed certain oil and gas related assets and liabilities to the Company in exchange for a member interest in the Company and cash paid to Par. Since then, the Company has raised additional capital from the original and new members (see Note 10). At December 31, 2018 and 2017, the Company’s properties were located in the Piceance Basin in Colorado. The financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (“GAAP”).

Cash and Cash Equivalents

The Company considers all highly liquid instruments purchased with a maturity of three months or less to be cash equivalents. The Company continually monitors its positions with, and the credit quality of, the financial institutions with which it invests. At December 31, 2018 and 2017, cash and cash equivalents balance exceeded the federally insured limit by \$552,496 and \$35,111, respectively.

Accounts Receivable

The Company’s accounts receivable consist mainly of amounts due from natural gas, condensate, and NGL purchasers, and joint interest owners on properties the Company operates. For receivables from joint interest owners, the Company typically has the ability to withhold future revenue disbursements to recover any non-payment of joint interest billings. Generally, the Company’s natural gas, condensate, and NGL revenue receivables are collected within two months. For each of the years ended December 31, 2018, 2017 and 2016, the Company did not record any bad debt expense. At December 31, 2018 and 2017, the Company did not have an allowance for doubtful accounts.

The Company’s producing properties are all located in Colorado in one general area, and the oil and gas production is sold to various purchasers based on market index prices. As of December 31, 2018, and 2017, three purchasers accounted for 86% and two purchasers accounted for 93% of accrued oil and gas revenue, respectively. For the year ended December 31, 2018, four purchasers accounted for 74% of total revenues. For the year ended December 31, 2017 and 2016, three purchasers accounted for 71% and 72% of total revenues, respectively. The Company continually monitors the credit standing of the primary purchasers.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

LARAMIE ENERGY, LLC

Notes to Financial Statements

Note 1 - Description of Business and Summary of Significant Accounting Policies (continued)

Use of Estimates (continued)

Depreciation, depletion, and amortization of oil and gas properties and the impairment of proved oil and gas properties are determined using estimates of oil and gas reserves. There are numerous uncertainties in estimating the quantity of reserves and in projecting the future rates of production and timing of development expenditures, including future costs to dismantle, dispose, and restore the Company's properties. Oil and gas reserve engineering must be recognized as a subjective process of estimating underground accumulations of oil and gas that cannot be measured in an exact way. In addition, significant estimates include the estimated cost and timing related to the asset retirement obligation, purchase price on a business combination (see Note 3), impairment of unproved oil and gas properties and the estimated fair value of derivative instruments.

Revenue Recognition

Oil and gas revenues are recognized when production volumes are sold to a purchaser at a fixed or determinable price, delivery has occurred and title has transferred, persuasive evidence of a sales arrangement exists and collectability of the revenue is reasonably assured. The Company utilizes the entitlements method of accounting for natural gas sales revenues. Under this method, revenues for the entitlement share of gas produced are based on the working interest in the properties. The Company records a receivable (payable) to the extent it receives less (more) than its proportionate share of gas revenues. The Company recognizes condensate revenues and natural gas liquids revenues based on the amount of condensate and natural gas liquids sold and delivered to purchasers. Revenues are reported on a gross basis for the amounts received before taking into account production taxes, gathering and transportation expenses, and lease operating costs, which are reported as separate expenses. The Company's aggregate imbalance positions as of December 31, 2018 and 2017 were not significant.

Income Taxes

The Company has elected to be treated as a partnership for income tax purposes. Partnerships are not subject to U.S. federal income taxes. Rather, the partnership's taxable income flows through to the owners, who are responsible for paying the applicable income taxes on the income allocated to them. Accordingly, no provision for income taxes has been recorded on the accompanying financial statements. For tax years beginning on or after January 1, 2018, the Company is subject to partnership audit rules enacted as part of the Bipartisan Budget Act of 2015 (the "Centralized Partnership Audit Regime"). Under the Centralized Partnership Audit Regime, any IRS audit of the Company would be conducted at the Company level, and if the IRS determines an adjustment, the default rule is that the Company would pay an "imputed underpayment" including interest and penalties, if applicable. The Company may instead elect to make a "push-out" election, in which case the partners for the year that is under audit would be required to take into account the adjustments on their own personal or business income tax returns. If the Company does not elect to make a "push-out" election, the Company LLC agreement requires current members to indemnify the Company for their specific share of the imputed underpayment.

LARAMIE ENERGY, LLC

Notes to Financial Statements

Note 1 - Description of Business and Summary of Significant Accounting Policies (continued)

Income Taxes (continued)

If the Company receives an imputed underpayment, a determination will be made based on the relevant facts and circumstances that exist at that time to allocate such imputed underpayment to each partner based on their specific share of such imputed underpayment. Any payments that the Company ultimately makes on behalf of its current partners will be reflected as a distribution, rather than tax expense, at the time that such distribution is declared.

The Company follows the guidance of Accounting Standards Codification (“ASC”) Topic 740, Income Taxes. Interest and penalties associated with tax positions are recorded in the period assessed as general and administrative expenses. The Company’s tax returns subject to examination by tax authorities include 2015 through the current period for state and federal tax reporting purposes, respectively.

Property and Equipment

The Company accounts for its oil and gas exploration and development activities under the successful efforts method of accounting. Under this method, costs of productive exploratory wells, all development wells and facilities, and undeveloped leases are capitalized when incurred. Oil and gas lease acquisition costs are also capitalized when incurred. Exploration costs, including personnel costs, geological and geophysical expenses, and delay rentals for oil and gas leases, are charged to expense as incurred. Exploratory drilling costs are initially capitalized, but charged to expense if and when the well is determined not to have found reserves in commercial quantities.

The Company reviews its oil and gas properties for impairment at least annually and whenever events and circumstances indicate that the carrying value of the assets may not be recoverable. The impairment test compares undiscounted future net cash flows to the assets’ net book value. If the net capitalized costs exceed future net cash flows, then the cost of the property is written down to fair value. Fair value for oil and gas properties is generally determined based on discounted future net cash flows. In 2018, 2017 and 2016, the Company did not recognize an impairment expense relative to its proved oil and gas properties. Unproved oil and gas properties are assessed periodically, but at least annually, for impairment on a field basis based on remaining lease terms, drilling results, reservoir performance, commodity price outlooks, or future plans to develop acreage and allocate capital. The Company did not recognize impairment expense for the periods ended December 31, 2018, 2017 and 2016.

The sale of a partial interest in a proved oil and gas property is accounted for as normal retirement, and no gain or loss is recognized as long as the treatment does not significantly affect the units-of-production depletion rate. The sale of a partial interest in an unproved property is accounted for as a recovery of cost when substantial uncertainty exists as to the ultimate recovery of the cost applicable to the interest retained. A gain on the sale is recognized to the extent that the sales price exceeds the carrying amount of the unproved property. A gain or loss is recognized for all other sales of producing and non-producing properties. There were no sales of proved oil and gas properties or unproved properties in 2018, 2017 or 2016.

LARAMIE ENERGY, LLC

Notes to Financial Statements

Note 1 - Description of Business and Summary of Significant Accounting Policies (continued)

Property and Equipment (continued)

Maintenance and repairs are charged to expense; renewals and betterments are capitalized to the appropriate property and equipment accounts. Upon retirement or disposition of assets, the costs and related accumulated depreciation are removed from the accounts with the resulting gains or losses, if any, reflected in results of operations.

The provision for depletion, depreciation, and amortization of oil and gas properties is calculated on a field basis based on proved reserves using the units-of-production method. Costs of certain facilities and equipment serving a number of properties are depreciated using the straight-line method over the estimated useful lives of the assets ranging from 7 to 15 years, or units-of-operations for certain significant equipment. The provisions for depreciation of the office furniture, equipment and other are calculated using the straight-line method over the estimated useful lives ranging from 5 to 15 years. Included in real estate and ranch property are buildings that are depreciated using the straight-line method over the estimated useful lives ranging from 20 to 39 years.

Derivative Instruments

The Company uses derivative instruments to manage its exposure to natural gas and natural gas liquids price volatility. All derivatives are initially, and subsequently, measured at estimated fair value and recorded as assets or liabilities on the balance sheets. The Company has elected not to designate its derivatives as cash flow hedges. For derivative contracts that do not qualify as cash flow hedges, changes in the estimated fair value of the contracts are recorded in gains and losses under the other income and expense caption in the statements of operations. When derivative contracts are settled, the Company also recognizes realized gains and losses under the other income and expense caption in its statements of operations.

Asset Retirement Obligation

Asset retirement obligations ("ARO") relate to future costs associated with the plugging and abandonment of oil and gas wells, removal of equipment and facilities from leased acreage and returning such land to its original condition. The Company records the estimated fair value of an ARO in the period in which it is incurred. When the liability is initially recorded, the Company capitalizes the cost by increasing the carrying amount of the related long-lived asset. Over time, the liability is accreted and the capitalized cost is depreciated over the useful life of the related asset. Upon settlement of the liability, the Company reports a gain or loss upon settlement to the extent the actual costs differ from the recorded liability.

The majority of the Company's ARO relates to the plugging and abandoning of oil and gas wells, the reclamation of the Company's well locations and decommissioning and reclaiming water and compression facilities and pipelines. Revisions to estimated ARO result in adjustments to the related capitalized asset and corresponding liability.

LARAMIE ENERGY, LLC

Notes to Financial Statements

Note 1 - Description of Business and Summary of Significant Accounting Policies (continued)

Asset Retirement Obligation (continued)

The following is a reconciliation of the ARO:

	For the Years Ended December 31,	
	2018	2017
Balance, beginning of period	\$ 26,986,294	\$ 23,902,588
Additions	1,233,296	2,039,180
Acquired oil and gas properties (Note 3)	1,372,963	—
Settlements and disposals	(284,609)	(241,364)
Accretion expense	1,512,723	1,285,890
Balance, end of period	<u>\$ 30,820,667</u>	<u>\$ 26,986,294</u>

Equity-Based Compensation

Compensation expense associated with equity-based awards is recognized at the fair value of the awards over the vesting period on a straight-line basis.

Recently Issued Accounting Pronouncements

In August 2018, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2018-13, *Fair Value Measurement - Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement*. The amendments in this update improve the effectiveness of fair value measurement disclosures and modify the disclosure requirements on fair value measurements, including the consideration of costs and benefits. ASU 2018-13 is effective for all entities for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. The Company is currently evaluating the impact of adopting this standard.

In September 2017, the FASB issued ASU 2017-13, *Revenue Recognition (Topic 605), Revenue from Contracts with Customers (Topic 606), Leases (Topic 840), and Leases (Topic 842) – Amendments to SEC Paragraphs Pursuant to the Staff Announcement at the July 20, 2017 EITF Meeting and Rescission of Prior SEC Staff Announcements and Observer Comments*. The objective of ASU 2017-13 is to provide transition relief for adoption of Topic 606 and Topic 842 for a public business entity that otherwise would not meet the definition of a public business entity except for a requirement to include its financial statements or financial information in another entity’s filing with the SEC. ASU 2017-13 allows these entities to adopt ASC Topic 606 in annual reporting periods beginning after December 15, 2018, and interim reporting periods within annual reporting periods beginning after December 15, 2019, and ASC Topic 842 in fiscal years beginning after December 15, 2019, and interim periods within fiscal years beginning after December 15, 2020.

LARAMIE ENERGY, LLC

Notes to Financial Statements

Note 1 - Description of Business and Summary of Significant Accounting Policies (continued)

Recently Issued Accounting Pronouncements (continued)

In January 2017, the FASB issued ASU 2017-01, *Business Combinations - Clarifying the Definition of a Business*. The objective of this update is to clarify the definition of a business with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of businesses. ASU 2017-01 is effective for annual periods beginning after December 15, 2017, including interim periods within those periods, for public business entities. The Company adopted ASU 2017-01 as of January 1, 2018 on a prospective basis. The adoption of ASU 2017-01 had no impact on the Company's financial statements.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows-Classification of Certain Cash Receipts and Cash Payments*. The objective of this update is to address eight specific cash flow issues in order to reduce the existing diversity in practice. ASU 2016-15 is effective for the fiscal years beginning after December 15, 2017, and interim periods within those fiscal years for public business entities. The Company adopted ASU 2016-15 as of January 1, 2018 using a retrospective transition method. The adoption of ASU 2016-15 had no impact on the Company's financial statements.

In February 2016, the FASB issued ASU 2016-02, *Leases*. The objective of this update is to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. The FASB subsequently issued various ASUs which provided additional implementation guidance. As allowed for by ASU 2017-13, ASU 2016-02 and its amendments are effective for fiscal years beginning after December 15, 2019, and interim periods within fiscal years beginning after December 15, 2020 for public business entities that otherwise would not meet the definition of a public business entity except for a requirement to include its financial statements in another entity's filing with the SEC. The Company is currently evaluating the impact of adopting this standard.

In January 2016, the FASB issued ASU 2016-01, *Recognition and Measurement of Financial Assets and Financial Liabilities*. The objective of this update is to improve the recognition and measurement of financial instruments. ASU 2016-01 is effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years, for public business entities. The Company adopted ASU 2016-01 as of January 1, 2018 on a prospective basis. The adoption of ASU 2016-01 had no impact on the Company's financial statements.

LARAMIE ENERGY, LLC

Notes to Financial Statements

Note 1 - Description of Business and Summary of Significant Accounting Policies (continued)

Recently Issued Accounting Pronouncements (continued)

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers*. The objective of this update is to clarify the principles for recognizing revenue and to develop a common revenue standard. As allowed for by ASU 2017-13, ASU 2014-09 is effective for annual reporting periods beginning after December 15, 2018, and interim reporting periods within annual reporting periods beginning after December 15, 2019, for public business entities that otherwise would not meet the definition of a public business entity except for a requirement to include its financial statements in another entity's filing with the SEC. Early application is permitted only as of annual reporting periods beginning after December 15, 2016, including interim reporting periods within that reporting period, for public companies, and as of an annual reporting period beginning after December 15, 2016, including interim reporting periods within that reporting period, for private companies. The Company has completed an initial review of its contracts and is finalizing its accounting policies to address the provisions of ASU 2014-09 and the related updates and clarifications. While the Company does not expect net income or cash flows from operations to be materially impacted, the Company expects that there may be changes in the recognition of revenues and expenses associated with certain natural gas gathering and processing contracts resulting in offsetting changes to revenues and "Gathering, transportation and processing" expenses on the statements of operations. The adoption of the standard will also require that we provide expanded disclosures related to the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. The Company will adopt ASU 2014-09 effective January 1, 2019 using the modified retrospective approach.

Note 2 - Fair Value Measurements

Authoritative guidance defines estimated fair value as the price that would be received to sell an asset or paid to transfer a liability (an exit price) in an orderly transaction between market participants at the measurement date. The guidance establishes a hierarchy for inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the most observable inputs be used when available. Observable inputs are inputs that market participants would use in pricing the asset or liability developed based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions of what market participants would use in pricing the asset or liability developed based on the best information available in the circumstances.

The hierarchy is broken down into three levels based on the reliability of the inputs as follows:

Level 1 – Quoted prices are available in active markets for identical assets or liabilities as of the reporting date. Active markets are those in which transactions for the asset or liability occur in sufficient frequency and volume to provide pricing information on an ongoing basis.

LARAMIE ENERGY, LLC

Notes to Financial Statements

Note 2 - Fair Value Measurements (continued)

Level 2 – Pricing inputs are other than quoted prices in active markets included in Level 1, and are either directly or indirectly observable as of the reporting date. Level 2 includes those financial instruments that are valued using models or other valuation methodologies. Substantially all Level 2 assumptions are observable in the marketplace throughout the full term of the instrument, can be derived from observable data or are supported by observable levels at which transactions are executed in the marketplace.

Level 3 – Pricing inputs include significant inputs that are generally less observable than objective sources. These inputs may be used with internally developed methodologies that result in management's best estimate of fair value.

The assets and liabilities are classified based on the lowest level of input that is significant to the fair value measurement. The Company's policy is to recognize transfers in and/or out of the fair value hierarchy as of the end of the reporting period in which the event or change in circumstances caused the transfer. The Company has consistently applied the valuation techniques discussed below in all periods presented. The following table presents the Company's financial assets and liabilities that were accounted for at fair value on a recurring basis as of December 31, 2018 and 2017, by level within the fair value hierarchy:

		Level 1	Level 2	Level 3	Total
<u>December 31, 2018</u>					
Assets					
Derivative instruments, current	\$	—	\$ 2,517,353	\$ —	\$ 2,517,353
Liabilities					
Derivative instruments, current	\$	—	\$ 3,613,133	\$ —	\$ 3,613,133
<u>December 31, 2017</u>					
Liabilities					
Derivative instruments, current	\$	—	\$ 2,983,243	\$ —	\$ 2,983,243
Derivative instruments, current	\$	—	\$ 16,811	\$ —	\$ 16,811

LARAMIE ENERGY, LLC

Notes to Financial Statements

Note 2 - Fair Value Measurements (continued)

As of December 31, 2018, the Company's commodity derivative financial instruments were comprised of 21 natural gas and natural gas differential swaps. As of December 31, 2017, the Company's commodity derivative financial instruments were comprised of 14 natural gas swaps and 3 costless collars. The fair values of the swap agreements are determined under the income valuation technique using a discounted cash flows model. The fair values of the collar agreements are determined under the income valuation technique using an option-pricing model. The valuation models require a variety of inputs, including contractual terms, published forward prices, volatilities for options, and discount rates, as appropriate. The Company's estimates of fair value of derivatives include consideration of the counterparty's creditworthiness, the Company's creditworthiness, and the time value of money. The consideration of these factors results in an estimated exit price for each derivative asset or liability under a marketplace participant's view. All of the significant inputs are observable, either directly or indirectly; therefore, the Company's derivative instruments are included within the Level 2 fair value hierarchy. The counterparties in all of the Company's commodity derivative financial instruments are the lenders in the Company's bank credit facility.

Non-Recurring Fair Value Measurements

The treatment of the net assets acquired qualified as a business combination and, as such, the Company estimated the fair value of each property as of the acquisition date (the date on which the Company obtained control of the properties) (see Note 3).

Financial Instruments

Other financial instruments not measured at fair value on a recurring basis include cash and cash equivalents, accounts receivable, accounts payable, oil and gas sales payable, accrued liabilities, notes payable and Class A Preferred units. With the exception of the notes payable and Class A Preferred units, the financial statement carrying amounts of these items approximate their fair values due to their short-term nature. The Company's note payable has a recorded value that approximates its fair value since its variable interest rate is tied to current market rates and the applicable margins represent market rates. The fair value of the Company's Class A Preferred units approximates its carrying value based on the terms and conditions the Company can receive for similar financial instruments as of year-end.

LARAMIE ENERGY, LLC

Notes to Financial Statements

Note 3 – Acquisitions

In the normal course of its business, the Company anticipates acquiring interests in proved oil and gas properties and in unproved acreage in its area of operations.

On February 28, 2018, the Company entered into a Contribution and Purchase Agreement (“CP Agreement”) with Black Hills Exploration and Production Inc. and Black Hills Plateau Production LLC (collectively “Black Hills”). Under the CP Agreement, Black Hills contributed \$20 million in cash in exchange for 49,984 A Units issued by the Company and the Company acquired \$8.1 million of developed properties, leasehold acreage and real estate assets and ARO and water sourcing liabilities in exchange for 20,243 additional Class A units issued by the Company. The Class A units issued are the consideration for the assets acquired in a business combination, the amount of which is determined based upon the fair value of the Class A units at the date of the acquisition. In addition, Black Hills provided the Company with a \$3.5 million cash payment for liabilities related to the properties conveyed. The contribution of a business by Black Hills into the Company is accounted for as a business combination, and as such, the Company recorded the estimated fair value of the identifiable assets acquired and liabilities assumed as of the acquisition date (the date on which the Company obtained control of the properties).

Fair value measurements utilize assumptions of market participants. To determine the fair value of the oil and gas assets related to the acquisition, the Company used an income approach based on a discounted cash flow model and made market assumptions as to future commodity prices, projections of estimated quantities of oil and natural gas reserves, expectations for timing and amount of future development and operating costs, projections of future rates of production, expected recovery rates and risk adjusted discount rates. The Company determined the appropriate discount rates used for the discounted cash flow analyses by using a weighted average cost of capital from a market participant perspective plus property specific risk premiums for the assets acquired. The Company estimated property specific risk premiums taking into consideration that the related reserves are primarily natural gas, among other items. Given the unobservable nature of the significant inputs, they are deemed to be Level 3 in the fair value hierarchy. The fair value measurements of the ARO and water sourcing commitment were determined using discounted cash flow analyses. The fair value measurements of the unproved oil and gas properties and real estate were determined by comparison to recorded sales price per acre of comparable assets.

LARAMIE ENERGY, LLC

Notes to Financial Statements

Note 3 – Acquisitions (continued)

The following table summarizes the purchase price and final allocation of the fair value of assets acquired and liabilities assumed:

	<u>February 28, 2018</u>
Purchase price	\$ 8,100,000
Oil and gas properties	
Proved	1,601,463
Unproved	4,930,500
Real estate	5,530,900
Asset retirement obligations	(1,372,963)
Water sourcing commitment	(2,589,900)
	<u>\$ 8,100,000</u>

The Company's financial statements for the year ended December 31, 2018 include the results of operations from the properties acquired from Black Hills since March 1, 2018, during which period the properties acquired totaled revenues of \$15,417,423, operating expenses of \$13,819,856, and income from operations of \$1,597,566.

Note 4 – Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets consist of the following:

	<u>December 31,</u>	
	<u>2018</u>	<u>2017</u>
Prepaid insurance	\$ 630,722	\$ 429,361
Prepaid rent	106,175	103,545
Prepaid royalties	903,000	603,500
Prepaid other	409,105	281,831
	<u>\$ 2,049,002</u>	<u>\$ 1,418,237</u>

LARAMIE ENERGY, LLC

Notes to Financial Statements

Note 5 - Accrued Liabilities

Accrued liabilities, current, consist of the following:

	December 31,	
	2018	2017
Accrued capital expenditures	\$ 5,306,100	\$ 11,801,484
Accrued production and property taxes	7,808,168	5,392,732
Accrued bonuses	3,279,874	2,725,409
Accrued pipeline throughput commitment deficiency	2,892,161	59,842
Accrued water commitment payment	515,000	—
Accrued general and administrative expenses	570,109	183,341
Accrued lease operating expenses	961,999	1,837,222
Accrued other	871,272	1,264,334
	<u>\$ 22,204,683</u>	<u>\$ 23,264,364</u>

Note 6 - Credit Facility

On June 4, 2012, the Company entered into a credit facility (the “Facility”), as amended, with J.P. Morgan Securities, LLC and Wells Fargo Securities LLC, each as an arranger, JPMorgan Chase Bank, N.A. as the administrative agent (the “Administrative Agent”), and the lenders party thereto. The Facility is a \$400 million secured revolving credit facility secured by a lien on the Company’s oil and gas properties and related assets. The Facility matures on December 15, 2020.

Availability under the Facility is limited to the lesser of (i) \$400 million or (ii) the borrowing base in effect from time to time. The borrowing base is determined by the Administrative Agent and the lenders, in their sole discretion, based on customary lending practices, review of the oil and gas properties included in the borrowing base, financial review of the Company, and such other factors as may be deemed relevant. The borrowing base is redetermined (i) on or about March 15 of each year based on the previous December 31 reserve report prepared by an independent engineering firm acceptable to the Administrative Agent, and (ii) on or about September 15 of each year based on the previous June 30 reserve report prepared by the Company’s internal engineers. The borrowing base at December 31, 2018 was \$240,000,000. At December 31, 2018 and 2017, the outstanding balance on the Facility was \$210,800,000 and \$171,500,000, respectively.

During the year ended December 31, 2018, the Company incurred \$55,227 of debt issuance costs in relation to the borrowing base redeterminations. Debt issuance costs incurred for the year ended December 31, 2017 were \$211,087. The remaining unamortized debt issuance costs incurred in relation to the original Facility and the debt issuance costs incurred in relation to the amended Facility are being amortized straight-line over the life of the amended Facility.

LARAMIE ENERGY, LLC

Notes to Financial Statements

Note 6 - Credit Facility (continued)

Amounts borrowed bear interest at rates ranging from LIBOR plus 2.00% to LIBOR plus 3.00% per annum for Eurodollar loans and the prime rate plus 1.00% to prime rate plus 2.00% per annum for Base Rate loans, depending upon the ratio of outstanding credit to the borrowing base. At December 31, 2018, interest rates were between 5.10% and 5.28% for Eurodollar loans and 6.75% for Base Rate loans. At December 31, 2017, interest rates were between 3.74% and 4.06% for Eurodollar loans and 6.00% for Base Rate loans. Interest is due monthly on draw date of each Eurodollar and Base Rate loan. The agreement contains customary operational and financial covenants, including a current ratio covenant, and a total debt to consolidated EBITDAX (as defined) covenant. At December 31, 2018 and 2017, the Company was in compliance with all such covenants. Under the terms of the Facility, the Company is generally prohibited from making future cash distributions to its owners.

Note 7 - Derivative Instruments

The Company periodically enters into various commodity hedging instruments to mitigate a portion of the effect of natural gas and natural gas liquids price fluctuations. The Company classifies the fair value amounts of derivative assets and liabilities as net current or non-current derivative assets or net current or non-current derivative liabilities, whichever the case may be, by commodity and counterparty. The Company enters into derivatives under master netting arrangements, which, in an event of default, allows the Company to offset payables to and receivables from the defaulting counterparty. As of December 31, 2018 and 2017, there were no available amounts to be offset.

LARAMIE ENERGY, LLC

Notes to Financial Statements

Note 7 - Derivative Instruments (continued)

The Company's commodity derivative contracts as of December 31, 2018 are summarized below:

<u>Natural Gas Swaps</u>	<u>Basis</u>	<u>Average Quantity (MMBtu/Day)</u>	<u>Average Swap Price (\$/MMBtu)</u>
January 1, 2019 - March 31, 2019	NWPL	60,000	\$2.40 - \$2.78
April 1, 2019 - December 31, 2019	NWPL	40,000	\$2.40 - \$2.77
January 1, 2019 - March 31, 2019	NYMEX	100,000	\$2.80 - \$3.10
April 1, 2019 - October 31, 2019	NYMEX	60,000	\$2.80 - \$2.81
November 1, 2019 - December 31, 2019	NYMEX	40,000	\$2.80
<u>Natural Gas Liquids Swaps</u>	<u>Basis</u>	<u>Average Quantity (Gal/Day)</u>	<u>Average Swap Price (\$/Gal)</u>
January 1, 2019 - December 31, 2019	MBV	26,302	\$0.80 - \$1.48
<u>Natural Gas Basis Swaps</u>	<u>Basis</u>	<u>Average Quantity (MMBtu/Day)</u>	<u>Basis Differential (\$/MMBtu)</u>
January 1, 2019 - February 28, 2019	NWPL	20,000	(\$0.200)
January 1, 2019 - March 31, 2019	NYMEX	62,500	\$ (0.60) - \$ (0.64)
April 1, 2019 - December 31, 2019	NYMEX	22,500	\$ (0.60) - \$ (0.64)

LARAMIE ENERGY, LLC

Notes to Financial Statements

Note 7 - Derivative Instruments (continued)

The aggregate fair value of the Company's derivative instruments reported in the balance sheets, including the classification between current and non-current assets and liabilities, consists of the following:

		December 31, 2018	
		Gross Recognized Assets/ Liabilities	Net Recognized Fair Value Assets/ Liabilities
Derivative instruments	Current assets	\$ 2,517,353	\$ 2,517,353
Total derivative assets		\$ 2,517,353	\$ 2,517,353
Derivative instruments	Current liabilities	\$ 3,613,133	\$ 3,613,133
Total derivative liabilities		\$ 3,613,133	\$ 3,613,133
		December 31, 2017	
		Gross Recognized Assets/ Liabilities	Net Recognized Fair Value Assets/ Liabilities
Derivative instruments	Current assets	\$ 2,983,243	\$ 2,983,243
Total derivative assets		\$ 2,983,243	\$ 2,983,243
Derivative instruments	Current liabilities	\$ 16,811	\$ 16,811
Total derivative liabilities		\$ 16,811	\$ 16,811

None of the Company's derivative instruments contain credit-risk-related contingent features. Counterparties to the Company's financial derivative contracts are high credit-quality financial institutions that are lenders under the Company's credit facility. The Company uses only credit facility participants to hedge with, since these institutions are secured equally with the holders of the Company's bank debt, which eliminates the potential need to post collateral when the Company is in a derivative liability position. As a result, the Company is not required to post letters of credit or company guarantees for its derivative counterparties in order to secure contract performance obligations.

LARAMIE ENERGY, LLC

Notes to Financial Statements

Note 7 - Derivative Instruments (continued)

The table below summarizes the realized and unrealized gains and losses related to the Company's derivative instruments for the years ended December 31, 2018, 2017 and 2016.

Commodity Derivative Instrument	Location of Gain (Loss) Recognized	For the Years Ended December 31,		
		2018	2017	2016
Realized (losses) gains on derivative instruments, net	Other income (expense)	\$ (9,363,941)	\$ (10,710,922)	\$ 6,723,873
Unrealized (losses) gains on derivative instruments, net	Other income (expense)	(4,062,212)	46,241,453	(34,452,084)
Total realized and unrealized (losses) gains recorded, net	Other income (expense)	\$ (13,426,153)	\$ 35,530,531	\$ (27,728,211)

Due to the volatility of oil and natural gas prices, the estimated fair values of the Company's commodity derivative instruments are subject to large fluctuations from period to period.

Note 8 – Commitments and Contingencies

The table below shows the Company's minimum future payments under non-cancellable operating leases as of December 31, 2018 and which are described below:

	Payments due by period						Total
	2019	2020	2021	2022	2023	Thereafter	
Office leases	\$ 1,103,979	1,121,561	330,263	—	—	—	\$ 2,555,803
Equipment leases	1,231,327	1,231,327	1,231,327	1,231,327	938,517	645,706	6,509,531
Auto leases	113,519	113,519	88,271	16,136	—	—	331,445
Total	\$ 2,448,825	2,466,407	1,649,861	1,247,463	938,517	645,706	\$ 9,396,779

Non-cancelable Office Leases

The Company leases administrative office space in Denver, Colorado under an operating lease expiring May 31, 2021 and office space in Grand Junction, Colorado expiring December 31, 2020. Rental expense is recognized on a straight-line basis over the terms of the leases and was \$1,154,806, \$1,181,612 and \$1,286,339 for the years ended December 31, 2018, 2017 and 2016.

LARAMIE ENERGY, LLC

Notes to Financial Statements

Note 8 – Commitments and Contingencies (continued)

Drilling Rig Contracts

At December 31, 2018, the Company had one drilling rig under contract, the Company can terminate the contract at any time with 30-day notice. At December 31, 2017, the Company had two drilling rigs under contract, both expired on March 13, 2018. At December 31, 2016, the Company had one drilling rig under contract until May 2017 and was subsequently extended to March 2018.

Equipment Lease Financing

At December 31, 2018, the Company had two lease financing obligations pertaining to natural gas compressors with a major bank's leasing subsidiary. The leases expire in June 2023 and December 2024, respectively, at which time the Company may purchase the equipment at its fair market value. Rental expense was \$1,322,939 and \$648,499 for the years ended December 31, 2018 and 2017. The aggregate undiscounted minimum future lease payments are presented above.

Employment Agreements

The Company has an employment agreement with one of its executive officers.

Retirement Savings Plan

The Company outsources payroll and human resources functions to an administrative agent. In conjunction with this arrangement, the Company has a 401(k) plan (the "Plan") available to eligible employees. The Plan provides for up to 5% matching contributions by the Company. In 2018, 2017 and 2016, the Company's matching contributions to the Plan were \$511,208, \$468,484 and \$346,558, respectively.

Letter of Credit

The Company has guaranteed a \$250,000 letter of credit, expiring in April 2019, issued by JPMorgan Chase Bank, N.A. for TransColorado Gas Transmission Company LLC.

LARAMIE ENERGY, LLC

Notes to Financial Statements

Note 8 – Commitments and Contingencies (continued)

Transportation, Gathering and Processing Agreements

Effective August 1, 2015, as part of the Management Agreement termination, the Company assumed from Laramie II a ship-or-pay agreement with an interstate pipeline company that extends through December 31, 2023. The transportation agreement obliges the Company to ship 15,000 MMBtu per day or pay the pipeline company a deficiency payment equal to an established tariff per MMBtu for the volume shortfall. For the past several years, because the Company did not utilize this firm capacity, the Company assigned the firm capacity to another shipper to partially offset this liability by supplementing the volumes that the Company did not ship. For the years ended December 31, 2018, 2017 and 2016, the Company incurred \$743,613, \$771,893 and \$788,127, respectively, in deficiency payments for the volume shortfall which is included in general and administrative expenses in the statements of operations.

Gathering and Processing Agreements

At inception in August 2012, the Company assumed the long-term gas gathering and processing contracts of its predecessors. Subsequently, as other asset acquisitions have been made by the Company, other pre-existing long-term gas gathering and processing contracts tied to the acquired assets have been assumed by the Company. Accordingly, most of the Company's acreage in Mesa, Garfield, and Rio Blanco Counties, Colorado is dedicated to one or more of these gas gathering and processing contracts such that all of the Company's gas production flows through third party midstream companies for gathering and processing. Only one of these contracts requires a minimum annual volume commitment, and this contract's volume commitment ends in November 2019. Under this contract, should the Company not ship the required volumes in a particular year prior to 2019, it must pay the gatherer a deficiency payment equal to the gathering fee for the volume shortfall. During the years ended December 31, 2018, 2017 and 2016, the Company incurred gas gathering expense related to this volume shortfall of \$1,162,381, \$1,177,689, and \$1,432,100, respectively, which is paid in the following January each year which is included in gathering, transportation and processing expense. At December 31, 2018, the Company had the respective 2018 gas volume deficiency expenses under this contract included in accrued liabilities. At December 31, 2017, the Company had the respective 2017 gas volume deficiency expenses under this contract included in accounts payable.

Effective January 1, 2017, the Company amended one of its gathering and processing contracts. Under the terms of the amendment, the Company received reduced gathering and processing fees in return for a commitment to drill and complete a total 150 wells by December 31, 2018, 50 of which were required to be drilled and completed by December 31, 2017. If the commitment to drill and complete 50 wells was not met by December 31, 2017, the reduction in gathering and processing fees would be subject to a clawback payment. The Company met the commitments to drill and complete 50 wells in 2017 and the total of 150 wells by December 31, 2018, thus eliminating the clawback provision.

LARAMIE ENERGY, LLC

Notes to Financial Statements

Note 8 – Commitments and Contingencies (continued)

Other Minimum Volume Obligations Relating to Gathering and Processing Agreements

Upon closing of the asset acquisition from Oxy on March 1, 2016, the Company acquired Oxy's oil and gas leases, gas wells, and its gathering and processing agreements to which the acquired gas wells and lease acreage were dedicated. As a key provision of the contractual assignment of Oxy's former gathering and processing contracts to the Company, Oxy retained all of the deficiency payment liabilities of the underlying gathering and processing contracts' minimum volume obligations between Oxy and the gathering and processing companies. Per the terms of the asset acquisition, and to partially offset Oxy's retained deficiency payment liabilities, the Company entered into four separate minimum volume commitment agreements directly between Oxy and the Company. Under each of these minimum volume commitment agreements, the Company must pay Oxy a monthly deficiency payment for the difference between the committed volumes and the actual volumes shipped under Oxy's former gathering and processing contracts that were assigned to the Company. Each of these four minimum volume commitment agreements relate to one of the four separate gathering and processing contracts that Oxy assigned to the Company.

Each of the Company's four minimum volume agreements with Oxy have a separate monthly gas volume schedule. Under two of the agreements between the Company and Oxy, the minimum gas volume schedules are based on the Company's forecast of future gas production from the existing proved developed wells that are dedicated to the two assumed gathering and processing contracts. The minimum volume schedules of the other two agreements between the Company and Oxy are based on the Company's forecast of existing proved developed wells and from future wells that the Company plans to drill within the acquired acreage. For the year ended December 31, 2018, 2017 and 2016, the Company incurred \$1,732,146, \$228,713 and \$63,978, in deficiency payments for the volume shortfall which is included in gathering, transportation and processing expenses in the statements of operations.

Litigation

The Company is subject to litigation, claims and governmental regulatory proceedings arising in the course of ordinary business. No litigation or governmental regulatory proceedings are currently underway or pending.

Environmental Matters

As an owner or lessee and operator of oil and gas properties, the Company is subject to various federal, state, and local laws and regulations relating to discharge of materials into, and protection of, the environment. The Company has policies to ensure continuing compliance with environmental laws and regulations and maintains insurance coverage for certain environmental matters. There can be no assurance that current or future federal, state, or local laws and regulations will not require the Company to spend material amounts to comply with such laws and regulations

LARAMIE ENERGY, LLC

Notes to Financial Statements

Note 9 – Preferred A Units

Under the Unit Purchase Agreement (“UPA 2016”) dated February 22, 2016, the Company issued 30,000 Class A Preferred units at \$1,000 per unit. The Class A Preferred units have liquidation preference rights over the Class A units. The liquidation preference rights were waived for the Class A unit redemption completed under the Unit Purchase Agreement (“UPA 2018”) (Note 10). Dividends due on the Class A Preferred units are 10% per annum and due on a quarterly basis if paid in cash. The Company may elect to accrue dividends and increase the liquidation preference of the Class A Preferred units at 12% per annum on a quarterly compounding basis. Under the Forth Amended and Restated LLC Agreement (“4th LLC Agreement”), dated October 18, 2018, beginning with the quarter ended March 31, 2019, the Class A Preferred units liquidation preference rate increases from 12% per annum to 14% per annum if certain customary operational and financial covenants are exceeded. During 2018, 2017 and 2016, the Company incurred non-cash preferred dividend expense of \$4,688,995, \$4,166,112 and \$3,193,820, respectively.

The Company has classified the Class A Preferred units as debt due to the mandatorily redeemable feature. The Class A Preferred units are redeemable six years from the date of the UPA 2016, February 22, 2022. Under ASC Topic 470, *Debt*, the proceeds of debt instruments should be allocated based upon their relative fair values. In connection with the issuance of the 30,000 Class A Preferred units in exchange for \$30,000,000, the purchaser, Wells Fargo Central Pacific Holdings, Inc. (“Wells Fargo”), received 12,992 Class A units. The Company used a market-based approach to a “Backsolve” method to identify the relative fair values of the Class A Preferred units and Class A units, \$27,689,935 and \$2,310,065, respectively, upon issuance.

Note 10 – Members’ Equity

On October 18, 2018, the Company entered into a UPA 2018 with two of its Class A Members, EnCap Energy Capital Fund VI, L.P. and EnCap Energy VI-B Acquisitions, L.P. (collectively “Encap”). Under the terms of UPA 2018, the Company purchased all of Encap’s Class A units, totaling 138,795, for \$14.8 million. During December of 2018, the Company entered into an additional five unit purchase agreements. The Company purchased all Class A units of five individual investors, totaling 524 Class A units, for \$55,906.

On February 28, 2018, the Company entered into the CP Agreement with Black Hills (see Note 3). Black Hills contributed \$20.0 million in cash and \$8.1 million of developed properties, leasehold acreage and real estate in exchange for 70,227 Class A units.

In 2016, the Company issued additional Class A units to existing members under UPA 2016. Members purchased 195,530 Class A units at \$358 per Class A unit for \$70,000,000. In addition, the Company issued 12,992 Class A units to Wells Fargo (see Note 9).

LARAMIE ENERGY, LLC

Notes to Financial Statements

Note 10 – Members' Equity (continued)

All Class A unit holders vote as a single class based upon their respective sharing percentages. Revenues and costs are allocated in accordance with specific provisions in the 4th LLC Agreement. After payout to the Class A Preferred units, the Class A units are senior to Class B units in terms of liquidation and voting and have first-call on all assets until the Class A units reach payout as defined in the 4th LLC Agreement.

	Class A Units	
	Units	Amount
Balances, December 31, 2016	866,134	\$ 530,789,814
Balances, December 31, 2017	866,134	530,789,814
UPA 2018 – February 28, 2018	70,227	28,100,000
Funding fees and other costs of raising capital	—	(51,957)
Redemptions of Class A Units	(139,319)	(14,878,715)
Balances, December 31, 2018	<u>797,042</u>	<u>\$ 543,959,142</u>

Class B Units

Laramie Energy Employee Holdings, LLC (“Employee Holdings”) (FKA Piceance Energy Employee Holdings, LLC) was formed on August 28, 2015 by the Management Investors of Laramie Energy Employee Holding, LLC (“Management Investors”) and holds all 15,000, Class B units authorized under the Company’s Second Amended and Restated Limited Liability Company Agreement (the “LLC Agreement”). Employee Holdings is authorized to grant the Class B units to selected Company employees (including the Management Investors) upon written consent from the Company in its capacity as Manager of Employee Holdings. No Class B Units were granted in 2018. As of December 31, 2018, Employee Holdings had granted 14,235 Class B units, net of forfeitures, to the Company’s employees.

LARAMIE ENERGY, LLC

Notes to Financial Statements

Note 10 – Members' Equity (continued)

Class B Units (continued)

Class B units generally vest over three years. As of December 31, 2018, 2017 and 2016, vested Class B units were 13,468, 8,723 and 4,208, respectively. If an employee is terminated by the Company for cause, all Class B units, whether vested or unvested at the time of termination, shall be deemed automatically forfeited. Employees who cease to be employed by the Company for any reason, other than termination for cause, will forfeit all unvested units. Vested units may be repurchased by the Company at fair value at the Company's option. Distributions to Class B unit holders will only occur after the Class A unit holders reach "pay-out" as defined in the LLC Agreement. Generally, Class A unit holders are entitled to receive the return of their investment in the Company's Class A units plus a specified internal rate of return on such investment prior to the Class B unit holders receiving any cash distributions. No Class B units were repurchases in 2018, 2017 or 2016.

The Company's Class B units are non-voting "profits interests" for which no cash consideration was received upon issuance and which are used to compensate management based on the value of the Company. The Company accounts for the Class B units as an equity award and has recorded compensation expense to date based on the grant dates' fair values and the vesting periods. The estimated fair value of the Class B units at grant date July 1, 2017, July 1, 2016 and August 31, 2015 was approximately \$0.1 million, \$0.8

million and \$19.3 million, respectively. In 2017, employees forfeited 550 Class B units which reduced compensation cost by \$0.5 million. In 2016, employees forfeited 425 Class B units which reduced compensation cost by \$0.6 million. In 2015, there were no forfeitures of Class B units. Total compensation cost recognized during 2018, 2017 and 2016 was approximately \$3.2 million, \$6.2 million and \$6.6 million, respectively, and is included in general and administrative expense in the accompanying statements of operations. Approximately \$0.2 million in compensation expense will be recognized over the remaining 1.5 years. Estimated fair values were determined considering the following factors:

- Estimating the fair value of the Company at the dates on which units were awarded and the balance sheet date based on investments in Class A units.
- Allocating the Company's fair value to the unit holders through application of the Option Pricing Method as detailed in the AICPA Accounting and Valuation Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*

LARAMIE ENERGY, LLC

Notes to Financial Statements

Note 10 – Members' Equity (continued)

Class B Units (continued)

As part of the Option Pricing Method, a series of Black-Scholes option pricing models were applied in order to model the value to the Class B units as a contingent claim on the upside value of the Company's equity value. The assumptions listed below were made in applying this option pricing model:

- The underlying equity value was solved such that the value allocable to the Class A units aligned to the investment values of \$400, \$358 and \$595.50 per share of the Company at July 1, 2017, July 1, 2016 and August 31, 2015, respectively. This approach is referred to as the "Backsolve" method in the AICPA guide.
- The exercise prices of the options were based upon the participation thresholds at which the participation ratios of liquidation proceeds change between Class A and B. These amounts were derived based on the rights and preferences outlined in Company's LLC Agreement.
- The maturity dates of the options were assumed to be three years from the grant date, aligning to the expected investment holding period.
- Volatility was based on the volatilities of comparable companies and was estimated at 41% as of the grant dates.

The risk-free rate was based on U.S. Treasury Strips, which corresponded with the assumed term (three years) of the options at grant date at 1.24%, 0.71 % and 1.04% as of the grant dates, July 1, 2017, July 1, 2016 and August 31, 2015, respectively.

Note 11 – Subsequent Events

The Company has evaluated all subsequent events through the independent auditors' report date, February 23, 2019, which is the date the financial statements were available for issuance.