UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-Q

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

FOR THE QUARTERLY PERIOD ENDED SEPTEMBER 30, 2019

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

FOR THE TRANSITION PERIOD FROM __________ TO __________

Commission File No. 001-37917

Mammoth Energy Services, Inc.

(Exact name of registrant as specified in its charter)

Delaware		**32-0498321**
(State or other jurisdiction of incorporation or organization)		(I.R.S. Employer Identification No.)
14201 Caliber Drive, Suite 300 Oklahoma City, Oklahoma	**(405) 608-6007**	**73134**
(Address of principal executive offices)	(Registrant's telephone number, including area code)	(Zip Code)

Securities registered pursuant to Section 12(b) of The Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock	TUSK	(The Nasdaq Stock Market LLC)

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 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 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 the 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	☐	Accelerated filer	☒
Non-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 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 Exchange Act). Yes ☐ No ☒

As of November 5, 2019, there were 45,021,461 shares of common stock, $0.01 par value, outstanding.

MAMMOTH ENERGY SERVICES, INC.

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GLOSSARY OF OIL AND NATURAL GAS AND ELECTRICAL INFRASTRUCTURE TERMS

The following is a glossary of certain oil and natural gas industry terms used in this report:

Term	Definition
Acidizing	To pump acid into a wellbore to improve a well's productivity or injectivity.
Blowout	An uncontrolled flow of reservoir fluids into the wellbore, and sometimes catastrophically to the surface. A blowout may consist of salt water, oil, natural gas or a mixture of these. Blowouts can occur in all types of exploration and production operations, not just during drilling operations. If reservoir fluids flow into another formation and do not flow to the surface, the result is called an underground blowout. If the well experiencing a blowout has significant open-hole intervals, it is possible that the well will bridge over (or seal itself with rock fragments from collapsing formations) down-hole and intervention efforts will be averted.
Bottomhole assembly	The lower portion of the drillstring, consisting of (from the bottom up in a vertical well) the bit, bit sub, a mud motor (in certain cases), stabilizers, drill collar, heavy-weight drillpipe, jarring devices (“jars”) and crossovers for various threadforms. The bottomhole assembly must provide force for the bit to break the rock (weight on bit), survive a hostile mechanical environment and provide the driller with directional control of the well. Oftentimes the assembly includes a mud motor, directional drilling and measuring equipment, measurements-while-drilling tools, logging-while-drilling tools and other specialized devices.
Cementing	To prepare and pump cement into place in a wellbore.
Coiled tubing	A long, continuous length of pipe wound on a spool. The pipe is straightened prior to pushing into a wellbore and rewound to coil the pipe back onto the transport and storage spool. Depending on the pipe diameter (1 in. to 4 1/2 in.) and the spool size, coiled tubing can range from 2,000 ft. to 23,000 ft. (610 m to 6,096 m) or greater length.
Completion	A generic term used to describe the assembly of down-hole tubulars and equipment required to enable safe and efficient production from an oil or gas well. The point at which the completion process begins may depend on the type and design of the well.
Directional drilling	The intentional deviation of a wellbore from the path it would naturally take. This is accomplished through the use of whipstocks, bottomhole assembly (BHA) configurations, instruments to measure the path of the wellbore in three-dimensional space, data links to communicate measurements taken down-hole to the surface, mud motors and special BHA components and drill bits, including rotary steerable systems, and drill bits. The directional driller also exploits drilling parameters such as weight on bit and rotary speed to deflect the bit away from the axis of the existing wellbore. In some cases, such as drilling steeply dipping formations or unpredictable deviation in conventional drilling operations, directional-drilling techniques may be employed to ensure that the hole is drilled vertically. While many techniques can accomplish this, the general concept is simple: point the bit in the direction that one wants to drill. The most common way is through the use of a bend near the bit in a down-hole steerable mud motor. The bend points the bit in a direction different from the axis of the wellbore when the entire drillstring is not rotating. By pumping mud through the mud motor, the bit turns while the drillstring does not rotate, allowing the bit to drill in the direction it points. When a particular wellbore direction is achieved, that direction may be maintained by rotating the entire drillstring (including the bent section) so that the bit does not drill in a single direction off the wellbore axis, but instead sweeps around and its net direction coincides with the existing wellbore. Rotary steerable tools allow steering while rotating, usually with higher rates of penetration and ultimately smoother boreholes.
Down-hole	Pertaining to or in the wellbore (as opposed to being on the surface).
Down-hole motor	A drilling motor located in the drill string above the drilling bit powered by the flow of drilling mud. Down-hole motors are used to increase the speed and efficiency of the drill bit or can be used to steer the bit in directional drilling operations. Drilling motors have become very popular because of horizontal and directional drilling applications and the day rates for drilling rigs.
Drilling rig	The machine used to drill a wellbore.
Drillpipe or Drill pipe	Tubular steel conduit fitted with special threaded ends called tool joints. The drillpipe connects the rig surface equipment with the bottomhole assembly and the bit, both to pump drilling fluid to the bit and to be able to raise, lower and rotate the bottomhole assembly and bit.
Drillstring or Drill string	The combination of the drillpipe, the bottomhole assembly and any other tools used to make the drill bit turn at the bottom of the wellbore.
Flowback	The process of allowing fluids to flow from the well following a treatment, either in preparation for a subsequent phase of treatment or in preparation for cleanup and returning the well to production.
Horizontal drilling	A subset of the more general term “directional drilling,” used where the departure of the wellbore from vertical exceeds about 80 degrees. Note that some horizontal wells are designed such that after reaching true 90-degree horizontal, the wellbore may actually start drilling upward. In such cases, the angle past 90 degrees is continued, as in 95 degrees, rather than reporting it as deviation from vertical, which would then be 85 degrees. Because a horizontal well typically penetrates a greater length of the reservoir, it can offer significant production improvement over a vertical well.
Hydraulic fracturing	A stimulation treatment routinely performed on oil and gas wells in low permeability reservoirs. Specially engineered fluids are pumped at high pressure and rate into the reservoir interval to be treated, causing a vertical fracture to open. The wings of the fracture extend away from the wellbore in opposing directions according to the natural stresses within the formation. Proppant, such as grains of sand of a particular size, is mixed with the treatment fluid to keep the fracture open when the treatment is complete. Hydraulic fracturing creates high-conductivity communication with a large area of formation and bypasses any damage that may exist in the near-wellbore area.
Hydrocarbon	A naturally occurring organic compound comprising hydrogen and carbon. Hydrocarbons can be as simple as methane, but many are highly complex molecules, and can occur as gases, liquids or solids. Petroleum is a complex mixture of hydrocarbons. The most common hydrocarbons are natural gas, oil and coal.

Mesh size	The size of the proppant that is determined by sieving the proppant through screens with uniform openings corresponding to the desired size of the proppant. Each type of proppant comes in various sizes, categorized as mesh sizes, and the various mesh sizes are used in different applications in the oil and natural gas industry. The mesh number system is a measure of the number of equally sized openings per square inch of screen through which the proppant is sieved.
Mud motors	A positive displacement drilling motor that uses hydraulic horsepower of the drilling fluid to drive the drill bit. Mud motors are used extensively in directional drilling operations.
Natural gas liquids	Components of natural gas that are liquid at surface in field facilities or in gas processing plants. Natural gas liquids can be classified according to their vapor pressures as low (condensate), intermediate (natural gasoline) and high (liquefied petroleum gas) vapor pressure.
Nitrogen pumping unit	A high-pressure pump or compressor unit capable of delivering high-purity nitrogen gas for use in oil or gas wells. Two basic types of units are commonly available: a nitrogen converter unit that pumps liquid nitrogen at high pressure through a heat exchanger or converter to deliver high-pressure gas at ambient temperature, and a nitrogen generator unit that compresses and separates air to provide a supply of high pressure nitrogen gas.
Plugging	The process of permanently closing oil and gas wells no longer capable of producing in economic quantities. Plugging work can be performed with a well servicing rig along with wireline and cementing equipment; however, this service is typically provided by companies that specialize in plugging work.
Plug	A down-hole packer assembly used in a well to seal off or isolate a particular formation for testing, acidizing, cementing, etc.; also a type of plug used to seal off a well temporarily while the wellhead is removed.
Pounds per square inch	A unit of pressure. It is the pressure resulting from a one pound force applied to an area of one square inch.
Pressure pumping	Services that include the pumping of liquids under pressure.
Producing formation	An underground rock formation from which oil, natural gas or water is produced. Any porous rock will contain fluids of some sort, and all rocks at considerable distance below the Earth's surface will initially be under pressure, often related to the hydrostatic column of ground waters above the reservoir. To produce, rocks must also have permeability, or the capacity to permit fluids to flow through them.
Proppant	Sized particles mixed with fracturing fluid to hold fractures open after a hydraulic fracturing treatment. In addition to naturally occurring sand grains, man-made or specially engineered proppants, such as resin-coated sand or high-strength ceramic materials like sintered bauxite, may also be used. Proppant materials are carefully sorted for size and sphericity to provide an efficient conduit for production of fluid from the reservoir to the wellbore.
Resource play	Accumulation of hydrocarbons known to exist over a large area.
Shale	A fine-grained, fissile, sedimentary rock formed by consolidation of clay- and silt-sized particles into thin, relatively impermeable layers.
Tight oil	Conventional oil that is found within reservoirs with very low permeability. The oil contained within these reservoir rocks typically will not flow to the wellbore at economic rates without assistance from technologically advanced drilling and completion processes. Commonly, horizontal drilling coupled with multistage fracturing is used to access these difficult to produce reservoirs.
Tight sands	A type of unconventional tight reservoir. Tight reservoirs are those which have low permeability, often quantified as less than 0.1 millidarcies.
Tubulars	A generic term pertaining to any type of oilfield pipe, such as drill pipe, drill collars, pup joints, casing, production tubing and pipeline.
Unconventional resource	A term for the different manner by which resources are exploited as compared to the extraction of conventional resources. In unconventional drilling, the wellbore is generally drilled to specific objectives within narrow parameters, often across long, lateral intervals within narrow horizontal formations offering greater contact area with the producing formation. Typically, the well is then hydraulically fractured at multiple stages to optimize production.
Wellbore	The physical conduit from surface into the hydrocarbon reservoir.
Well stimulation	A treatment performed to restore or enhance the productivity of a well. Stimulation treatments fall into two main groups, hydraulic fracturing treatments and matrix treatments. Fracturing treatments are performed above the fracture pressure of the reservoir formation and create a highly conductive flow path between the reservoir and the wellbore. Matrix treatments are performed below the reservoir fracture pressure and generally are designed to restore the natural permeability of the reservoir following damage to the near wellbore area. Stimulation in shale gas reservoirs typically takes the form of hydraulic fracturing treatments.
Wireline	A general term used to describe well-intervention operations conducted using single-strand or multi-strand wire or cable for intervention in oil or gas wells. Although applied inconsistently, the term commonly is used in association with electric logging and cables incorporating electrical conductors.
Workover	The process of performing major maintenance or remedial treatments on an oil or gas well. In many cases, workover implies the removal and replacement of the production tubing string after the well has been killed and a workover rig has been placed on location. Through-tubing workover operations, using coiled tubing, snubbing or slickline equipment, are routinely conducted to complete treatments or well service activities that avoid a full workover where the tubing is removed. This operation saves considerable time and expense.

The following is a glossary of certain electrical infrastructure industry terms used in this report:

Term	Definition
Distribution	The distribution of electricity from the transmission system to individual customers.
Substation	A part of an electrical transmission and distribution system that transforms voltage from high to low, or the reverse.
Transmission	The movement of electrical energy from a generating site, such as a power plant, to an electric substation.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Various statements contained in this report that express a belief, expectation, or intention, or that are not statements of historical fact, are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, or the Exchange Act. In particular, the factors discussed in this report and detailed under Part II, Item 1A. Risk Factors in this report and our Annual Report on Form 10–K for the year ended December 31, 2018 could affect our actual results and cause our actual results to differ materially from expectations, estimates or assumptions expressed, forecasted or implied in such forward-looking statements.

Forward-looking statements may include statements about our:

- business strategy;
- pending or future acquisitions and future capital expenditures;
- ability to obtain permits and governmental approvals;
- outcome of a government investigation relating to the contracts awarded to one of our subsidiaries by the Puerto Rico Electric Power Authority and any resulting litigation;
- outcome of pending litigation discussed in this report;
- technology;
- financial strategy;
- future operating results; and
- plans, objectives, expectations and intentions.

All of these types of statements, other than statements of historical fact included in this quarterly report, are forward-looking statements. These forward-looking statements may be found in the “Business,” “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and other sections of this quarterly report. In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “could,” “should,” “would,” “expect,” “plan,” “project,” “budget,” “intend,” “anticipate,” “believe,” “estimate,” “predict,” “potential,” “pursue,” “target,” “seek,” “objective,” “continue,” “will be,” “will benefit,” or “will continue,” the negative of such terms or other comparable terminology.

The forward-looking statements contained in this report 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, which are difficult to predict and many of which are beyond our control. 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, our management’s assumptions about future events may prove to be inaccurate. Our management cautions all readers that the forward-looking statements contained in this report are not guarantees of future performance, and we cannot assure any reader that such statements will be realized or 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 many factors including those described in Part II, Item 1A. Risk Factors in this report and our Annual Report on Form 10–K for the year ended December 31, 2018 and Item 2. "Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere in this report. All forward-looking statements speak only as of the date of this report. We do not intend to publicly 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.

PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

MAMMOTH ENERGY SERVICES, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS (unaudited)

ASSETS		September 30, 2019		December 31, 2018
		(in thousands)		
CURRENT ASSETS				
Cash and cash equivalents	$	9,598	$	67,625
Accounts receivable, net		369,313		337,460
Receivables from related parties		8,542		11,164
Inventories		17,303		21,302
Prepaid expenses		7,613		11,317
Other current assets		682		688
Total current assets		413,051		449,556
Property, plant and equipment, net		381,656		436,699
Sand reserves		68,423		71,708
Operating lease right-of-use assets		47,959		—
Intangible assets, net - customer relationships		1,433		1,711
Intangible assets, net - trade names		5,415		6,045
Goodwill		98,051		101,245
Other non-current assets		7,101		6,127
Total assets	$	1,023,089	$	1,073,091
LIABILITIES AND EQUITY				
CURRENT LIABILITIES				
Accounts payable	$	36,898	$	68,843
Payables to related parties		486		370
Accrued expenses and other current liabilities		40,552		59,652
Current operating lease liability		17,142		—
Income taxes payable		32,453		104,958
Total current liabilities		127,531		233,823
Long-term debt		80,000		—
Deferred income tax liabilities		47,260		79,309
Long-term operating lease liability		30,827		—
Asset retirement obligation		3,559		3,164
Other liabilities		5,485		2,743
Total liabilities		294,662		319,039
COMMITMENTS AND CONTINGENCIES (Note 19)				
EQUITY				
Equity:				
Common stock, $0.01 par value, 200,000,000 shares authorized, 45,021,461 and 44,876,649 issued and outstanding at September 30, 2019 and December 31, 2018		450		449
Additional paid in capital		534,284		530,919
Retained earnings		197,281		226,765
Accumulated other comprehensive loss		(3,588)		(4,081)
Total equity		728,427		754,052
Total liabilities and equity	$	1,023,089	$	1,073,091

The accompanying notes are an integral part of these condensed consolidated financial statements.

MAMMOTH ENERGY SERVICES, INC.

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE (LOSS) INCOME (unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
REVENUE	(in thousands, except per share amounts)			
Services revenue	$ 85,783	$ 346,368	$ 394,645	$ 1,210,572
Services revenue - related parties	15,000	18,933	95,910	108,632
Product revenue	9,710	14,955	40,381	67,703
Product revenue - related parties	2,924	3,787	26,439	24,979
Total revenue	113,417	384,043	557,375	1,411,886
COST AND EXPENSES				
Services cost of revenue (exclusive of depreciation, depletion, amortization and accretion of $25,749, $77,028, $27,810 and $79,283, respectively, for the three and nine months ended September 30, 2019 and three and nine months ended September 30, 2018)	91,813	216,670	382,607	809,932
Services cost of revenue - related parties (exclusive of depreciation, depletion, amortization and accretion of $0, $0, $0 and $0, respectively, for the three and nine months ended September 30, 2019 and three and nine months ended September 30, 2018)	774	1,425	4,138	5,645
Product cost of revenue (exclusive of depreciation, depletion, amortization and accretion of $4,019, $11,414, $4,183 and $10,376, respectively, for the three and nine months ended September 30, 2019 and three and nine months ended September 30, 2018)	18,547	29,470	81,475	97,917
Selling, general and administrative (Note 12)	14,029	(45,761)	39,726	56,916
Selling, general and administrative - related parties (Note 12)	394	437	1,487	1,398
Depreciation, depletion, amortization and accretion	29,791	32,015	88,512	89,718
Impairment of long-lived assets	6,542	4,582	6,542	4,769
Total cost and expenses	161,890	238,838	604,487	1,066,295
Operating (loss) income	(48,473)	145,205	(47,112)	345,591
OTHER INCOME (EXPENSE)				
Interest expense, net	(1,398)	(458)	(3,472)	(2,654)
Other, net	6,368	(400)	34,944	(914)
Total other income (expense)	4,970	(858)	31,472	(3,568)
(Loss) income before income taxes	(43,503)	144,347	(15,640)	342,023
(Benefit) provision for income taxes	(7,794)	74,835	2,625	174,265
Net (loss) income	$ (35,709)	$ 69,512	$ (18,265)	$ 167,758
OTHER COMPREHENSIVE (LOSS) INCOME				
Foreign currency translation adjustment, net of tax of ($49), $134, ($87) and $185, respectively, for the three and nine months ended September 30, 2019 and three and nine months ended September 30, 2018	(213)	327	493	(459)
Comprehensive (loss) income	$ (35,922)	$ 69,839	$ (17,772)	$ 167,299
Net (loss) income per share (basic) (Note 15)	$ (0.79)	$ 1.55	$ (0.41)	$ 3.75
Net (loss) income per share (diluted) (Note 15)	$ (0.79)	$ 1.54	$ (0.41)	$ 3.73
Weighted average number of shares outstanding (basic) (Note 15)	45,020	44,756	44,984	44,718
Weighted average number of shares outstanding (diluted) (Note 15)	45,020	45,082	44,984	45,012
Dividends declared per share	$ —	$ 0.125	$ 0.25	$ 0.125

The accompanying notes are an integral part of these condensed consolidated financial statements.

MAMMOTH ENERGY SERVICES, INC.

CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY (unaudited)

	Three Months Ended September 30, 2019					
	Common Stock		Retained	Additional Paid-In	Accumulated Other Comprehensive	
	Shares	Amount	Earnings	Capital	Loss	Total
	(in thousands)					
Balance at June 30, 2019	45,005	$ 450	$ 232,990	$ 533,151	$ (3,375)	$ 763,216
Stock based compensation	17	—	—	1,133	—	1,133
Net loss	—	—	(35,709)	—	—	(35,709)
Other comprehensive loss	—	—	—	—	(213)	(213)
Balance at September 30, 2019	45,022	$ 450	$ 197,281	$ 534,284	$ (3,588)	$ 728,427

	Three Months Ended September 30, 2018					
	Common Stock		Retained	Additional Paid-In	Accumulated Other Comprehensive	
	Shares	Amount	Earnings	Capital	Loss	Total
	(in thousands)					
Balance at June 30, 2018	44,753	$ 448	$ 100,247	$ 528,421	$ (3,447)	$ 625,669
Stock based compensation	3	—	—	1,404	—	1,404
Net income	—	—	69,512	—	—	69,512
Cash dividends paid ($0.125 per share)	—	—	(5,594)			(5,594)
Other comprehensive income	—	—	—	—	327	327
Balance at September 30, 2018	44,756	$ 448	$ 164,165	$ 529,825	$ (3,120)	$ 691,318

	Nine Months Ended September 30, 2019					
	Common Stock		Retained	Additional Paid-In	Accumulated Other Comprehensive	
	Shares	Amount	Earnings	Capital	Loss	Total
	(in thousands)					
Balance at December 31, 2018	44,877	$ 449	$ 226,765	$ 530,919	$ (4,081)	$ 754,052
Stock based compensation	145	1	—	3,365	—	3,366
Net loss	—	—	(18,265)	—	—	(18,265)
Cash dividends paid ($0.25 per share)	—	—	(11,219)	—	—	(11,219)
Other comprehensive income	—	—	—	—	493	493
Balance at September 30, 2019	45,022	$ 450	$ 197,281	$ 534,284	$ (3,588)	$ 728,427

	Nine Months Ended September 30, 2018					
	Common Stock		Retained	Additional Paid-In	Accumulated Other Comprehensive	
	Shares	Amount	Earnings	Capital	Loss	Total
	(in thousands)					
Balance at December 31, 2017	44,589	$ 446	$ 2,001	$ 508,010	$ (2,661)	$ 507,796
Equity based compensation	—	—	—	17,487	—	17,487
Stock based compensation	167	2	—	4,328	—	4,330
Net income	—	—	167,758	—	—	167,758
Cash dividends paid ($0.125 per share)	—	—	(5,594)	—	—	(5,594)
Other comprehensive loss	—	—	—	—	(459)	(459)
Balance at September 30, 2018	44,756	$ 448	$ 164,165	$ 529,825	$ (3,120)	$ 691,318

The accompanying notes are an integral part of these condensed consolidated financial statements.

MAMMOTH ENERGY SERVICES, INC.

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (unaudited)

	Nine Months Ended September 30,	
	2019	2018
	(in thousands)	
Cash flows from operating activities:		
Net (loss) income	$ (18,265)	$ 167,758
Adjustments to reconcile net (loss) income to cash (used in) provided by operating activities:		
Equity based compensation (Note 16)	—	17,487
Stock based compensation	3,367	4,331
Depreciation, depletion, accretion and amortization	88,512	89,718
Amortization of coil tubing strings	1,236	1,473
Amortization of debt origination costs	245	299
Bad debt expense	1,230	(14,543)
Loss (gain) on disposal of property and equipment	245	(185)
Impairment of long-lived assets	6,542	4,769
Inventory obsolescence	1,349	—
Deferred income taxes	(32,183)	6,418
Other	(539)	—
Changes in assets and liabilities, net of acquisitions of businesses:		
Accounts receivable, net	(33,042)	(132,553)
Receivables from related parties	2,622	8,453
Inventories	1,415	(2,665)
Prepaid expenses and other assets	3,713	1,814
Accounts payable	(27,187)	(5,179)
Payables to related parties	117	24
Accrued expenses and other liabilities	(19,121)	(405)
Income taxes payable	(72,501)	135,578
Net cash (used in) provided by operating activities	(92,245)	282,592
Cash flows from investing activities:		
Purchases of property and equipment	(34,637)	(144,898)
Purchases of property and equipment from related parties	(253)	(4,632)
Business acquisitions	—	(14,456)
Contributions to equity investee	(680)	—
Proceeds from disposal of property and equipment	2,491	1,213
Net cash used in investing activities	(33,079)	(162,773)
Cash flows from financing activities:		
Borrowings from lines of credit	138,000	77,000
Repayments of lines of credit	(58,000)	(176,900)
Principal payments on financing leases and equipment financing notes	(1,534)	(219)
Dividends paid	(11,219)	(5,594)
Net cash provided by (used in) financing activities	67,247	(105,713)
Effect of foreign exchange rate on cash	50	(51)
Net change in cash and cash equivalents	(58,027)	14,055
Cash and cash equivalents at beginning of period	67,625	5,637
Cash and cash equivalents at end of period	$ 9,598	$ 19,692
Supplemental disclosure of cash flow information:		
Cash paid for interest	$ 3,280	$ 2,726
Cash paid for income taxes	$ 116,448	$ 32,269
Supplemental disclosure of non-cash transactions:		
Purchases of property and equipment included in accounts payable and accrued expenses	$ 1,203	$ 21,124

The accompanying notes are an integral part of these condensed consolidated financial statements.

1. Organization and Nature of Business

Mammoth Energy Services, Inc. ("Mammoth Inc." or the "Company"), together with its subsidiaries, is an integrated, growth-oriented company serving both the oil and gas and the electric utility industries in North America and US territories. Mammoth Inc.'s infrastructure division provides construction, upgrade, maintenance and repair services to various public and private owned utilities. Its oilfield services division provides a diversified set of services to the exploration and production industry including pressure pumping and natural sand and proppant services as well as contract land and directional drilling, coil tubing, equipment rental, full service transportation, crude oil hauling and remote accommodation services.

The Company was incorporated in Delaware in June 2016 as a wholly-owned subsidiary of Mammoth Energy Partners LP, a Delaware limited partnership (the “Partnership” or the “Predecessor”). The Partnership was originally formed by Wexford Capital LP (“Wexford”) in February 2014 as a holding company under the name Redback Energy Services Inc. and was converted to a Delaware limited partnership in August 2014. On November 24, 2014, Mammoth Energy Holdings LLC (“Mammoth Holdings,” an entity controlled by Wexford), Gulfport Energy Corporation (“Gulfport”) and Rhino Resource Partners LP (“Rhino”) contributed their interest in certain of the entities presented below to the Partnership in exchange for 20 million limited partner units. Mammoth Energy Partners GP, LLC (the “General Partner”) held a non-economic general partner interest.

On October 12, 2016, the Partnership was converted into a Delaware limited liability company named Mammoth Energy Partners LLC (“Mammoth LLC”), and then Mammoth Holdings, Gulfport and Rhino, as all the members of Mammoth LLC, contributed their member interests in Mammoth LLC to Mammoth Inc. Prior to the conversion and the contribution, Mammoth Inc. was a wholly-owned subsidiary of the Partnership. Following the conversion and the contribution, Mammoth LLC (as the converted successor to the Partnership) was a wholly-owned subsidiary of Mammoth Inc. Mammoth Inc. did not conduct any material business operations until Mammoth LLC was contributed to it. On October 19, 2016, Mammoth Inc. closed its initial public offering of 7,750,000 shares of common stock (the “IPO”), which included an aggregate of 250,000 shares that were offered by Mammoth Holdings, Gulfport and Rhino, at a price to the public of $15.00 per share.

On June 29, 2018, Gulfport and MEH Sub LLC ("MEH Sub"), an entity controlled by Wexford (collectively, the "Selling Stockholders"), completed an underwritten secondary public offering of 4,000,000 shares of the Company’s common stock at a purchase price to the Selling Stockholders of $38.01 per share. The Selling Stockholders granted the underwriters an option to purchase up to an aggregate of 600,000 additional shares of the Company's common stock at the same purchase price. This option was exercised, in part, and on July 30, 2018, the underwriters purchased an additional 385,000 shares of common stock from the Selling Stockholders at the same price per share. The Selling Stockholders received all proceeds from this offering.

At September 30, 2019 and December 31, 2018, Wexford, Gulfport and Rhino beneficially owned the following shares of outstanding common stock of Mammoth Inc.:

	At September 30, 2019		At December 31, 2018	
	Share Count	**% Ownership**	**Share Count**	**% Ownership**
Wexford	21,992,677	48.8%	21,988,473	49.0%
Gulfport	9,829,548	21.8%	9,826,893	21.9%
Rhino	—	—%	104,100	0.2%
Outstanding shares owned by related parties	31,822,225	70.6%	31,919,466	71.1%
Total outstanding	45,021,461	100.0%	44,876,649	100.0%

Operations

The Company's infrastructure services include electric utility contracting services focused on the construction, upgrade, maintenance and repair of transmission and distribution networks. The Company’s infrastructure services also provide storm repair and restoration services in response to natural disasters including hurricanes and ice or other storm-related damage. The Company's pressure pumping services include equipment and personnel used in connection with the

completion and early production of oil and natural gas wells as well as water transfer services. The Company's natural sand proppant services include the distribution and production of natural sand proppant that is used primarily for hydraulic fracturing in the oil and gas industry. The Company also provides other services, including contract land and directional drilling, coil tubing, equipment rentals, full service transportation, crude oil hauling and remote accommodations.

All of the Company’s operations are in North America. During certain of the periods presented in this report, the Company provided its infrastructure services primarily in the northeast, southwest and midwest portions of the United States and in Puerto Rico. The Company’s infrastructure business depends on infrastructure spending on maintenance, upgrade, expansion and repair and restoration. Any prolonged decrease in spending by electric utility companies, delays or reductions in government appropriations or the failure of customers to pay their receivables could have a material adverse effect on the Company’s results of operations and financial condition. During the periods presented, the Company has operated its oil and natural gas businesses in the Permian Basin, the Utica Shale, the Eagle Ford Shale, the Marcellus Shale, the Granite Wash, the SCOOP, the STACK, the Cana-Woodford Shale, the Cleveland Sand and the oil sands located in Northern Alberta, Canada. The Company's oil and natural gas business depends in large part on the conditions in the oil and natural gas industry and, specifically, on the amount of capital spending by its customers. Any prolonged increase or decrease in oil and natural gas prices affects the levels of exploration, development and production activity, as well as the entire health of the oil and natural gas industry. Continuation of or decreases in the current commodity prices for oil and natural gas could have a material effect on the Company’s results of operations and financial condition.

2. Basis of Presentation and Significant Accounting Policies

Basis of Presentation

The accompanying unaudited condensed consolidated interim financial statements include the accounts of the Company and its subsidiaries and the variable interest entities (“VIE”) for which the Company is the primary beneficiary. All material intercompany accounts and transactions have been eliminated.

This report has been prepared in accordance with the rules and regulations of the Securities and Exchange Commission, and reflects all adjustments, which in the opinion of management are necessary for the fair presentation of the results for the interim periods, on a basis consistent with the annual audited consolidated financial statements. Certain information, accounting policies and footnote disclosures normally included in financial statements prepared in accordance with generally accepted accounting principles (“GAAP”) have been omitted pursuant to such rules and regulations, although the Company believes that the disclosures are adequate to make the information presented not misleading. These unaudited condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and the summary of significant accounting policies and notes thereto included in the Company’s most recent annual report on Form 10-K.

Accounts Receivable

Accounts receivable include amounts due from customers for services performed or goods sold. The Company grants credit to customers in the ordinary course of business and generally does not require collateral. Most areas in the continental United States in which the Company operates provide for a mechanic’s lien against the property on which the service is performed if the lien is filed within the statutorily specified time frame. Customer balances are generally considered delinquent if unpaid by the 30th day following the invoice date and credit privileges may be revoked if balances remain unpaid. Interest on delinquent accounts receivable is recognized in other income when chargeable and collectability is reasonably assured.

During certain of the periods presented, the Company provided infrastructure services in Puerto Rico under master services agreements entered into by Cobra Acquisitions LLC ("Cobra"), one of the Company's subsidiaries, with the Puerto Rico Electric Power Authority ("PREPA") to perform repairs to PREPA’s electrical grid as a result of Hurricane Maria. During the three and nine months ended September 30, 2019, the Company charged interest on delinquent accounts receivable pursuant to the terms of its agreements with PREPA totaling $5.9 million and $34.9 million, respectively. These amounts are included in other, net on the unaudited condensed consolidated statement of comprehensive (loss) income. On September 30, 2019, the Company filed a motion with the U.S. District Court for the District of Puerto Rico seeking recovery of the amounts owed to the Company by PREPA. PREPA filed a motion to stay the Company's motion on the ground that the ongoing criminal proceedings described in Note 19 below against the former president of Cobra and two other individuals may affect the recovery of those amounts. On October 17, 2019, the court granted PREPA’s request to stay the Company's motion and directed the parties to file a joint motion addressing specified issues by January 22, 2020 in advance of a status conference to be held on January 29, 2020.

The Company regularly reviews receivables and provides for estimated losses through an allowance for doubtful accounts. In evaluating the level of established reserves, the Company makes judgments regarding its customers' ability to make required payments, economic events and other factors. As the financial condition of customers changes, circumstances develop, or additional information becomes available, adjustments to the allowance for doubtful accounts may be required. In the event the Company was to determine that a customer may not be able to make required payments, the Company would increase the allowance through a charge to income in the period in which that determination is made. If it is determined that previously reserved amounts are collectible, the Company would decrease the allowance through a credit to income in the period in which that determination is made. Uncollectible accounts receivable are periodically charged against the allowance for doubtful accounts once a final determination is made regarding their uncollectability.

Following is a roll forward of the allowance for doubtful accounts for the year ended December 31, 2018 and the nine months ended September 30, 2019 (in thousands):

Balance, January 1, 2018	$	21,737
Additions (reductions) charged to bad debt expense		(14,589)
Deductions for uncollectible receivables written off		(1,950)
Balance, December 31, 2018		5,198
Additions charged to bad debt expense		1,230
Deductions for uncollectible receivables written off		(202)
Balance, September 30, 2019	$	6,226

At December 31, 2017, the Company reviewed receivables due from PREPA and made specific reserves consistent with Company policy which resulted in additions to the allowance for doubtful accounts totaling $16.0 million. During 2018, the Company received payment from PREPA for the amount reserved at December 31, 2017. As a result, the Company reversed the 2017 additions to the allowance for doubtful accounts from PREPA during the year ended December 31, 2018.

Additionally, the Company has made specific reserves consistent with Company policy which resulted in additions to allowance for doubtful accounts totaling $1.2 million and $1.4 million, respectively, for the nine months ended September 30, 2019 and year ended December 31, 2018. The Company will continue to pursue collection until such time as final determination is made consistent with Company policy.

Concentrations of Credit Risk and Significant Customers

Financial instruments that potentially subject the Company to concentrations of credit risk consist of cash and cash equivalents in excess of federally insured limits and trade receivables. Following is a summary of our significant customers based on percentages of total accounts receivable balances at September 30, 2019 and December 31, 2018 and percentages of total revenues derived for the three and nine months ended September 30, 2019 and 2018:

	REVENUES				ACCOUNTS RECEIVABLE	
	Three Months Ended September 30,		Nine Months Ended September 30,		At September 30,	At December 31,
	2019	2018	2019	2018	2019	2018
Customer A[(a)]	—%	57%	17%	63%	69%	65%
Customer B[(b)]	15%	6%	22%	9%	2%	3%

a. Customer A is a third-party customer. Revenues and the related accounts receivable balances earned from Customer A were derived from the Company's infrastructure services segment. Accounts receivable for Customer A also includes receivables due for interest charged on delinquent accounts receivable.

b. Customer B is a related party customer. Revenues and the related accounts receivable balances earned from Customer B were derived from the Company's pressure pumping services segment, natural sand proppant services segment and other businesses.

Fair Value of Financial Instruments

The Company's financial instruments consist of cash and cash equivalents, trade receivables, trade payables, amounts receivable or payable to related parties and long-term debt. The carrying amount of cash and cash equivalents, trade receivables, receivables from related parties and trade payables approximates fair value because of the short-term nature

of the instruments. The fair value of long-term debt approximates its carrying value because the cost of borrowing fluctuates based upon market conditions.

New Accounting Pronouncements

In February 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2016-02 "Leases (Topic 842)" amending the current accounting for leases. Under the new provisions, all lessees will report a right of use asset and lease liability on the balance sheet for all leases with a term longer than one year, while maintaining substantially similar classifications for financing and operating leases. Lessor accounting remains substantially unchanged with the exception that no leases entered into after the effective date will be classified as leveraged leases. ASU 2016-02 is effective for fiscal years beginning after December 15, 2018, and interim periods within that fiscal year. The Company adopted this ASU effective January 1, 2019 utilizing the transition method permitted by ASU No. 2018-11 "Leases (Topic 842): Targeted Improvements", issued in August 2018, which permits an entity to recognize a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption with no adjustment made to the comparative periods presented in the consolidated financial statements. See Note 14 for the impact the adoption of this standard had on the Company's financial statements.

In June 2016, the FASB issued ASU No. 2016-13, "Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments," which amends current guidance on reporting credit losses on financial instruments. This ASU requires entities to reflect its current estimate of all expected credit losses. The guidance affects most financial assets, including trade accounts receivable. This ASU is effective for fiscal years beginning after December 31, 2019, with early adoption permitted. The Company is currently evaluating the impact this standard may have on its financial statements and related disclosures.

In June 2018, the FASB issued ASU No. 2018-07, "Compensation - Stock Compensation (Topic 718): Improvements to Non-employee Share-Based Accounting," which simplifies the accounting for share-based payments granted to non-employees by aligning the accounting with requirements for employee share-based compensation. Upon transition, this ASU requires non-employee awards to be measured at fair value as of the adoption date. This ASU is effective for fiscal years beginning after December 15, 2018, and interim periods within that fiscal year. The Company adopted this ASU effective January 1, 2019 and estimates the fair value of its non-employee awards (see Note 16) was approximately $18.9 million as of this date.

3. Revenues

The Company's primary revenue streams include infrastructure services, pressure pumping services, natural sand proppant services and other services, which includes contract land and directional drilling, coil tubing, pressure control, flowback, cementing, acidizing, equipment rentals, full service transportation, crude oil hauling and remote accommodations services. As a result of market conditions, the Company temporarily shut down its cementing and acidizing operations as well as its flowback operations during the third quarter of 2019. See Note 20 for the Company's revenue disaggregated by type.

Infrastructure Services

Infrastructure services are typically provided pursuant to master service agreements, repair and maintenance contracts or fixed price and non-fixed price installation contracts. Pricing under these contracts may be unit priced, cost-plus/hourly (or time and materials basis) or fixed price (or lump sum basis). Generally, the Company accounts for infrastructure services as a single performance obligation satisfied over time. In certain circumstances, the Company supplies materials that are utilized during the jobs as part of the agreement with the customer. The Company accounts for these infrastructure agreements as multiple performance obligations satisfied over time. Revenue is recognized over time as work progresses based on the days completed or as the contract is completed. Under certain customer contracts in our infrastructure services segment, the Company warranties equipment and labor performed for a specified period following substantial completion of the work.

Pressure Pumping Services

Pressure pumping services are typically provided based upon a purchase order, contract or on a spot market basis. Services are provided on a day rate, contracted or hourly basis. Generally, the Company accounts for pressure pumping services as a single performance obligation satisfied over time. In certain circumstances, the Company supplies proppant that is utilized for pressure pumping as part of the agreement with the customer. The Company accounts for these pressure pumping agreements as multiple performance obligations satisfied over time. Jobs for these services are typically short-term in nature and range from a few hours to multiple days. Generally, revenue is recognized over time upon the

completion of each segment of work based upon a completed field ticket, which includes the charges for the services performed, mobilization of the equipment to the location, consumable supplies and personnel.

Pursuant to a contract with one of its customers, the Company has agreed to provide that customer with use of up to two pressure pumping fleets for the period covered by the contract. Under this agreement, performance obligations are satisfied as services are rendered based on the passage of time rather than the completion of each segment of work. The Company has the right to receive consideration from this customer even if circumstances prevent us from performing work. All consideration owed to the Company for services performed during the contractual period is fixed and the right to receive it is unconditional.

Additional revenue is generated through labor charges and the sale of consumable supplies that are incidental to the service being performed. Such amounts are recognized ratably over the period during which the corresponding goods and services are consumed.

Natural Sand Proppant Services
The Company sells natural sand proppant through sand supply agreements with its customers. Under these agreements, sand is typically sold at a flat rate per ton or a flat rate per ton with an index-based adjustment. The Company recognizes revenue at the point in time when the customer obtains legal title to the product, which may occur at the production facility, rail origin or at the destination terminal.

Certain of the Company's sand supply agreements contain a minimum volume commitment related to sand purchases whereby the Company charges a shortfall payment if the customer fails to meet the required minimum volume commitment. These agreements may also contain make-up provisions whereby shortfall payments can be applied in future periods against purchased volumes exceeding the minimum volume commitment. If a make-up right exists, the Company has future performance obligations to deliver excess volumes of product in subsequent months. In accordance with ASC 606, if the customer fails to meet the minimum volume commitment, the Company will assess whether it expects the customer to fulfill its unmet commitment during the contractually specified make-up period based on discussions with the customer and management's knowledge of the business. If the Company expects the customer will make-up deficient volumes in future periods, revenue related to shortfall payments will be deferred and recognized on the earlier of the date on which the customer utilizes make-up volumes or the likelihood that the customer will exercise its right to make-up deficient volumes becomes remote. As of September 30, 2019, the Company had deferred revenue totaling $3.0 million related to shortfall payments. This amount is included in accrued expenses and other current liabilities on the unaudited condensed consolidated balance sheet. If the Company does not expect the customer will make-up deficient volumes in future periods, the breakage model will be applied and revenue related to shortfall payments will be recognized when the model indicates the customer's inability to take delivery of excess volumes. During the nine months ended September 30, 2019 and 2018, the Company recognized revenue totaling $1.3 million and $1.5 million, respectively, related to shortfall payments.

In certain of the Company's sand supply agreements, the customer obtains control of the product when it is loaded into rail cars and the customer reimburses the Company for all freight charges incurred. The Company has elected to account for shipping and handling as activities to fulfill the promise to transfer the sand. If revenue is recognized for the related product before the shipping and handling activities occur, the Company accrues the related costs of those shipping and handling activities.

Other Services
During the periods presented, the Company also provided contract land and directional drilling, coil tubing, pressure control, flowback, cementing, equipment rentals, full service transportation, crude oil hauling and remote accommodations services, which are reported under other services. As a result of market conditions, the Company temporarily shut down its cementing and acidizing operations as well as its flowback operations during the third quarter of 2019. The Company's other services are typically provided based upon a purchase order, contract or on a spot market basis. Services are provided on a day rate, contracted or hourly basis. Performance obligations for these services are satisfied over time and revenue is recognized as the work progresses based on the measure of output. Jobs for these services are typically short-term in nature and range from a few hours to multiple days.

Practical Expedients
The Company does not disclose the value of unsatisfied performance obligations for (i) contracts with an original expected length of one year or less and (ii) contracts in which variable consideration is allocated entirely to a wholly unsatisfied performance obligation or to a wholly unsatisfied distinct good or service that forms part of a single performance obligation.

Contract Balances
Following is a rollforward of the Company's contract liabilities (in thousands):

Balance, January 1, 2018	$	15,000
Deduction for recognition of revenue		(15,000)
Increase for deferral of shortfall payments		4,246
Increase for deferral of customer prepayments		58
Balance, December 31, 2018		4,304
Deduction for recognition of revenue		(3,255)
Increase for deferral of shortfall payments		2,735
Increase for deferral of customer prepayments		674
Deduction of shortfall payments due to contract renegotiations		(1,350)
Balance, September 30, 2019	$	3,108

The Company did not have any contract assets as of September 30, 2019 or December 31, 2018.

Performance Obligations
Revenue recognized in the current period from performance obligations satisfied in previous periods was a nominal amount for the three and nine months ended September 30, 2019 and 2018. As of September 30, 2019, the Company had unsatisfied performance obligations totaling $103.2 million, which will be recognized over the next 2.1 years.

4. Acquisitions

Acquisition of Air Rescue Systems and Brim Equipment Assets

On December 21, 2018, Cobra Aviation Services LLC ("Cobra Aviation"), a variable interest entity of the Company, completed a series of transactions that provided for an expansion of its aviation service business. These transactions include (i) the acquisition of all outstanding equity interests in Air Rescue Systems Corporation ("ARS"), (ii) the purchase of two commercial helicopters, spare parts, support equipment and aircraft documents from Brim Equipment Leasing, Inc. ("Brim Equipment") (the "Brim Equipment Assets") and (iii) the formation of a joint venture between Cobra Aviation and Wexford Partners Investment Co. LLC ("Wexford Investment"), a related party, under the name of Brim Acquisitions LLC ("Brim Acquisitions"), which acquired all outstanding equity interest in Brim Equipment. Cobra Aviation owns a 49% economic interest and Wexford Investment owns a 51% economic interest in Brim Acquisitions, and each member contributed its pro rata portion of Brim Acquisitions' initial capital of $2.0 million.

The acquisition of ARS qualifies under FASB ASC 805, *Business Combinations*, as a business combination. The purchase of the Brim Equipment Assets was negotiated and funded as part of the acquisition. Therefore, the purchase of the Brim Equipment Assets also qualifies as a business combination under ASC 805. Cobra Aviation is able to exercise significant influence over certain aspects of Brim Acquisitions' activities, but is a minority owner and does not have controlling financial interest. As a result, Cobra Aviation's investment in Brim Acquisitions is accounted for as an equity method investment under FASB ASC 323, *Investments-Equity Method and Joint Ventures*. See Note 8 for additional information on our investment in Brim Acquisitions.

Total consideration paid for ARS and the Brim Equipment Assets was $2.7 million and $4.2 million, respectively. The Company used cash on hand to fund the acquisitions.

The following table summarizes the fair value of ARS and the Brim Equipment Assets as of December 21, 2018 (in thousands):

	ARS	Brim Equipment Assets
Accounts receivable	$ 146	$ —
Property, plant and equipment	1,702	1,990
Identifiable intangible assets - trade name[a]	120	—
Goodwill[b]	694	2,243
Other non-current assets	5	—
Total assets acquired	$ 2,667	$ 4,233

a. Trade name was valued using a "Relief-from-Royalty" method and will be amortized over 20 years.

b. Goodwill was the excess of the consideration transferred over the net assets recognized and represents the future economic benefits arising from other assets acquired that could not be individually identified and separately recognized. Goodwill recorded in connection with the acquisition is attributable to assembled workforces and future profitability expected to arise from the acquired entity.

From the acquisition date through December 31, 2018 and for the nine months ended September 30, 2019, ARS and the Brim Equipment Assets provided the following activity (in thousands):

	2019		2018	
	ARS	Brim Equipment Assets	ARS	Brim Equipment Assets
Revenues	$ 1,719	$ 2,331	$ —	$ —
Net loss[a]	(328)	(828)	(25)	—

a. Includes depreciation expense of $0.2 million and $0.02 million, respectively, for ARS for 2019 and 2018 and $0.3 million for the Brim Equipment Assets for 2019.

The following table presents unaudited pro forma information as if the ARS and the Brim Equipment Assets acquisitions had occurred as of January 1, 2018 (in thousands):

	Nine Months Ended September 30, 2018	
	ARS	Brim Equipment Assets
Revenues	$ 2,213	$ 3,294
Net income	163	1,743

The Company recognized $0.3 million of transaction related costs during the year ended December 31, 2018 related to these acquisitions.

Acquisition of WTL Oil LLC

On May 31, 2018, the Company completed its acquisition of WTL Oil LLC ("WTL") for total consideration of $6.1 million. The Company used cash on hand and borrowings under its credit facility to fund the acquisition. The acquisition of WTL expanded the Company's service offerings into the crude oil hauling business.

The following table summarizes the fair value of WTL as of May 31, 2018 (in thousands):

		WTL
Property, plant and equipment	$	2,960
Identifiable intangible assets - customer relationships[(a)]		930
Identifiable intangible assets - trade name[(a)]		650
Goodwill[(b)]		1,567
Total assets acquired	$	6,107

a. Identifiable intangible assets were measured using a combination of income approaches. Trade names were valued using a "Relief-from-Royalty" method. Non-contractual customer relationships were valued using a "Multi-period excess earnings" method. Identifiable intangible assets will be amortized over 10-20 years.
b. Goodwill was the excess of the consideration transferred over the net assets recognized and represents the future economic benefits arising from other assets acquired that could not be individually identified and separately recognized. Goodwill recorded in connection with the acquisition is attributable to the assembled workforce and future profitability expected to arise from the acquired entity.

From the acquisition date through December 31, 2018 and for the nine months ended September 30, 2019, WTL provided the following activity (in thousands):

		2019		2018
Revenues	$	7,251	$	7,511
Net loss[(a)]		(1,462)		(149)

a. Includes depreciation and amortization expense of $1.7 million and $1.0 million, respectively, for the 2019 and 2018 periods.

The following table presents unaudited pro forma information as if the acquisition of WTL had occurred as of January 1, 2018 (in thousands):

		Nine Months Ended September 30, 2018
Revenues	$	5,998
Net loss		(8)

The Company recognized $0.1 million of transaction related costs during the year ended December 31, 2018 related to this acquisition.

Acquisition of RTS Energy Services LLC

On June 15, 2018, the Company completed its acquisition of RTS Energy Services LLC ("RTS") for total consideration of $8.1 million. The Company used cash on hand and borrowings under its credit facility to fund the acquisition. The acquisition of RTS expanded Mammoth's cementing services into the Permian Basin and added acidizing to the Company's service offerings.

The following table summarizes the fair value of RTS as of June 15, 2018 (in thousands):

		RTS
Inventory	$	180
Property, plant and equipment		7,787
Goodwill[(a)]		133
Total assets acquired	$	8,100

a. Goodwill was the excess of the consideration transferred over the net assets recognized and represents the future economic benefits arising from other assets acquired that could not be individually identified and separately recognized. Goodwill recorded in connection with the acquisition is attributable to the assembled workforce and future profitability expected to arise from the acquired entity.

From the acquisition date through December 31, 2018 and for the nine months ended September 30, 2019, RTS provided the following activity (in thousands):

	2019	2018
Revenues	$ 2,456	$ 6,682
Net loss[a]	(5,581)	(3,210)

a. Includes depreciation expense of $1.7 million and $0.9 million, respectively, for the 2019 and 2018 periods.

The following table presents unaudited pro forma information as if the acquisition of RTS had occurred as of January 1, 2018 (in thousands):

	Nine Months Ended September 30, 2018
Revenues	$ 14,398
Net loss	(1,841)

The Company recognized $0.1 million of transaction related costs during the year ended December 31, 2018 related to this acquisition.

As a result of market conditions, the Company temporarily shut down its cementing and acidizing operations during the third quarter of 2019. As a result, the Company impaired the balance of RTS's goodwill totaling $0.1 million. In addition, the Company wrote-off obsolete inventory totaling $0.2 million.

5. Inventories

Inventories consist of raw sand and processed sand available for sale, chemicals and other products sold as a bi-product of completion and production operations and supplies used in performing services. Inventory is stated at the lower of cost or market (net realizable value) on an average cost basis. The Company assesses the valuation of its inventories based upon specific usage and future utility. A summary of the Company's inventories is shown below (in thousands):

	September 30, 2019	December 31, 2018
Supplies	$ 10,035	$ 12,571
Raw materials	290	199
Work in process	4,601	3,273
Finished goods	2,377	5,259
Total inventories	$ 17,303	$ 21,302

As a result of market conditions, the Company temporarily shut down its cementing and acidizing operations as well as its flowback operations during the third quarter of 2019. As a result of this, the Company wrote-off obsolete inventory totaling $1.3 million.

6. Property, Plant and Equipment

Property, plant and equipment include the following (in thousands):

	Useful Life	September 30, 2019	December 31, 2018
Assets held and used:			
Pressure pumping equipment	3-5 years	$ 216,610	$ 208,968
Drilling rigs and related equipment	3-15 years	124,040	122,198
Machinery and equipment	7-20 years	196,006	173,867
Buildings	15-39 years	16,945	16,887
Vehicles, trucks and trailers	5-10 years	135,253	132,337
Coil tubing equipment	4-10 years	29,846	29,128
Land	N/A	13,687	14,235
Land improvements	15 years or life of lease	10,135	9,614
Rail improvements	10-20 years	13,802	13,806
Other property and equipment	3-12 years	14,030	13,614
		770,354	734,654
Deposits on equipment and equipment in process of assembly[(a)]		7,409	16,865
		777,763	751,519
Less: accumulated depreciation		417,396	337,514
Total assets held and used, net		360,367	414,005
Assets subject to operating leases:			
Buildings	15-30 years	30,369	29,493
Helicopters	6 years	4,943	4,937
		35,312	34,430
Less: accumulated depreciation		14,023	11,736
Total assets subject to operating leases, net		21,289	22,694
Total property, plant and equipment, net		$ 381,656	$ 436,699

a. Deposits on equipment and equipment in process of assembly represents deposits placed with vendors for equipment that is in the process of assembly and purchased equipment that is being outfitted for its intended use. The equipment is not yet placed in service.

Proceeds from customers for horizontal and directional drilling services equipment damaged or lost down-hole are reflected in revenue with the carrying value of the related equipment charged to cost of service revenues and are reported as cash inflows from investing activities in the statement of cash flows. For the nine months ended September 30, 2019 and 2018, proceeds from the sale of equipment damaged or lost down-hole were a nominal amount and$0.9 million, respectively, and gains on sales of equipment damaged or lost down-hole were a nominal amount and $0.8 million, respectively.

A summary of depreciation, depletion, amortization and accretion expense is below (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Depreciation expense	$ 28,123	$ 28,052	$ 84,288	$ 79,508
Depletion expense	1,339	1,552	3,285	2,979
Amortization expense	277	2,396	844	7,186
Accretion expense	52	15	95	45
Depreciation, depletion, amortization and accretion	$ 29,791	$ 32,015	$ 88,512	$ 89,718

As a result of market conditions, the Company temporarily shutdown its flowback operations during the third quarter of 2019. As a result, the Company recognized $3.3 million of impairment charges, which is included in impairment of long-lived assets on the unaudited condensed consolidated statements of comprehensive income (loss), for its flowback property and equipment during the three months ended September 30, 2019. Estimated fair value for these assets was determined using significant unobservable inputs (Level 3) based on an income approach.

7. Intangible Assets and Goodwill

The Company had the following definite lived intangible assets recorded (in thousands):

	September 30, 2019	December 31, 2018
Customer relationships	$ 1,980	$ 2,255
Trade names	9,063	9,063
Less: accumulated amortization - customer relationships	(547)	(544)
Less: accumulated amortization - trade names	(3,648)	(3,018)
Intangible assets, net	$ 6,848	$ 7,756

Amortization expense for intangible assets was $0.8 million and $7.2 million, respectively, for the nine months ended September 30, 2019 and 2018. The original life of customer relationships ranges from 6 to 10 years with a remaining average useful life of 6.4 years. The original life of trade names ranges from 10 to 20 years with a remaining average useful life of 8.4 years.

Aggregated expected amortization expense for the future periods is expected to be as follows (in thousands):

	Amount
Remainder of 2019	$ 277
2020	1,107
2021	1,107
2022	1,107
2023	991
Thereafter	2,259
	$ 6,848

Goodwill was $98.1 million and $101.2 million, respectively, at September 30, 2019 and December 31, 2018. Changes in the goodwill for the year ended December 31, 2018 and the nine months ended September 30, 2019 are set forth below (in thousands):

Balance, January 1, 2018	$	99,811
Additions:		
WTL acquisition		1,567
RTS acquisition		133
ARS acquisition		694
Brim Equipment Assets acquisition		2,243
Impairment		(3,203)
Balance, December 31, 2018		101,245
Impairment		(3,194)
Balance, September 30, 2019	$	98,051

During the year ended December 31, 2018, the Company moved Stingray Cementing LLC's ("Cementing") equipment from the Utica shale to the Permian basin. As a result, the Company recognized impairment on Cementing's intangible assets, including goodwill, non-contractual customer relationships and trade name of $3.2 million, $1.0 million and $0.2 million, respectively, which is included in impairment of long-lived assets on the unaudited condensed consolidated statements of comprehensive (loss) income. Cementing's goodwill was measured using an income approach, which provides an estimated fair value based on anticipated cash flows that are discounted using a weighted average cost of capital rate.

As a result of market conditions, the Company temporarily shut down its cementing and acidizing operations as well as its flowback operations during the third quarter of 2019. As a result, the Company recognized impairment of goodwill and non-contractual customer relationships totaling $3.2 million and $0.1 million, respectively, which is included in impairment of long-lived assets on the unaudited condensed consolidated statements of comprehensive (loss) income.

8. Equity Method Investment

On December 21, 2018, Cobra Aviation and Wexford Investment LLC, a related party, formed a joint venture under the name of Brim Acquisitions to acquire all outstanding equity interest in Brim Equipment for a total purchase price of approximately $2.0 million. Cobra Aviation owns a 49% economic interest and Wexford Investment owns a 51% economic interest in Brim Acquisitions, and each member contributed its pro rata portion of Brim Acquisitions' initial capital of $2.0 million. Brim Acquisitions, through Brim Equipment, owns one commercial helicopter and leases five commercial helicopters for operations, which it uses to provide a variety of services, including short haul, aerial ignition, hoist operations, aerial photography, fire suppression, construction services, animal/capture/survey, search and rescue, airborne law enforcement, power line construction, precision long line operations, pipeline construction and survey, mineral and seismic exploration, and aerial seeding and fertilization.

The Company uses the equity method of accounting to account for its investment in Brim Acquisitions, which had a carrying value of approximately $2.2 million at September 30, 2019. The investment is included in other non-current assets on the unaudited condensed consolidated balance sheets. The Company recorded an equity method adjustment to its investment of $0.5 million for its share of Brim Acquisitions' income for the nine months ended September 30, 2019, which is included in other, net on the unaudited condensed consolidated statements of comprehensive (loss) income. The Company made additional investments totaling $0.7 million during the nine months ended September 30, 2019.

9. Accrued Expenses and Other Current Liabilities

Accrued expense and other current liabilities included the following (in thousands):

	September 30, 2019	December 31, 2018
Accrued compensation, benefits and related taxes	$ 10,236	$ 20,898
State and local taxes payable	16,938	18,687
Insurance reserves	3,659	4,678
Deferred revenue	3,108	4,304
Financed insurance premiums	1,728	6,761
Other	4,883	4,324
Total	$ 40,552	$ 59,652

Financed insurance premiums are due in monthly installments, are unsecured and mature within the twelve month period following the close of the year. As of September 30, 2019 and December 31, 2018, the applicable interest rate associated with financed insurance premiums was3.45%.

10. Debt

On October 19, 2018, Mammoth Inc. and certain of its direct and indirect subsidiaries, as borrowers, entered into an amended and restated revolving credit and security agreement with the lenders party thereto and PNC Bank, National Association, as a lender and as administrative agent for the lenders, which amended and restated the Company's prior revolving credit and security agreement dated as of November 25, 2014, as amended prior to October 19, 2018 (the "revolving credit facility"). The revolving credit facility matures on October 19, 2023. Borrowings under the revolving credit facility are secured by the assets of Mammoth Inc., inclusive of certain of the subsidiary companies, and are subject to a borrowing base calculation prepared monthly. On November 5, 2019, the Company entered into a first amendment to the revolving credit facility to amend the interest coverage ratio definition to give accrual treatment to certain cash taxes included in the ratio calculation. As a result, certain cash tax payments that were made in 2019 are now treated as if they were made in 2018, the year in which the income related to such tax payments was actually received.

Outstanding borrowings under the revolving credit facility bear interest at a per annum rate elected by Mammoth Inc. that is equal to an alternate base rate or LIBOR, in each case plus the applicable margin. The applicable margin ranges from 1.00% to 1.50% per annum in the case of the alternate base rate, and from2.00% to 2.50% per annum in the case of LIBOR. The applicable margin depends on the amount of excess availability under this facility.

At September 30, 2019, there were outstanding borrowings under the revolving credit facility of$80.0 million and $96.1 million of available borrowing capacity, after giving effect to $8.7 million of outstanding letters of credit. At December 31, 2018, there were no outstanding borrowings under the revolving credit facility and $175.8 million of borrowing capacity under the facility, after giving effect to$8.4 million of outstanding letters of credit.

The revolving credit facility also contains various customary affirmative and restrictive covenants. Among the covenants are two financial covenants, including a minimum interest coverage ratio (3.0 to 1.0), maximum leverage ratio (4.0 to 1.0), and a minimum availability covenant ($10 million). As of September 30, 2019 and December 31, 2018, the Company was in compliance with the financial covenants under the revolving facility.

11. Variable Interest Entities

Dire Wolf Energy Services LLC ("Dire Wolf") and Predator Aviation LLC ("Predator Aviation"), wholly owned subsidiaries of the Company, are party to Voting Trust Agreements with TVPX Aircraft Solutions Inc. (the "Voting Trustee"). Under the Voting Trust Agreements, Dire Wolf transferred 100% of its membership interest in Cobra Aviation and Predator Aviation transferred 100% of its membership interest in Leopard Aviation LLC ("Leopard") to the respective Voting Trustees in exchange for Voting Trust Certificates. Dire Wolf and Predator Aviation retained the obligation to absorb all expected returns or losses of Cobra Aviation and Leopard. Prior to the transfer of the membership interest to the Voting Trustee, Cobra Aviation was a wholly owned subsidiary of Dire Wolf and Leopard was a wholly owned subsidiary of Predator Aviation. Cobra Aviation owns three helicopters and support equipment, 100% of the equity interest in ARS and49% of the equity interest in Brim Acquisitions. Leopard owns one helicopter. Dire Wolf and Predator Aviation entered into the Voting Trust Agreements in order to meet certain registration requirements.

Dire Wolf's and Predator Aviation's voting rights are not proportional to their respective obligations to absorb expected returns or losses of Cobra Aviation and Leopard, respectively, and all of Cobra Aviation's and Leopard's activities are conducted on behalf of Dire Wolf and Predator Aviation, which have disproportionately fewer voting rights; therefore, Cobra Aviation and Leopard meet the criteria of a VIE. Cobra Aviation and Leopard's operational activities are directed by Dire Wolf's and Predator Aviation's officers and Dire Wolf and Predator Aviation have the option to terminate the Voting Trust Agreements at any time. Therefore, the Company, through Dire Wolf and Predator Aviation, is considered the primary beneficiary of the VIEs and consolidates Cobra Aviation and Leopard at September 30, 2019.

12. Selling, General and Administrative Expense

Selling, general and administrative ("SG&A") expense includes of the following (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Cash expenses:				
Compensation and benefits	$ 4,777	$ 14,864	$ 16,161	$ 33,541
Professional services	6,104	3,267	12,827	8,835
Other[(a)]	1,665	3,701	8,290	9,243
Total cash SG&A expense	12,546	21,832	37,278	51,619
Non-cash expenses:				
Bad debt provision[(b)]	964	(68,333)	1,230	(14,543)
Equity based compensation[(c)]	—	—	—	17,487
Stock based compensation	913	1,177	2,705	3,751
Total non-cash SG&A expense	1,877	(67,156)	3,935	6,695
Total SG&A expense	$ 14,423	$ (45,324)	$ 41,213	$ 58,314

a. Includes travel-related costs, IT expenses, rent, utilities and other general and administrative-related costs.
b. During the three months ended September 30, 2018, the Company received payment for amounts previously reserved in 2017. As a result, during the three months ended September 30, 2018, the Company reversed bad debt expense of $16.0 million recognized in 2017 and $53.6 million of the bad debt expense recognized in the first half of 2018.
c. Represents compensation expense for non-employee awards, which were issued and are payable by certain affiliates of Wexford (the sponsor level). See Note 16 for additional detail.

13. Income Taxes

The Company's effective tax rate was(17%) and 51% for the nine months ended September 30, 2019 and 2018, respectively. The effective tax rates for thenine months ended September 30, 2019 and 2018 differ from the statutory rate of 21% primarily due to the mix of earnings between the United States and Puerto Rico. For thenine months ended September 30, 2019, the Company recognized a loss in the United States, which was partially offset by earnings from its operations in Puerto Rico, which has a higher statutory rate compared to the United States. During the nine months ended September 30, 2019, the Company recorded a benefit related to return to provision adjustments, which was partially offset by changes in the valuation allowance. The Company recorded income tax expense of $2.6 million and $174.3 million for the nine months ended September 30, 2019 and 2018, respectively.

14. Leases

In February 2016, the FASB issued ASU 2016-02,*Leases (Topic 842)* which supersedes the requirements set forth in ASC 840,*Leases*. The Company adopted this standard effective January 1, 2019 utilizing the transition method which permits an entity to recognize a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption with no adjustment made to the comparative periods presented in the consolidated financial statements. Accordingly, the comparative information as of December 31, 2018 and for the three and nine months ended September 30, 2018 has not been adjusted and continues to be reported under the previous lease standard. The new guidance requires lessees to report a right of use asset and lease liability on the balance sheet for all leases with a term longer than one year, while maintaining substantially similar classifications for financing and operating leases. Lessor accounting remains substantially unchanged with the exception that no leases entered into after the effective date will be classified as leveraged leases.

The Company elected the transition practical expedient package whereby an entity was not required to reassess (i) whether any expired or existing contracts are or contained leases, (ii) the lease classification for any expired or existing leases and (iii) initial direct costs for any existing leases. The adoption of ASC 842 resulted in the recognition of approximately $60.0 million of operating lease right-of-use assets and operating lease liabilities on our consolidated balance sheet as of January 1, 2019 and did not materially impact our consolidated statement of comprehensive income for the three and nine months ended September 30, 2019.

Lessee Accounting

Beginning January 1, 2019, for all leases with a term in excess of 12 months, the Company recognized a lease liability equal to the present value of the lease payments and a right-of-use asset representing its right to use the underlying asset for the lease term. For operating leases, lease expense for lease payments is recognized on a straight-line basis over the lease term, while finance leases include both an operating expense and an interest expense component. For all leases with a term of 12 months or less, the Company elected the practical expedient to not recognize lease assets and liabilities and recognizes lease expense for these short-term leases on a straight-line basis over the lease term.

The Company's operating leases are primarily for rail cars, real estate, equipment and vehicles and its finance leases are primarily for machinery and equipment. Generally, the Company does not include renewal or termination options in its assessment of the leases unless extension or termination for certain assets is deemed to be reasonably certain. The accounting for some of the Company's leases may require significant judgment, which includes determining whether a contract contains a lease, determining the incremental borrowing rates to utilize in the net present value calculation of lease payments for lease agreements which do not provide an implicit rate and assessing the likelihood of renewal or termination options. Lease agreements that contain a lease and non-lease component are generally accounted for as a single lease component.

Lease expense consisted of the following for the three and nine months ended September 30, 2019 (in thousands):

	Three Months Ended September 30, 2019	Nine Months Ended September 30, 2019
Operating lease expense	$ 5,278	$ 16,697
Short-term lease expense	135	498
Finance lease expense:		
Amortization of right-of-use assets	312	797
Interest on lease liabilities	55	134
Total lease expense	$ 5,780	$ 18,126

Supplemental balance sheet information related to leases as ofSeptember 30, 2019 is as follows:

		September 30, 2019
Operating leases:		
Operating lease right-of-use assets	$	47,959
Current operating lease liability		17,142
Long-term operating lease liability		30,827
Finance leases:		
Property and equipment, net	$	5,942
Accrued expenses and other current liabilities		1,465
Other liabilities		4,145

Other supplemental information related to leases for thethree and nine months ended September 30, 2019 is as follows (in thousands):

		Three Months Ended September 30, 2019		Nine Months Ended September 30, 2019
Cash paid for amounts included in the measurement of lease liabilities:				
Operating cash flows from operating leases	$	5,222	$	16,468
Operating cash flows from finance leases		55		134
Financing cash flows from finance leases		391		1,114
Right-of-use assets obtained in exchange for lease obligations:				
Operating leases	$	1,314	$	3,249
Finance leases		2,130		3,721

	September 30, 2019
Weighted-average remaining lease term:	
Operating leases	3.5 years
Finance leases	4.3 years
Weighted-average discount rate:	
Operating leases	4.5%
Finance leases	4.3%

Maturities of lease liabilities as of September 30, 2019 are as follows (in thousands):

		Operating Leases		Finance Leases
Remainder of 2019	$	5,060	$	447
2020		17,823		1,563
2021		13,055		1,254
2022		8,949		1,220
2023		4,330		1,214
Thereafter		2,588		441
Total lease payments		51,805		6,139
Less: Present value discount		3,836		529
Present value of lease payments	$	47,969	$	5,610

As of December 31, 2018, future minimum payments under noncancellable operating leases were$66.2 million in the aggregate, which consisted of the following: $20.2 million in 2019, $16.6 million in 2020, $12.6 million in 2021, $9.3 million in 2022, $5.0 million in 2023 and $2.5 million thereafter.

Lessor Accounting

The Company's agreements with its customers for contract land drilling services, aviation services and remote accommodation services contain an operating lease component under ASC 842 because (i) there are identified assets, (ii) the customer obtains substantially all of the economic benefits of the identified assets throughout the period of use and (iii) the customer directs the use of the identified assets throughout the period of use. The Company has elected to apply the practical expedient provided to lessors to combine the lease and non-lease components of a contract where the revenue recognition pattern is the same and where the lease component, when accounted for separately, would be considered an operating lease. The practical expedient also allows a lessor to account for the combined lease and non-lease components under ASC 606, *Revenue from Contracts with Customers*, when the non-lease component is the predominant element of the combined component. The Company's agreement for its contract land drilling services contain a service component in addition to a lease component. The Company has determined the service component is greater than the lease component and therefore, reports revenue for its contract land drilling services under ASC 606.

The Company's lease agreements are generally short-term in nature and lease revenue is recognized over time based on on a monthly, daily or hourly rate basis. The Company does not provide an option for the lessee to purchase the rented assets at the end of the lease and the lessees do not provide residual value guarantees on the rented assets. The Company recognized lease revenue of $1.7 million and $5.8 million, respectively, during the three and nine months ended September 30, 2019, which is included in service revenue on the unaudited condensed consolidated statement of comprehensive income.

15. Earnings (Loss) Per Share

Reconciliations of the components of basic and diluted net income (loss) per common share are presented in the table below (in thousands, except per share data):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Basic earnings (loss) per share:				
Allocation of earnings (loss):				
Net (loss) income	$ (35,709)	$ 69,512	$ (18,265)	$ 167,758
Weighted average common shares outstanding	45,020	44,756	44,984	44,718
Basic (loss) earnings per share	$ (0.79)	$ 1.55	$ (0.41)	$ 3.75
Diluted earnings (loss) per share:				
Allocation of earnings (loss):				
Net (loss) income	$ (35,709)	$ 69,512	$ (18,265)	$ 167,758
Weighted average common shares, including dilutive effect[a]	45,020	45,082	44,984	45,012
Diluted (loss) earnings per share	$ (0.79)	$ 1.54	$ (0.41)	$ 3.73

a. No incremental shares of potentially dilutive restricted stock awards were included for the three and nine months ended September 30, 2019 as their effect was antidilutive under the treasury stock method.

16. Equity Based Compensation

Upon formation of certain operating entities by Wexford, Gulfport and Rhino, specified members of management (the “Specified Members”) and certain non-employee members (the “Non-Employee Members”) were granted the right to receive distributions from the operating entities after the contribution member’s unreturned capital balance was recovered (referred to as “Payout” provision).

On November 24, 2014, the awards were modified in conjunction with the contribution of the operating entities to Mammoth. These awards were not granted in limited or general partner units. The awards are for interests in the distributable earnings of the members of MEH Sub, Mammoth’s majority equity holder.

On the IPO closing date, the unreturned capital balance of Mammoth's majority equity holder was not fully recovered from its sale of common stock in the IPO. As a result, Payout did not occur and no compensation cost was recorded.

On June 29, 2018, as part of an underwritten secondary public offering, MEH Sub sold2,764,400 shares of the Company's common stock at a purchase price to MEH Sub of $38.01 per share. Additionally, the selling stockholders granted the underwriters an option to purchase additional shares of the Company's common stock at the same purchase price. On July 30, 2018, in connection with the partial exercise of this option, MEH Sub sold an additional 266,026 shares of common stock to the underwriters. MEH Sub received the proceeds from this offering. As a result of the June 29, 2018 offering, a portion of the Non-Employee Member awards reached Payout. During the three months ended June 30, 2018, the Company recognized equity compensation expense totaling $17.5 million related to these non-employee awards. These awards are at the sponsor level and this transaction had no dilutive impact or cash impact to the Company.

Payout for the remaining awards is expected to occur as the contribution member's unreturned capital balance is recovered from additional sales by MEH Sub of its shares of the Company's common stock or from dividend distributions, which is not considered probable until the event occurs. For the Specified Member awards, the unrecognized amount, which represents the fair value of the award as of the modification dates or grant date, was $5.6 million.

The Company adopted ASU 2018-07 as of January 1, 2019. This ASU aligns the accounting for non-employee share-based compensation with the requirements for employee share-based compensation. The standard required non-employee awards to be measured at fair value as of the date of adoption. For the Company's Non-Employee Member awards, the unrecognized amount, which represents the fair value of the awards as of the date of adoption of ASU 2018-07 was $18.9 million.

17. Stock Based Compensation

The 2016 Plan authorizes the Company's Board of Directors or the compensation committee of the Company's Board of Directors to grant restricted stock, restricted stock units, stock appreciation rights, stock options and performance awards. There are 4.5 million shares of common stock reserved for issuance under the 2016 Plan.

Restricted Stock Units

The fair value of restricted stock unit awards was determined based on the fair market value of the Company's common stock on the date of the grant. This value is amortized over the vesting period.

A summary of the status and changes of the unvested shares of restricted stock under the 2016 Plan is presented below.

	Number of Unvested Restricted Shares	Weighted Average Grant-Date Fair Value
Unvested shares as of January 1, 2019	434,119	$ 22.78
Granted	64,507	9.87
Vested	(144,812)	25.28
Forfeited	(70,002)	19.16
Unvested shares as of September 30, 2019	283,812	$ 23.23

As of September 30, 2019, there was $2.1 million of total unrecognized compensation cost related to the unvested restricted stock. The cost is expected to be recognized over a weighted average period of approximately 11 months.

Included in cost of revenue and selling, general and administrative expenses is stock based compensation expense of$1.1 million and $1.4 million for the three months ended September 30, 2019 and 2018, respectively, and $3.4 million and $4.3 million for the nine months ended September 30, 2019 and 2018, respectively.

18. Related Party Transactions

Transactions between the subsidiaries of the Company, including Stingray Pressure Pumping LLC ("Pressure Pumping"),

Muskie Proppant LLC ("Muskie"), Stingray Energy Services LLC ("SR Energy"), Stingray Cementing LLC ("Cementing"), Aquahawk Energy LLC ("Aquahawk"), Panther Drilling Systems LLC ("Panther Drilling"), Cobra Aviation, ARS, Leopard, Cobra and Higher Power Electrical LLC ("Higher Power") and the following companies are included in Related Party Transactions: Gulfport; Grizzly Oil Sands ULC ("Grizzly"); El Toro Resources LLC ("El Toro"); Everest Operations Management LLC ("Everest"); Elk City Yard LLC ("Elk City Yard"); Double Barrel Downhole Technologies LLC ("DBDHT"); Caliber Investment Group LLC ("Caliber"); Predator Drilling LLC ("Predator"); T&E Flow Services LLC ("T&E"); and Brim Equipment.

Following is a summary of related party transactions (in thousands):

		REVENUES				ACCOUNTS RECEIVABLE	
		Three Months Ended September 30,		Nine Months Ended September 30,		At September 30,	At December 31,
		2019	2018	2019	2018	2019	2018
Pressure Pumping and Gulfport	(a)	$ 13,578	$ 15,540	$ 84,407	$ 87,916	$ 6,231	$ 8,175
Muskie and Gulfport	(b)	2,924	3,787	26,439	24,980	1,153	1,193
SR Energy and Gulfport	(c)	672	1,743	8,712	13,323	536	1,658
Cementing and Gulfport	(d)	—	977	—	5,853	—	—
Aquahawk and Gulfport	(e)	6	—	828	—	6	—
Panther Drilling and El Toro	(f)	80	509	573	854	80	64
Cobra Aviation/ARS/Leopard and Brim Equipment	(g)	679	—	1,390	—	498	—
Other Relationships		(15)	164	—	685	38	74
		$ 17,924	$ 22,720	$ 122,349	$ 133,611	$ 8,542	$ 11,164

a. Pressure Pumping provides pressure pumping, stimulation and related completion services to Gulfport.
b. Muskie has agreed to sell and deliver, and Gulfport has agreed to purchase, specified annual and monthly amounts of natural sand proppant, subject to certain exceptions specified in the agreement, and pay certain costs and expenses.
c. SR Energy provides rental services to Gulfport.
d. Cementing performed well cementing services for Gulfport.
e. Aquahawk provides water transfer services for Gulfport pursuant to a master service agreement.
f. Panther provides directional drilling services for El Toro, an entity controlled by Wexford, pursuant to a master service agreement.
g. Cobra Aviation, ARS and Leopard lease helicopters to Brim Equipment pursuant to aircraft lease and management agreements.

		Three Months Ended September 30,		Nine Months Ended September 30,		At September 30,	At December 31,
		2019	2018	2019	2018	2019	2018
		COST OF REVENUE		COST OF REVENUE		ACCOUNTS PAYABLE	
Cobra Aviation/ ARS/Leopard and Brim Equipment	(a)	$ 739	$ —	$ 4,103	$ —	$ 366	$ —
Cobra and T&E	(b)	—	1,281	—	4,042	—	—
Higher Power and T&E	(b)	—	144	—	1,603	—	—
Other		35	—	35	—	35	240
		$ 774	$ 1,425	$ 4,138	$ 5,645	$ 401	$ 240
		SELLING, GENERAL AND ADMINISTRATIVE COSTS		SELLING, GENERAL AND ADMINISTRATIVE COSTS			
The Company and Wexford	(c)	$ 109	$ 267	$ 551	$ 740	$ —	$ 100
The Company and Caliber	(d)	201	116	589	462	64	3
Cobra Aviation/ ARS/Leopard and Brim Equipment	(a)	43	—	209	—	—	—
Other		41	54	138	196	8	27
		$ 394	$ 437	$ 1,487	$ 1,398	$ 72	$ 130
		CAPITAL EXPENDITURES		CAPITAL EXPENDITURES			
Leopard and Brim Equipment	(a)	$ 48	$ —	$ 266	$ —	$ 13	$ —
Cobra and T&E	(b)	—	116	—	1,247		—
Higher Power and T&E	(b)	—	187	—	2,960		—
		$ 48	$ 303	$ 266	$ 4,207	$ 13	$ —
						$ 486	$ 370

a. Cobra Aviation, ARS and Leopard lease helicopters to Brim Equipment pursuant to aircraft lease and management agreements.
b. Cobra and Higher Power purchased materials and services from T&E, an entity in which a member of management's family owned a minority interest. T&E ceased to be a related party as of September 30, 2018.
c. Wexford provides certain administrative and analytical services to the Company and, from time to time, the Company pays for goods and services on behalf of Wexford.
d. Caliber leases office space to Mammoth.

On December 21, 2018, Cobra Aviation acquired all outstanding equity interest in ARS and purchased two commercial helicopters, spare parts, support equipment and aircraft documents from Brim Equipment. Following these transactions, and also on December 21, 2018, Cobra Aviation formed a joint venture with Wexford Investments named Brim Acquisitions to acquire all outstanding equity interests in Brim Equipment. Cobra Aviation owns a 49% economic interest and Wexford Investment owns a 51% economic interest in Brim Acquisitions, and each member contributed its pro rata portion of Brim Acquisitions' initial capital of $2.0 million. Cobra Aviation made additional investments in Brim Acquisitions totaling $0.7 million during the nine months ended September 30, 2019. Wexford Investments is an entity controlled by Wexford, which owns approximately 49% of the Company's outstanding common stock.

19. Commitments and Contingencies

Minimum Purchase Commitments

The Company has entered into agreements with suppliers that contain minimum purchase obligations. Failure to purchase the minimum amounts may require the Company to pay shortfall fees. However, the minimum quantities set forth in the agreements are not in excess of currently expected future requirements.

Capital Spend Commitments

The Company has entered into agreements with suppliers to acquire capital equipment.

Aggregate future minimum payments under these obligations in effect at September 30, 2019 are as follows (in thousands):

Year ended December 31:	Capital Spend Commitments	Minimum Purchase Commitments[(a)]
Remainder of 2019	$ 1,007	$ 5,234
2020	—	20,650
2021	—	656
2022	—	91
2023	—	8
Thereafter	—	—
	$ 1,007	$ 26,639

a. Included in these amounts are sand purchase commitments of $19.5 million. Pricing for certain sand purchase agreements is variable and, therefore, the total sand purchase commitments could be as much as $23.1 million. The minimum amount due in the form of shortfall fees under certain sand purchase agreements was $1.8 million as of September 30, 2019.

Letters of Credit

The Company has various letters of credit that were issued under the Company's revolving credit agreement which is collateralized by substantially all of the assets of the Company. The letters of credit are categorized below (in thousands):

	September 30, 2019	December 31, 2018
Environmental remediation	$ 4,182	$ 3,877
Insurance programs	4,105	4,105
Rail car commitments	455	455
Total letters of credit	$ 8,742	$ 8,437

Insurance

The Company has insurance coverage for physical partial loss to its assets, employer's liability, automobile liability, commercial general liability, workers' compensation and insurance for other specific risks. The Company has also elected in some cases to accept a greater amount of risk through increased deductibles on certain insurance policies. As of September 30, 2019 and December 31, 2018, the workers' compensation and automobile liability policies require a deductible per occurrence of up to $0.3 million and $0.1 million, respectively. The Company establishes liabilities for the unpaid deductible portion of claims incurred based on estimates. As of September 30, 2019 and December 31, 2018, the workers' compensation and auto liability policies contained an aggregate stop loss of $5.4 million. As of September 30, 2019 and December 31, 2018, accrued claims were $3.7 million and $4.7 million, respectively.

The Company also has insurance coverage for directors and officers liability. As of September 30, 2019 and December 31, 2018, the directors and officers liability policy had a deductible per occurrence of $1.0 million and an aggregate deductible of $10.0 million. As of September 30, 2019 and December 31, 2018, the Company did not have any accrued claims for directors and officers liability.

The Company also self-insures its employee health insurance. The Company has coverage on its self-insurance program in the form of a stop loss of $0.2 million per participant and an aggregate stop-loss of $5.8 million for the calendar year ending December 31, 2019. These estimates may change in the near term as actual claims continue to develop. As of September 30, 2019 and December 31, 2018, accrued claims were $2.8 million and $3.2 million, respectively.

Warranty Guarantees

Pursuant to certain customer contracts in our infrastructure services segment, the Company warrants equipment and labor performed under the contracts for a specified period following substantial completion of the work. Generally, the warranty is for one year or less. No liabilities were accrued as of September 30, 2019 and December 31, 2018 and no expense was recognized during the three months ended September 30, 2019 or 2018 related to warranty claims. However, if warranty claims occur, the Company could be required to repair or replace warrantied items, which in most cases are covered by warranties extended from the manufacturer of the equipment. In the event the manufacturer of equipment failed to perform on a warranty obligation or denied a warranty claim made by the Company, the Company could be required to pay for the cost of the repair or replacement.

Bonds

In the ordinary course of business, the Company is required to provide bid bonds to certain customers in the infrastructure services segment as part of the bidding process. These bonds provide a guarantee to the customer that the Company, if awarded the project, will perform under the terms of the contract. Bid bonds are typically provided for a percentage of the total contract value. Additionally, the Company may be required to provide performance and payment bonds for contractual commitments related to projects in process. These bonds provide a guarantee to the customer that the Company will perform under the terms of a contract and that the Company will pay subcontractors and vendors. If the Company fails to perform under a contract or to pay subcontractors and vendors, the customer may demand that the surety make payments or provide services under the bond. The Company must reimburse the surety for expenses or outlays it incurs. As of September 30, 2019 and December 31, 2018, outstanding bid bonds totaled $0.4 million and $3.6 million, respectively, and outstanding performance and payment bonds totaled $40.0 million and $22.3 million, respectively. The estimated cost to complete projects secured by the performance and payment bonds totaled $12.8 million as of September 30, 2019.

Litigation

The Company is routinely involved in state and local tax audits. During 2015, the State of Ohio assessed taxes on the purchase of equipment the Company believes is exempt under state law. The Company appealed the assessment and a hearing was held in 2017. As a result of the hearing, the Company received a decision from the State of Ohio. The Company is appealing the decision and while it is not able to predict the outcome of the appeal, this matter is not expected to have a material adverse effect on the Company's financial position, results of operations or cash flows.

On September 10, 2019, the U.S. District Court for the District of Puerto Rico unsealed an indictment that charged the former President of Cobra with conspiracy, wire fraud, false statements and disaster fraud. Two other individuals were also charged in the indictment. The indictment is focused on the interactions between a former FEMA official and the former President of Cobra. Neither the Company nor any of its subsidiaries were charged in the indictment. The Company is continuing to cooperate with the related investigation. Given the uncertainty inherent in the criminal litigation, it is not possible at this time to determine the potential outcome or other potential impacts that the criminal litigation could have

on the Company. PREPA has stated in court filing that it may contend the alleged criminal activity affects Cobra's entitlement to payment under its contracts with PREPA.

On June 27, 2018, the Company's registered agent notified the Company that it had been served with a putative class action lawsuit titled Wendco of Puerto Rico Inc.; Multisystem Restaurant Inc.; Restaurant Operators Inc.; Apple Caribe, Inc.; on their own behalf and in representation of all businesses that conduct business in the Commonwealth of Puerto Rico vs. Mammoth Energy Services Inc.; Cobra Acquisitions, LLC; D. Grimm Puerto Rico, LLC; Aseguradoras A, B & C; John Doe; Richard Doe, in the Commonwealth of Puerto Rico Superior Court of San Juan. The plaintiffs allege negligent acts by the defendants caused an electrical failure in Puerto Rico resulting in damages of at least $300 million. The Company believes this claim is without merit and will vigorously defend the action. However, the Company continues to evaluate the background facts and at this time is not able to predict the outcome of this lawsuit or whether it will have a material impact on the Company's financial position, results of operations or cash flows.

In late 2018 and early 2019, Cobra was served with four lawsuits from municipalities in Puerto Rico alleging failure to pay municipal license and construction excise taxes. The Government of Puerto Rico's Central Recovery and Reconstruction Office ("COR3") has noted the unique nature of work executed by entities such as Cobra in Puerto Rico and that taxes, such as those in these matters, may be eligible for reimbursement by the government. Further, COR3 indicated that it is working to develop a solution that will result in payment of taxes owed to the municipalities without placing an undue burden on entities such as Cobra. The Company continues to work with COR3 to resolve these matters. However, the Company continues to evaluate the facts and circumstances and at this time is not able to predict the outcome of this lawsuit or whether it will have a material impact on the Company's financial position, results of operations or cash flows.

On April 16, 2019, a putative class and collective action lawsuit alleging that the Company failed to pay a class of workers overtime in compliance with the Fair Labor Standards Act and Puerto Rico law was filed titled Christopher Williams, individually and on behalf of all others similarly situated vs. Higher Power Electrical, LLC, Cobra Acquisitions LLC and Cobra Energy LLC in the U.S. District Court for the District of Puerto Rico. On June 24, 2019, the complaint was amended to replace Mr. Williams with Matthew Zeisset, another former Higher Power employee, as the named plaintiff. On July 8, 2019, the defendants moved to dismiss Mr. Zeisset's claims and compel them to arbitration on an individual basis. On August 21, 2019, upon request of the parties, the court stayed proceedings in the lawsuit pending completion of the arbitration proceedings involving Mr. Zeisset and all opt-in plaintiffs. The plaintiff and additional claimants subsequently initiated individual arbitration proceedings which are pending the selection of arbitrators. In a similar matter, in April 2019, the Company received a demand for arbitration from seven individual claimants alleging the Company failed to pay overtime in violation of the Fair Labor Standards Act and Puerto Rico law. Other claimants have subsequently initiated individual arbitration proceedings as well. The Company is evaluating the background facts of these matters and at this time is not able to predict the outcome of these proceedings or whether they will have a material impact on the Company’s financial position, results of operations or cash flows.

In June 2019 and August 2019, the Company was served with three class action lawsuits filed in the Western District of Oklahoma, which were later consolidated into a single class action, alleging that several of the Company's filings with the SEC contained material misrepresentations and omissions in violation of federal securities laws. The Company believes these claims are without merit and will vigorously defend the actions. However, the Company continues to evaluate the background facts and at this time is not able to predict the outcome of these lawsuits or whether they will have a material impact on the Company's financial position, results of operations or cash flows.

In September 2019, four derivative lawsuits were filed, two in the Western District of Oklahoma and two in the District of Delaware, purportedly on behalf of the Company against its officers and directors. The lawsuits allege violations of securities laws, breach of fiduciary duties, waste of corporate assets and unjust enrichment. In October 2019, plaintiffs in the two Oklahoma actions voluntarily dismissed those cases, and on October 31, 2019, refiled them as a single derivative action in the District of Delaware. The Company believes these claims are without merit and will vigorously defend the actions. However, the Company continues to evaluate the background facts and at this time is not able to predict the outcome of these lawsuits or whether they will have a material impact on the Company's financial position, results of operations or cash flows.

On September 12, 2019, AL Global Services, LLC (“Alpha Lobo”) filed a Second Amended Third-Party Petition against the Company in an action styled Jim Jorrie v. Craig Charles, Julian Calderas, Jr., and AL Global Services, LLC v. Jim Jorrie v. Cobra Acquisitions LLC v. Espada Logistics & Security Group, LLC, Espada Caribbean LLC, Arty Straehla, Ken Kinsey, Jennifer Jorrie, and Mammoth Energy Services, Inc., pending in the 57th Judicial District Court in Bexar County,

Texas. The Petition alleges the Company should be held vicariously liable under alter ego, agency and respondeat superior theories for Alpha Lobo's alleged claims against Cobra and Arty Straehla for aiding and abetting, knowing participation in and conspiracy to breach fiduciary duty in connection with Cobra's execution of an agreement with Espada Caribbean, LLC for security services related to Cobra's work in Puerto Rico. The Company believes these claims are without merit and will vigorously defend the action. However, the Company continues to evaluate the background facts and at this time is not able to predict the outcome of this lawsuit or whether it will have a material impact on the Company's financial position, results of operations or cash flows.

On September 16, 2019, Cobra filed a lawsuit for breach of contract against Robert Malcolm ("Malcom") alleging that Malcom breached his non-compete and non-solicit obligations contained in the purchase and sale agreement in which Cobra purchased Higher Power from Malcom. On September 16, 2019, the Court entered a Temporary Restraining Order enjoining Malcom from competing against Higher Power and soliciting its customers and employees. On October 25, 2019, the Court entered a Temporary Injunction enjoining Malcom from competing against Higher Power and soliciting its customers and employees until time of trial and set December 18, 2019 as the trial date. Cobra is seeking to permanently enjoin Malcom from competing against Higher Power and soliciting its customers and employees and the damages it incurred as a result of Malcom's breach of his non-compete agreement. On November 3, 2019, Malcom filed his original counter-petition and third-party petition against Cobra, Higher Power, Keith Ellison and Arty Straehla alleging, among other things, breach of contract, conversion, unjust enrichment, tortious interference, retaliation, civil rico violations and conspiracy. The Company believes these claims are without merit and will vigorously defend the action. However, at this time the Company is not able to predict the outcome of the lawsuit or whether it will have a material impact on the Company's financial position, results of operations or cash flows.

The Company is involved in various other legal proceedings in the ordinary course of business. Although the Company cannot predict the outcome of these proceedings, legal matters are subject to inherent uncertainties and there exists the possibility that the ultimate resolution of these matters could have a material adverse effect on the Company's business, financial condition, results of operations or cash flows.

Defined Contribution Plan

The Company sponsors a 401(k) defined contribution plan for the benefit of substantially all employees at their date of hire. The plan allows eligible employees to contribute up to 92% of their annual compensation, not to exceed annual limits established by the federal government. The Company makes discretionary matching contributions of up to 3% of an employee's compensation and may make additional discretionary contributions for eligible employees. For thenine months ended September 30, 2019 and 2018, the Company paid $2.7 million and $4.5 million, respectively, in contributions to the plan.

20. Reporting Segments

The Company principally provides electric infrastructure services to government-funded utilities, private utilities, public investor-owned utilities and co-operative utilities and services in connection with on-shore drilling of oil and natural gas wells for small to large domestic independent oil and natural gas producers. As of September 30, 2019, the Company's revenues, income before income taxes and identifiable assets are primarily attributable tothree reportable segments including infrastructure services ("Infrastructure"), pressure pumping services ("Pressure Pumping") and natural sand proppant services ("Sand").

The Company's Chief Executive Officer and Chief Financial Officer comprise the Company's Chief Operating Decision Maker function ("CODM"). Segment information is prepared on the same basis that the CODM manages the segments, evaluates the segment financial statements and makes key operating and resource utilization decisions. Segment evaluation is determined on a quantitative basis based on a function of operating income (loss), as well as a qualitative basis, such as nature of the product and service offerings and types of customers.

Prior to the year ended December 31, 2018, the Company had four reportable segments, including infrastructure services, pressure pumping services, natural sand proppant services and contract land and directional drilling services. Based on its assessment of FASB ASC 280, *Segment Reporting*, guidance at December 31, 2018, the Company changed its reportable segment presentation in 2018, as it determined based upon both a quantitative and qualitative basis that the contract land and directional drilling services segment is not of continuing significance for accounting reporting purposes. The Company now includes the results of the entities previously included in the contract land and directional drilling services segment in the reconciling column titled "All Other" in the tables below. The results below for the three and nine months ended September 30, 2018 have been retroactively adjusted to reflect this change.

During the periods presented, the infrastructure services segment provided electric utility infrastructure services to government-funded utilities, private utilities, public investor-owned utilities and co-operative utilities in Puerto Rico and the northeast, southwest and midwest portions of the United States. The pressure pumping services segment provides hydraulic fracturing and water transfer services primarily in the Utica Shale of Eastern Ohio, Marcellus Shale in Pennsylvania, Eagle Ford and Permian Basins in Texas and the mid-continent region. The sand segment mines, processes and sells sand for use in hydraulic fracturing. The sand segment primarily services the Utica Shale, Permian Basin, SCOOP, STACK and Montney Shale in British Columbia and Alberta, Canada.

During the periods presented, the Company also provided contract land and directional drilling services, coil tubing services, flowback services, cementing services, acidizing services, equipment rental services, full service transportation, crude oil hauling services and remote accommodation services. The businesses that provide these services are distinct operating segments, which the CODM reviews independently when making key operating and resource utilization decisions. None of these operating segments meet the quantitative thresholds of a reporting segment and do not meet the aggregation criteria set forth in ASC 280 *Segment Reporting.* Therefore, results for these operating segments are included in the column labeled "All Other" in the tables below. Additionally, assets for corporate activities, which primarily include cash and cash equivalents, inter-segment accounts receivable, prepaid insurance and certain property and equipment, are included in the All Other column. Although Mammoth LLC, which holds these corporate assets, meets one of the quantitative thresholds of a reporting segment, it does not engage in business activities from which it may earn revenues and its results are not regularly reviewed by the Company's CODM when making key operating and resource utilization decisions. Therefore, the Company does not include it as a reportable segment.

Sales from one segment to another are generally priced at estimated equivalent commercial selling prices. Total revenue and Total cost of revenue amounts included in the Eliminations column in the following tables include inter-segment transactions conducted between segments. Receivables due for sales from one segment to another and for corporate allocations to each segment are included in the Eliminations column for Total assets in the following tables. All transactions conducted between segments are eliminated in consolidation. Transactions conducted by companies within the same reporting segment are eliminated within each reporting segment. The following tables set forth certain financial information with respect to the Company's reportable segments (in thousands):

Three months ended September 30, 2019	Infrastructure	Pressure Pumping	Sand	All Other	Eliminations	Total
Revenue from external customers	$ 37,289	$ 43,887	$ 12,634	$ 19,607	$ —	$ 113,417
Intersegment revenues	—	725	5,727	367	(6,819)	—
Total revenue	37,289	44,612	18,361	19,974	(6,819)	113,417
Cost of revenue, exclusive of depreciation, depletion, amortization and accretion	36,940	33,059	18,547	22,588	—	111,134
Intersegment cost of revenues	—	6,054	326	439	(6,819)	—
Total cost of revenue	36,940	39,113	18,873	23,027	(6,819)	111,134
Selling, general and administrative	7,322	3,669	1,314	2,118	—	14,423
Depreciation, depletion, amortization and accretion	7,953	10,176	4,022	7,640	—	29,791
Impairment of long-lived assets	—	—	—	6,542	—	6,542
Operating (loss) income	(14,926)	(8,346)	(5,848)	(19,353)	—	(48,473)
Interest expense, net	599	316	43	440	—	1,398
Other (income) expense, net	(6,239)	(3)	99	(225)	—	(6,368)
(Loss) income before income taxes	$ (9,286)	$ (8,659)	$ (5,990)	$ (19,568)	$ —	$ (43,503)

Three months ended September 30, 2018	Infrastructure	Pressure Pumping	Sand	All Other	Eliminations	Total
Revenue from external customers	$ 237,052	$ 93,360	$ 18,742	$ 34,889	$ —	$ 384,043
Intersegment revenues	—	809	18,268	781	(19,858)	—
Total revenue	237,052	94,169	37,010	35,670	(19,858)	384,043
Cost of revenue, exclusive of depreciation, depletion, amortization and accretion	128,267	55,490	29,470	34,338	—	247,565
Intersegment cost of revenues	37	19,002	546	263	(19,848)	—
Total cost of revenue	128,304	74,492	30,016	34,601	(19,848)	247,565
Selling, general and administrative	(54,200)	4,508	1,618	2,750	—	(45,324)
Depreciation, depletion, amortization and accretion	6,591	12,720	4,184	8,520	—	32,015
Impairment of long-lived assets	—	143	—	4,439	—	4,582
Operating income (loss)	156,357	2,306	1,192	(14,640)	(10)	145,205
Interest expense, net	159	150	37	112	—	458
Other expense, net	181	2	199	18	—	400
Income (loss) before income taxes	$ 156,017	$ 2,154	$ 956	$ (14,770)	$ (10)	$ 144,347

Nine months ended September 30, 2019	Infrastructure	Pressure Pumping	Sand	All Other	Eliminations	Total
Revenue from external customers	$ 187,831	$ 217,456	$ 66,820	$ 85,268	$ —	$ 557,375
Intersegment revenues	—	3,936	29,795	1,610	(35,341)	—
Total revenue	187,831	221,392	96,615	86,878	(35,341)	557,375
Cost of revenue, exclusive of depreciation, depletion, amortization and accretion	140,768	157,106	81,475	88,871	—	468,220
Intersegment cost of revenues	1	31,388	2,513	1,499	(35,401)	—
Total cost of revenue	140,769	188,494	83,988	90,370	(35,401)	468,220
Selling, general and administrative	19,874	9,544	4,214	7,581	—	41,213
Depreciation, depletion, amortization and accretion	23,490	30,244	11,423	23,355	—	88,512
Impairment of long-lived assets	—	—	—	6,542	—	6,542
Operating income (loss)	3,698	(6,890)	(3,010)	(40,970)	60	(47,112)
Interest expense, net	1,024	965	145	1,338	—	3,472
Other (income) expense, net	(35,108)	5	67	92	—	(34,944)
Income (loss) before income taxes	$ 37,782	$ (7,860)	$ (3,222)	$ (42,400)	$ 60	$ (15,640)

Nine months ended September 30, 2018	Infrastructure	Pressure Pumping	Sand	All Other	Eliminations	Total
Revenue from external customers	$ 922,761	$ 290,272	$ 92,684	$ 106,169	$ —	$ 1,411,886
Intersegment revenues	—	6,441	48,186	4,974	(59,601)	—
Total revenue	922,761	296,713	140,870	111,143	(59,601)	1,411,886
Cost of revenue, exclusive of depreciation, depletion, amortization and accretion	532,532	183,695	97,917	99,350	—	913,494
Intersegment cost of revenues	2,582	50,578	5,851	590	(59,601)	—
Total cost of revenue	535,114	234,273	103,768	99,940	(59,601)	913,494
Selling, general and administrative	17,437	27,993	5,049	7,835	—	58,314
Depreciation, depletion, amortization and accretion	13,092	40,535	10,381	25,710	—	89,718
Impairment of long-lived assets	—	143	—	4,626	—	4,769
Operating income (loss)	357,118	(6,231)	21,672	(26,968)	—	345,591
Interest expense, net	341	995	193	1,125	—	2,654
Other expense, net	513	94	222	85	—	914
Income (loss) before income taxes	$ 356,264	$ (7,320)	$ 21,257	$ (28,178)	$ —	$ 342,023

	Infrastructure	Pressure Pumping	Sand	All Other	Eliminations	Total
As of September 30, 2019:						
Total assets	$ 427,798	$ 212,882	$ 197,196	$ 115,807	$ 69,406	$ 1,023,089
Goodwill	$ 3,828	$ 86,043	$ 2,684	$ 5,496	$ —	$ 98,051
As of December 31, 2018:						
Total assets	$ 366,457	$ 254,278	$ 177,870	$ 122,442	$ 152,044	$ 1,073,091
Goodwill	$ 3,828	$ 86,043	$ 2,684	$ 8,690	$ —	$ 101,245

21. Subsequent Events

Subsequent to September 30, 2019, the Company ordered additional capital equipment with aggregate commitments of $4.7 million, the majority of which relates to pressure pumping equipment expected to be purchased in 2020.

Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations

The following discussion should be read in conjunction with the unaudited condensed consolidated financial statements and related notes thereto presented in this Quarterly Report and the consolidated financial statements and related notes thereto included in our Annual Report on Form 10-K. This discussion contains forward-looking statements reflecting our current expectations, estimates and assumptions concerning events and financial trends that may affect our future operating results or financial position. Actual results and the timing of events may differ materially from those contained in these forward-looking statements due to a number of factors, including those discussed in Item 1A. "Risk Factors” in this Quarterly Report and in our Form 10-K for the year ended December 31, 2018, filed with the Securities and Exchange Commission, or the SEC, on March 18, 2019 and the section entitled “Forward-Looking Statements” appearing elsewhere in this Quarterly Report.

Overview

We are an integrated, growth-oriented company serving both the electric utility and oil and gas industries in North America. Our primary business objective is to grow our operations and create value for stockholders through organic growth opportunities and accretive acquisitions. Our suite of services includes infrastructure services, pressure pumping services, natural sand proppant services and other energy services, including contract land and directional drilling, coil tubing, equipment rental, full service transportation, crude oil hauling and remote accommodations. Our infrastructure services division provides construction, upgrade, maintenance and repair services to the electrical infrastructure industry. Our pressure pumping services division provides hydraulic fracturing and water transfer services. Our natural sand proppant services division mines, processes and sells proppant used for hydraulic fracturing. In addition to these service divisions, we also provide contract land and directional drilling services, coil tubing services, pressure control services, equipment rentals, full service transportation, crude oil hauling services and remote accommodations. We believe that the services we offer play a critical role in maintaining and improving electrical infrastructure as well as in increasing the ultimate recovery and present value of production streams from unconventional resources. Our complementary suite of services provides us with the opportunity to cross-sell our services and expand our customer base and geographic positioning.

Our transformation into an industrial based company is progressing. We recently formed an infrastructure engineering company focused on the transmission and distribution industry and also commenced oilfield equipment manufacturing operations. The startup of oilfield equipment manufacturing operations enables us to repair our existing equipment in-house, as well as manufacture certain new equipment we may need in the future. The oilfield equipment manufacturing operations will initially serve our internal needs for our water transfer and equipment rental businesses, but we intend to expand into third party sales in the future. We are continuing to explore other opportunities to expand our business lines as we shift to a broader industrial focus.

Third Quarter 2019 Highlights and Recent Developments

- Net loss of $35.7 million, or $0.79 per diluted share, for the three months ended September 30, 2019.
- Adjusted EBITDA of ($3.8) million for the three months ended September 30, 2019. See "Non-GAAP Financial Measures" below for a reconciliation of net income to adjusted EBITDA.
- Formed an infrastructure engineering company focused on the transmission and distribution industry and commenced oilfield equipment manufacturing operations.

Industry Overview

Energy Infrastructure Industry

In 2017, we expanded into the electric infrastructure business, offering both commercial and storm restoration services to government-funded utilities, private utilities, public investor owned utilities and cooperatives. Since we commenced operations in this line of business, substantially all of our infrastructure revenues has been generated from storm restoration work, primarily from the Puerto Rico Electric Power Authority, or PREPA, due to damage caused by Hurricane Maria. On October 19, 2017, Cobra Acquisitions LLC, or Cobra, and PREPA entered into an emergency master services agreement for repairs to PREPA’s electrical grid. The one-year contract, as amended, provided for payments of up to $945 million. On May 26, 2018, Cobra and PREPA entered into a new one-year, $900 million master services agreement to provide additional repair

services and begin the initial phase of reconstruction of the electrical power system in Puerto Rico. Our work under each of the contracts with PREPA ended on March 31, 2019.

As of September 30, 2019, PREPA owed us approximately $227.0 million for services performed excluding $34.9 million of interest charged on these delinquent balances as of September 30, 2019. See Note 2. Basis of Presentation and Significant Accounting Policies-Accounts Receivable of our unaudited condensed consolidated financial statements. PREPA is currently subject to bankruptcy proceedings pending in the U.S. District Court for the District of Puerto Rico. As a result, PREPA's ability to meet its payment obligations under the contracts is largely dependent upon funding from the Federal Emergency Management Agency or other sources. On September 30, 2019, we filed a motion with the U.S. District Court for the District of Puerto Rico seeking recovery of the amounts owed to us by PREPA. PREPA filed a motion to stay our motion on the ground that the ongoing criminal proceedings described below against the former president of Cobra and two other individuals may affect our recovery of those amounts. On October 17, 2019, the court granted PREPA’s request to stay our motion and directed the parties to file a joint motion addressing specified issues by January 22, 2020 in advance of a status conference to be held on January 29, 2020. In the event PREPA (i) does not have or does not obtain the funds necessary to satisfy its obligations to Cobra under the contracts, (ii) obtains the necessary funds but refuses to pay the amounts owed to us or (iii) otherwise fails to pay amounts owed to us for services performed, our financial condition, results of operations and cash flows would be materially and adversely affected. In addition, government contracts are subject to various uncertainties, restrictions and regulations, including oversight audits and compliance reviews by government agencies and representatives. In this regard, on September 10, 2019, the U.S. District Court for the District of Puerto Rico unsealed an indictment that charged the former president of Cobra with conspiracy, wire fraud, false statements and disaster fraud. Two other individuals were also charged in the indictment. The indictment is focused on the interactions between a former FEMA official and the former President of Cobra. Neither we nor any of our subsidiaries were charged in the indictment. We are continuing to cooperate with the related investigation. Given the uncertainty inherent in the criminal litigation, it is not possible at this time to determine the potential outcome or other potential impacts that the criminal litigation could have on us. Further, as noted above, our contracts with PREPA have concluded and there can be no assurance that we will be able to obtain one or more contracts with PREPA or other customers to replace the level of services that we provided to PREPA under our previous contracts.

Since the completion of our work in Puerto Rico on March 31, 2019, we have focused on right-sizing our infrastructure operations and performing required maintenance on our equipment which had been subjected to harsh working conditions. We expect this process, with its associated costs, to be completed during the fourth quarter of 2019.

Demand for our infrastructure services in the continental United States has increased since we began operations in 2017. We had a total of approximately 140 crews as of September 30, 2019, as compared to approximately 105 at December 31, 2018 and approximately 50 at December 31, 2017. Each distribution crew generally consists of five employees. These distribution crews, which now include many of the employees previously located in Puerto Rico, are working for multiple utilities primarily across the northeastern, midwestern and southwestern portions of the United States. We believe we will be able to grow our customer base and increase our revenues in the continental United States over the coming years. We also believe that the skill sets and experience of our crews will afford us enhanced bidding opportunities in both the U.S. and overseas.

As of September 30, 2019, our infrastructure services backlog was approximately $510 million, all of which is attributable to operations in the continental United States. Estimated backlog for our infrastructure services represents the amount of revenue we expect to realize over the next 36 months from future work on uncompleted construction projects, including new contracts under which work has not begun. Our estimated backlog also includes amounts payable to us under master service and other service agreements. Estimated infrastructure services backlog for work under master service and other service agreements is determined based on historical trends, experience from similar projects and estimates of customer demand based on communications with our customers.

Approximately $496 million of our infrastructure services backlog as of September 30, 2019 is attributable to amounts under master service or other service agreements pursuant to which our customers are not contractually committed to purchase a minimum amount of services. Most of these agreements can be canceled on short or no advance notice. Timing of revenue for our infrastructure services backlog can be subject to change as a result of our delays, customer delays, regulatory delays or other factors. These changes could cause estimated revenue to be realized in periods later than originally expected, or not at all. We occasionally experience postponements, cancellations and reductions in expected future work from master service agreements or other service agreements due to changes in our customers’ spending plans, market volatility, governmental funding and regulatory factors. There can be no assurance as to our customers’ requirements or the accuracy of our estimates. As a result, our backlog as of any particular date is an uncertain indicator of future revenue and earnings.

Backlog is not a term recognized under accounting principles generally accepted in the United States; however, it is a common measurement used in the infrastructure industry. As such, our methodology for determining backlog is not comparable to the methodologies used by others.

Oil and Natural Gas Industry

The oil and natural gas industry has traditionally been volatile and is influenced by a combination of long-term, short-term and cyclical trends, including the domestic and international supply and demand for oil and natural gas, current and expected future prices for oil and natural gas and the perceived stability and sustainability of those prices, production depletion rates and the resultant levels of cash flows generated and allocated by exploration and production companies to their drilling, completion and related services and products budget. The oil and natural gas industry is also impacted by general domestic and international economic conditions, political instability in oil producing countries, government regulations (both in the United States and elsewhere), levels of customer demand, the availability of pipeline capacity and other conditions and factors that are beyond our control.

Demand for most of our oil and natural gas products and services depends substantially on the level of expenditures by companies in the oil and natural gas industry. The levels of capital expenditures of our customers are predominantly driven by oil and natural gas prices. Over the past several years, commodity prices, particularly oil, has seen significant volatility with pricing ranging from a high of $110.53 per barrel on September 6, 2013 to a low of $26.19 per barrel on February 11, 2016. During early 2017, oil prices stabilized around the $50 per barrel level and started a gradual upward trend which continued into the fourth quarter of 2018, when oil prices peaked at $76.41 on October 3, 2018. Due to certain factors related to world politics and major oil producers, the price of oil experienced a sharp decline during the fourth quarter of 2018, with prices falling to a low of $42.53 on December 24, 2018. Oil prices stabilized in early 2019 and started an upward trend reaching a high of $66.30 per barrel on April 23, 2019. Throughout the third quarter of 2019, oil prices fluctuated between $51.09 and $62.90, averaging $56.33 per barrel.

We anticipate demand for our oil and natural gas services and products will continue to be dependent on the level of expenditures by companies in the oil and natural gas industry and, ultimately, commodity prices. We experienced a weakening in demand for our oilfield services beginning in the third quarter of 2018 which accelerated in the fourth quarter of 2018 as a result of softening of oil prices and budget exhaustion by our customers. With the rebound in commodity prices in early 2019 and the resetting of budgets for the new year, we saw demand for our pressure pumping services increase in the first quarter of 2019. However, utilization rates for our pressure pumping and other oilfield services started to decline in the second quarter of 2019 and pricing remained challenging. These utilization and pricing trends continued during the third quarter of 2019. If commodity prices remain at current levels or increase, the capital expenditures of our customers have the potential to increase from current levels as additional cash flows are realized. If this were to occur, we would expect an increase in demand for our services and products, particularly in our completion and production, natural sand proppant and contract land and directional drilling businesses. However, even if an increase in demand were to occur, it may not result in an increase in, or a continuation of, current pricing as many of the oilfield services we provide are oversupplied. Decreases in commodity prices, however, would be expected to result in a reduction in the capital expenditures of our customers and reduce the demand and pricing for our drilling, completion and other products and services.

During the first nine months of 2019, we experienced lower utilization rates and pricing for our oil and natural gas services, including our pressure pumping, contract drilling, coil tubing and directional drilling equipment and services, as compared to the same period of 2018. Further, in response to market conditions, we have temporarily shut down our cementing and acidizing operations as well as our flowback operations. Based on current feedback from our exploration and production customers, we expect them to take a cautious approach to activity levels in the fourth quarter of 2019 given the recent volatility in oil prices, investor sentiment calling for activities to remain within or below cash flows and budget exhaustion. Accordingly, we do not anticipate material changes in the overall pricing for our products and services in the near term. We intend to closely monitor our cost structure in response to market conditions. Further, a significant portion of our revenue from our pressure pumping business is derived from Gulfport pursuant to a contract that expires in December 2021. The termination of our relationship with Gulfport, or nonrenewal of our contract with Gulfport, or one or more of our other customers, if not replaced with comparable levels of service from other customers, could result in lower utilization rates for our pressure pumping equipment and, as a result, would have a material adverse effect on our business, financial condition, results of operation and cash flow.

Natural Sand Proppant Industry

In the natural sand proppant industry, demand growth for frac sand and other proppants is primarily driven by advancements in oil and natural gas drilling and well completion technology and techniques, such as horizontal drilling and hydraulic fracturing, as well as overall industry activity growth. Demand for proppant declined in 2015 and throughout most of 2016 and again in late 2018 due to reduced well completion activity; however, we believe that demand for proppant will continue to grow over the long-term, as it did throughout 2017 and the first half of 2018.

Over the past 24 months, several new suppliers entered the market and existing suppliers completed planned capacity additions of frac sand supply, particularly in the Permian Basin. The industry expansion caused the frac sand market to become oversupplied, particularly in finer grades. As a result, pricing for certain grades has fallen significantly from the peaks experienced during the first half of 2018. This price degradation has resulted in the temporary closure of several Northern White plants. We believe that the coarseness, conductivity, sphericity, acid-solubility and crush-resistant properties of our Northern White sand reserves and our transportation infrastructure afford us an advantage over many of our competitors and make us one of a select group of Northern White sand producers capable of delivering high volumes of frac sand that is optimal for oil and natural gas production to all major unconventional resource basins currently producing throughout North America.

During the nine months ended September 30, 2018, constraints in the rail system adversely impacted frac sand deliveries from our Taylor sand facility in Jackson County, Wisconsin. As a result, we estimate production at our Taylor facility was 31% lower during the nine months ended September 30, 2018 than it would have been in the absence of these constraints. These rail system constraints were largely alleviated by the end of 2018. Production at our Piranha facility was not impacted by these rail constraints.

Further, as a result of adverse market conditions, production at our Muskie sand facility in Pierce County, Wisconsin has been temporarily idled since September 2018. Our Taylor sand facility in Taylor, Wisconsin and Piranha sand facility in New Auburn, Wisconsin are currently running at 10% to 20% capacity. Our contracted capacity has provided a strong baseline of business, which has kept our Taylor and Piranha plants operating and our costs low. Our blended production costs have declined 28% from $16.37 during the nine months ended September 30, 2018 to $11.84 during the nine months ended September 30, 2019.

Results of Operations

Three Months Ended September 30, 2019 Compared to Three Months Ended September 30, 2018

	Three Months Ended	
	September 30, 2019	September 30, 2018
	(in thousands)	
Revenue:		
Infrastructure services	$ 37,289	$ 237,052
Pressure pumping services	44,612	94,169
Natural sand proppant services	18,361	37,010
Other services	19,974	35,670
Eliminations	(6,819)	(19,858)
Total revenue	113,417	384,043
Cost of revenue:		
Infrastructure services (exclusive of depreciation and amortization of $7,947 and $6,582, respectively, for the three months ended September 30, 2019 and 2018)	36,940	128,304
Pressure pumping services (exclusive of depreciation and amortization of $10,165 and $12,711, respectively, for the three months ended September 30, 2019 and 2018)	39,113	74,492
Natural sand proppant services (exclusive of depreciation, depletion and accretion of $4,019 and $4,183, respectively, for the three months ended September 30, 2019 and 2018)	18,873	30,016
Other services (exclusive of depreciation and amortization of $7,637 and $8,517, respectively, for the three months ended September 30, 2019 and 2018)	23,027	34,601
Eliminations	(6,819)	(19,848)
Total cost of revenue	111,134	247,565
Selling, general and administrative expenses	14,423	(45,324)
Depreciation, depletion, amortization and accretion	29,791	32,015
Impairment of long-lived assets	6,542	4,582
Operating (loss) income	(48,473)	145,205
Interest expense, net	(1,398)	(458)
Other income (expense), net	6,368	(400)
(Loss) income before income taxes	(43,503)	144,347
(Benefit) provision for income taxes	(7,794)	74,835
Net (loss) income	$ (35,709)	$ 69,512

Revenue. Revenue for the three months ended September 30, 2019 decreased $271 million, or 70%, to $113 million from $384 million for the three months ended September 30, 2018. The decrease in total revenue is primarily attributable to decreases in infrastructure services and pressure pumping services revenue of $200 million and $49 million, respectively, during the three months ended September 30, 2019.

Revenue derived from related parties was $18 million, or 16% of our total revenues, for the three months ended September 30, 2019 and $23 million, or 6% of our total revenue, for the three months ended September 30, 2018. Substantially all of our related party revenue is derived from Gulfport under pressure pumping and sand contracts. Revenue by operating division was as follows:

Infrastructure Services. Infrastructure services division revenue decreased $200 million, or 84%, to $37 million for the three months ended September 30, 2019 from $237 million for the three months ended September 30, 2018 primarily due to the conclusion on March 31, 2019 of the work we performed under our contracts with PREPA

for repairs to Puerto Rico's electrical grid as a result of Hurricane Maria. For additional information regarding our contracts with PREPA and our infrastructure services, see "Industry Overview - Electrical Infrastructure Industry" above. Revenue from operations in the continental United States increased $20 million, or 118%, to $37 million for the three months ended September 30, 2019 from $17 million for the three months ended September 30, 2018.

Pressure Pumping Services. Pressure pumping services division revenue decreased $49 million, or 52%, to $45 million for the three months ended September 30, 2019 from $94 million for the three months ended September 30, 2018. Revenue derived from related parties was $14 million, or 31% of total pressure pumping revenue, for the three months ended September 30, 2019 compared to $16 million, or 17% of total pressure pumping revenue, for the three months ended September 30, 2018. All of our related party revenue is derived from Gulfport. Inter-segment revenue, consisting primarily of revenue derived from our sand segment, totaled $1 million for each of the three months ended September 30, 2019 and 2018.

The decrease in our pressure pumping services revenue was primarily driven by a decline in utilization. The number of stages completed decreased 51% from 1,594 for the three months ended September 30, 2018 to 783 for the three months ended September 30, 2019. An average of 1.2 of our fleets were active for the three months ended September 30, 2019 as compared to an average of 3.5 fleets for the three months ended September 30, 2018.

Natural Sand Proppant Services. Natural sand proppant services division revenue decreased $19 million, or 51%, to $18 million for the three months ended September 30, 2019, from $37 million for the three months ended September 30, 2018. Revenue derived from related parties was $3 million, or 17% of total sand revenue, for the three months ended September 30, 2019 and $4 million, or 10% of total sand revenue, for the three months ended September 30, 2018. Inter-segment revenue, consisting primarily of revenue derived from our pressure pumping segment, totaled $6 million, or 33% of total sand revenue, for the three months ended September 30, 2019 and $18 million, or 49% of total sand revenue, for the three months ended September 30, 2018.

The decrease in our natural sand proppant services revenue was primarily attributable to a 29% decline in average price per ton of sand sold from $37.88 per ton during the three months ended September 30, 2018 to $26.84 per ton during the three months ended September 30, 2019, as well as a 24% decrease in tons of sand sold from 598,438 tons for the three months ended September 30, 2018 to 456,471 tons for the three months ended September 30, 2019.

Other Services. Other revenue, consisting of revenue derived from our contract land and directional drilling, coil tubing, pressure control, flowback, cementing, acidizing, equipment rental, full service transportation, crude oil hauling and remote accommodation businesses, decreased $16 million, or 44%, to $20 million for the three months ended September 30, 2019 from $36 million for the three months ended September 30, 2018. Revenue derived from related parties, consisting primarily of equipment rental revenue from Gulfport, was $1 million, or 5% of total other revenue, for the three months ended September 30, 2019 and $3 million, or 8% of total other revenue, for the three months ended September 30, 2018. Inter-segment revenue, consisting primarily of revenue derived from our pressure pumping and infrastructure segments, was a nominal amount and $1 million for the three months ended September 30, 2019 and 2018.

The decrease in our other services revenue was primarily due to declines in utilization for our contract land drilling, directional drilling, rig hauling and crude oil hauling businesses. Additionally, due to market conditions, we temporarily shut down our cementing and acidizing operations as well as our flowback operations during the three months ended September 30, 2019 resulting in a decline in revenue. These decreases were partially offset by an increase in activity for our equipment rental business. An average of 541 pieces of equipment were rented during the three months ended September 30, 2019, an increase of 42% from an average of 381 pieces of equipment rented during the three months ended September 30, 2018

Cost of Revenue (exclusive of depreciation, depletion, amortization and accretion expense). Cost of revenue, exclusive of depreciation, depletion, amortization and accretion expense, decreased $137 million from $248 million, or 64% of total revenue, for the three months ended September 30, 2018 to $111 million, or 98% of total revenue, for the three months ended September 30, 2019. The decrease was primarily due to a decline in activity across all business lines. Cost of revenue by operating division was as follows:

Infrastructure Services. Infrastructure services division cost of revenue, exclusive of depreciation and amortization expense, decreased $91 million, or 71%, to $37 million for the three months ended September 30, 2019 from $128 million for the three months ended September 30, 2018. The decrease is due to the conclusion on March

31, 2019 of the work we performed under our contracts with PREPA for repairs to Puerto Rico's electrical grid as a result of Hurricane Maria. As a percentage of revenue, cost of revenue, exclusive of depreciation and amortization expense of $8 million and $7 million for the three months ended September 30, 2019 and 2018, respectively, was 99% and 54% for the three months ended September 30, 2019 and 2018, respectively. The increase is primarily due to increased labor costs and repairs and maintenance expense as a percentage of revenue.

Pressure Pumping Services. Pressure pumping services division cost of revenue, exclusive of depreciation and amortization expense, decreased $35 million, or 47%, to $39 million for the three months ended September 30, 2019 from $74 million for the three months ended September 30, 2018 primarily due to a decline in activity. As a percentage of revenue, our pressure pumping services division cost of revenue, exclusive of depreciation and amortization expense of $10 million and $13 million for the three months ended September 30, 2019 and 2018, respectively, was 88% and 79% for the three months ended September 30, 2019 and 2018, respectively. The increase is primarily due to a decline in utilization.

Natural Sand Proppant Services. Natural sand proppant services division cost of revenue, exclusive of depreciation, depletion and accretion expense, decreased $11 million, or 37%, to $19 million for the three months ended September 30, 2019 from $30 million for the three months ended September 30, 2018, primarily due to a decline in cost of goods sold as a result of a 24% decrease in tons of sand sold. As a percentage of revenue, cost of revenue, exclusive of depreciation, depletion and accretion expense of $4 million for each of the three months ended September 30, 2019 and 2018, respectively, was 103% and 81% for the three months ended September 30, 2019 and 2018, respectively. The increase in cost as a percentage of revenue is primarily due to a 29% decline in average price per ton of sand sold.

Other Services. Other services division cost of revenue, exclusive of depreciation and amortization expense, decreased $12 million, or 34%, to $23 million for the three months ended September 30, 2019 from $35 million for the three months ended September 30, 2018, primarily due to declines in cost of revenue for our contract land drilling, directional drilling, crude oil hauling and rig hauling businesses as a result of reduced activity. Additionally, due to market conditions, we temporarily shut down our cementing and acidizing operations as well as our flowback operations during the three months ended September 30, 2019 resulting in a decline in cost of revenue. These declines were partially offset by an increase in costs for our equipment rental business. As a percentage of revenue, cost of revenue, exclusive of depreciation and amortization expense of $8 million and $9 million for the three months ended September 30, 2019 and 2018, respectively, was 115% and 97% for the three months ended September 30, 2019 and 2018, respectively. The increase is primarily the result declines in utilization for our contract land drilling, directional drilling, crude oil hauling and rig hauling businesses.

Selling, General and Administrative Expenses. Selling, general and administrative expenses, or SG&A, represent the costs associated with managing and supporting our operations. The table below presents a breakdown of SG&A expenses for the periods indicated (in thousands):

	Three Months Ended	
	September 30, 2019	September 30, 2018
Cash expenses:		
Compensation and benefits	$ 4,777	$ 14,864
Professional services	6,104	3,267
Other[(a)]	1,665	3,701
Total cash SG&A expense	12,546	21,832
Non-cash expenses:		
Bad debt provision[(b)]	964	(68,333)
Stock based compensation	913	1,177
Total non-cash SG&A expense	1,877	(67,156)
Total SG&A expense	$ 14,423	$ (45,324)

a. Includes travel-related costs, IT expenses, rent, utilities and other general and administrative-related costs.

b. During the three months ended September 30, 2018, we received payment for amounts previously reserved in 2017. As a result, during the three months ended September 30, 2018, we reversed bad debt expense of $16.0 million recognized in 2017 and $53.6 million of the bad debt expense recognized in the first half of 2018.

Depreciation, Depletion, Amortization and Accretion. Depreciation, depletion, amortization and accretion decreased $2 million, or 6%, to $30 million for the three months ended September 30, 2019 from $32 million for the three months ended September 30, 2018. The decrease is primarily attributable to a decline in intangible asset amortization expense.

Impairment of Long-Lived Assets. During the three months ended September 30, 2019, we temporarily shut down our cementing and acidizing operations as well as our flowback operations. As a result, we recorded impairment expense of $3 million on intangible assets, including goodwill, and $3 million on fixed assets during the three months ended September 30, 2019. We recorded an impairment of $5 million on various intangible assets during the three months ended September 30, 2018 related to the movement of certain cementing equipment from the Utica shale to the Permian basin.

Operating Income. Operating income decreased $193 million to an operating loss of $48 million for the three months ended September 30, 2019 from operating income of $145 million for the three months ended September 30, 2018. The decrease was primarily due to a $171 million decline in operating income for our infrastructure services division due to a decline in activity.

Interest Expense, Net. Interest expense, net increased $1 million during the three months ended September 30, 2019 compared to the three months ended September 30, 2018 primarily due to an increase in average borrowings outstanding.

Other Income, Net. Other income, net increased $7 million during the three months ended September 30, 2019 compared to the three months ended September 30, 2018 primarily due to the recognition of interest on trade account receivable totaling $6 million pursuant to the terms of our contracts with PREPA.

Income Taxes. We recorded an income tax benefit of $8 million on pre-tax loss of $44 million for the three months ended September 30, 2019 compared to income tax expense of $75 million on pre-tax income of $144 million for the three months ended September 30, 2018. Our effective tax rate was 18% and 52%, respectively, for the three months ended September 30, 2019 and 2018. The decline in effective tax rate is primarily due to lower earnings in Puerto Rico during the three months ended September 30, 2019, which has a higher tax rate than the United States.

Nine Months Ended September 30, 2019 Compared to Nine Months Ended September 30, 2018

	Nine Months Ended	
	September 30, 2019	**September 30, 2018**
	(in thousands)	
Revenue:		
Infrastructure services	$ 187,831	$ 922,761
Pressure pumping services	221,392	296,713
Natural sand proppant services	96,615	140,870
Other services	86,878	111,143
Eliminations	(35,341)	(59,601)
Total revenue	557,375	1,411,886
Cost of revenue:		
Infrastructure services (exclusive of depreciation and amortization of $23,471 and $13,071, respectively, for the nine months ended September 30, 2019 and 2018)	140,769	535,114
Pressure pumping services (exclusive of depreciation and amortization of $30,211 and $40,508, respectively, for the nine months ended September 30, 2019 and 2018)	188,494	234,273
Natural sand proppant services (exclusive of depreciation, depletion and accretion of $11,414 and $10,376, respectively, for the nine months ended September 30, 2019 and 2018)	83,988	103,768
Other services (exclusive of depreciation and amortization of $23,346 and $25,704, respectively, for the nine months ended September 30, 2019 and 2018)	90,370	99,940
Eliminations	(35,401)	(59,601)
Total cost of revenue	468,220	913,494
Selling, general and administrative expenses	41,213	58,314
Depreciation, depletion, amortization and accretion	88,512	89,718
Impairment of long-lived assets	6,542	4,769
Operating (loss) income	(47,112)	345,591
Interest expense, net	(3,472)	(2,654)
Other income (expense), net	34,944	(914)
(Loss) income before income taxes	(15,640)	342,023
Provision (benefit) for income taxes	2,625	174,265
Net (loss) income	$ (18,265)	$ 167,758

Revenue. Revenue for the nine months ended September 30, 2019 decreased $855 million, or 61%, to $557 million from $1.4 billion for the nine months ended September 30, 2018. The decrease in total revenue is primarily attributable to a $735 million decline in infrastructure services revenue as well as a $76 million decline in pressure pumping services revenue.

Revenue derived from related parties was $122 million, or 22% of our total revenue, for the nine months ended September 30, 2019 and $134 million, or 9% of our total revenue, for the nine months ended September 30, 2018. Substantially all of our related party revenue is derived from Gulfport under pressure pumping and sand contracts. Revenue by operating division was as follows:

Infrastructure Services. Infrastructure services division revenue decreased $735 million, or 80%, to $188 million for the nine months ended September 30, 2019 from $923 million for the nine months ended September 30, 2018 primarily due to the conclusion on March 31, 2019 of the work we performed under our contracts with PREPA for repairs to Puerto Rico's electrical grid as a result of Hurricane Maria. For the nine months ended September 30, 2019, we generated 51% of total infrastructure services revenue from our contracts with PREPA compared to 96% for the nine months ended September 30, 2018. For additional information regarding our contracts with PREPA and our

infrastructure services, see "Industry Overview - Electrical Infrastructure Industry" above. Revenue from operations in the continental United States increased $53 million, or 139%, to $91 million for the nine months ended September 30, 2019 from $38 million for the nine months ended September 30, 2018.

Pressure Pumping Services. Pressure pumping services division revenue decreased $76 million, or 26%, to $221 million for the nine months ended September 30, 2019 from $297 million for the nine months ended September 30, 2018. Revenue derived from related parties was $85 million, or 38% of total pressure pumping revenue, for the nine months ended September 30, 2019 compared to $88 million, or 30% of total pressure pumping revenue, for the nine months ended September 30, 2018. Substantially all of our related party revenue is derived from Gulfport. Inter-segment revenues, consisting primarily of revenue derived from our sand segment, totaled $4 million and $6 million, respectively, for the nine months ended September 30, 2019 and 2018.

The decrease in our pressure pumping services revenue was primarily driven by a decline in utilization. The number of stages completed decreased 14% to 4,389 for the nine months ended September 30, 2019 from 5,081 for the nine months ended September 30, 2018. An average of 2.0 of six fleets were active for the nine months ended September 30, 2019 as compared to an average of 3.9 fleets for the nine months ended September 30, 2018.

Natural Sand Proppant Services. Natural sand proppant services division revenue decreased $44 million, or 31%, to $97 million for the nine months ended September 30, 2019, from $141 million for the nine months ended September 30, 2018. Revenue derived from related parties was $26 million, or 27% of total sand revenue, for the nine months ended September 30, 2019 and $25 million, or 18% of total sand revenue, for the nine months ended September 30, 2018. Inter-segment revenue, consisting primarily of revenue derived from our pressure pumping segment, totaled $30 million, or 31% of total sand revenue, for the nine months ended September 30, 2019 and $48 million, or 34% of total sand revenue, for the nine months ended September 30, 2018.

The decrease in our natural sand proppant services revenue was primarily attributable to a 29% decline in average sales price per ton of sand sold from $42.08 per ton during the nine months ended September 30, 2018 to $30.08 per ton during the nine months ended September 30, 2019, as well as an 8% decrease in tons of sand sold from approximately 2.1 million tons for the nine months ended September 30, 2018 to approximately 1.9 million tons for the nine months ended September 30, 2019.

Other Services. Other revenue, consisting of revenue derived from our contract land and directional drilling, coil tubing, pressure control, flowback, cementing, acidizing, equipment rental, full service transportation, crude oil hauling and remote accommodation businesses, decreased $24 million, or 22%, to $87 million for the nine months ended September 30, 2019 from $111 million for the nine months ended September 30, 2018. Revenue derived from related parties, consisting primarily of equipment rental and cementing revenue from Gulfport, was $9 million, or 10% of total other revenue, for the nine months ended September 30, 2019 and $21 million, or 19% of total other revenue, for the nine months ended September 30, 2018. Inter-segment revenue, consisting primarily of revenue derived from our infrastructure and pressure pumping segments, totaled $2 million and $5 million, respectively, for the nine months ended September 30, 2019 and 2018.

The decrease in our other services revenue was primarily due to declines in utilization for our contract land drilling, coil tubing and directional drilling businesses. Additionally, due to market conditions, we temporarily shut down our cementing and acidizing operations as well as our flowback operations during the three months ended September 30, 2019 resulting in a decline in revenue. These declines were partially offset by an increase in activity for our equipment rental business and increased crude oil hauling revenues due to the acquisition of WTL in the second quarter of 2018. An average of 587 pieces of equipment were rented during the nine months ended September 30, 2019, an increase of 64% from an average of 359 pieces of equipment rented during the nine months ended September 30, 2018.

Cost of Revenue (exclusive of depreciation, depletion, amortization and accretion expense). Cost of revenue, exclusive of depreciation, depletion, amortization and accretion expense, decreased $445 million from $913 million, or 65% of total revenue, for the nine months ended September 30, 2018 to $468 million, or 84% of total revenue, for the nine months ended September 30, 2019. The decrease was primarily due to a decline in activity across all business lines. Cost of revenue by operating division was as follows:

Infrastructure Services. Infrastructure services division cost of revenue, exclusive of depreciation and amortization expense, decreased $394 million, or 74%, to $141 million for the nine months ended September 30, 2019 from $535 million for the nine months ended September 30, 2018. The decrease is primarily due to the conclusion on

March 31, 2019 of the work we performed under our contracts with PREPA for repairs to Puerto Rico's electrical grid as a result of Hurricane Maria. As a percentage of revenue, cost of revenue, exclusive of depreciation and amortization expense of $23 million and $13 million for the nine months ended September 30, 2019 and 2018, respectively, was 75% and 58% for the nine months ended September 30, 2019 and 2018, respectively. The increase is primarily due to increased labor and repairs and maintenance costs as a percentage of revenue.

Pressure Pumping Services. Pressure pumping services division cost of revenue, exclusive of depreciation and amortization expense, decreased$46 million, or 20%, to $188 million for the nine months ended September 30, 2019 from $234 million for the nine months ended September 30, 2018. The decrease was primarily due to a decline in activity. As a percentage of revenue, our pressure pumping services division cost of revenue, exclusive of depreciation and amortization expense of $30 million and $41 million for the nine months ended September 30, 2019 and 2018, respectively, was 85% and 79% for the nine months ended September 30, 2019 and 2018, respectively.

Natural Sand Proppant Services. Natural sand proppant services division cost of revenue, exclusive of depreciation, depletion and accretion expense, decreased $20 million, or 19%, from $104 million for the nine months ended September 30, 2018 to $84 million for the nine months ended September 30, 2019, primarily due to a decline in cost of goods sold as a result of a decrease in tons of sand sold. As a percentage of revenue, cost of revenue, exclusive of depreciation, depletion and accretion expense of $11 million and $10 million for the nine months ended September 30, 2019 and 2018, respectively, was 87% and 74% for the nine months ended September 30, 2019 and 2018, respectively. The increase in cost as a percentage of revenue is primarily due to a decline in average price per ton of sand sold.

Other Services. Other services division cost of revenue, exclusive of depreciation and amortization expense, decreased$10 million, or 10%, from $100 million for the nine months ended September 30, 2018 to $90 million for the nine months ended September 30, 2019, primarily due to a decline in costs for our contract land drilling, coil tubing and directional drilling businesses as a result of reduced activity. Additionally, due to market conditions, we temporarily shut down our cementing and acidizing operations as well as our flowback operations during the three months ended September 30, 2019 resulting in a decline in cost of revenue. These declines were partially offset by an increase in costs for our equipment rental business and crude oil hauling business. As a percentage of revenue, cost of revenue, exclusive of depreciation and amortization expense of $23 million and $26 million for the nine months ended September 30, 2019 and 2018, respectively, was 104% and 90% for the nine months ended September 30, 2019 and 2018, respectively. The increase is primarily the result of a decline in utilization in our contract land drilling, coil tubing, cementing and directional drilling businesses.

Selling, General and Administrative Expenses. Selling, general and administrative expenses represent the costs associated with managing and supporting our operations. The table below presents a breakdown of SG&A expenses for the periods indicated (in thousands):

	Nine Months Ended	
	September 30, 2019	**September 30, 2018**
Cash expenses:		
Compensation and benefits	$ 16,161	$ 33,541
Professional services	12,827	8,835
Other[(a)]	8,290	9,243
Total cash SG&A expense	37,278	51,619
Non-cash expenses:		
Bad debt provision[(b)]	1,230	(14,543)
Equity based compensation[(c)]	—	17,487
Stock based compensation	2,705	3,751
Total non-cash SG&A expense	3,935	6,695
Total SG&A expense	$ 41,213	$ 58,314

a. Includes travel-related costs, IT expenses, rent, utilities and other general and administrative-related costs.
b. During the nine months ended September 30, 2018, we received payment for amounts previously reserved in 2017. As a result, during the nine months ended September 30, 2018, we reversed bad debt expense of $16.0 million recognized in 2017.
c. Represents compensation expense for non-employee awards, which were issued and are payable by certain affiliates of Wexford (the sponsor level).

Depreciation, Depletion, Amortization and Accretion. Depreciation, depletion, amortization and accretion decreased $1 million to $89 million for the nine months ended September 30, 2019 from $90 million for the nine months ended September 30, 2018. The decrease is primarily attributable to a decline in intangible asset amortization expense, which was partially offset by an increase in depreciation expense as a result of additional property and equipment purchases.

Impairment of Long-Lived Assets. During the nine months ended September 30, 2019, we temporarily shut down our cementing and acidizing operations as well as our flowback operations. As a result, we recorded impairment expense of $3 million on intangible assets, including goodwill, and $3 million on fixed assets during the nine months ended September 30, 2019. We recorded an impairment of $5 million on various intangible assets during the nine months ended September 30, 2018 related to the movement of certain cementing equipment from the Utica shale to the Permian basin.

Operating Income (Loss). Operating income decreased $393 million to an operating loss of $47 million for the nine months ended September 30, 2019 from operating income of $346 million for the nine months ended September 30, 2018. The decrease was primarily due to a $353 million decline in operating income for our infrastructure services division due to a decline in activity as well as a $25 million decline in operating income for our natural sand proppant services division due to a decrease in pricing.

Interest Expense, Net. Interest expense, net increased $1 million during the nine months ended September 30, 2019 compared to the nine months ended September 30, 2018 primarily due to an increase in average borrowings outstanding.

Other Expense, Net. Other income, net increased $36 million during the nine months ended September 30, 2019 compared to the nine months ended September 30, 2018 primarily due to the recognition of interest on trade account receivable totaling $35 million pursuant to the terms of our contracts with PREPA.

Income Taxes. We recorded income tax expense of $3 million on pre-tax loss of $16 million for the nine months ended September 30, 2019 compared to $174 million on pre-tax income of $342 million for the nine months ended September 30, 2018. Our effective tax rate was (17%) for the nine months ended September 30, 2019 compared to 51% for the nine months ended September 30, 2018. For the nine months ended September 30, 2019, we recognized a loss in the United States, which was partially offset by earnings from our operations in Puerto Rico, which has a higher statutory rate compared to the United States. During the nine months ended September 30, 2019, we recorded a benefit related to return to provision adjustments, which was partially offset by changes in the valuation allowance.

Non-GAAP Financial Measures

Adjusted EBITDA

Adjusted EBITDA is a supplemental non-GAAP financial measure that is used by management and external users of our financial statements, such as industry analysts, investors, lenders and rating agencies. We define Adjusted EBITDA as net income (loss) before depreciation, depletion, accretion and amortization, impairment of long-lived assets, inventory obsolescence charges, acquisition related costs, public offering costs, equity based compensation, stock based compensation, interest expense, net, other (income) expense, net (which is comprised of the (gain) or loss on disposal of long-lived assets and interest on trade accounts receivable) and provision (benefit) for income taxes, further adjusted to add back interest on trade accounts receivable. We exclude the items listed above from net income (loss) in arriving at Adjusted EBITDA because these amounts can vary substantially from company to company within our industries depending upon accounting methods and book values of assets, capital structures and the method by which the assets were acquired. Adjusted EBITDA should not be considered as an alternative to, or more meaningful than, net income (loss) or cash flows from operating activities as determined in accordance with GAAP or as an indicator of our operating performance or liquidity. Certain items excluded from Adjusted EBITDA are significant components in understanding and assessing a company’s financial performance, such as a company’s cost of capital and tax structure, as well as the historic costs of depreciable assets, none of which are components of Adjusted EBITDA. Our computations of Adjusted EBITDA may not be comparable to other similarly titled measures of other companies. We believe that Adjusted EBITDA is a widely followed measure of operating performance and may also be used by investors to measure our ability to meet debt service requirements.

The following tables provide a reconciliation of Adjusted EBITDA to the GAAP financial measure of net income or (loss) for each of our operating segments for the specified periods (in thousands).

Consolidated

	Three Months Ended September 30,		Nine Months Ended September 30,	
Reconciliation of Adjusted EBITDA to net (loss) income:	**2019**	**2018**	**2019**	**2018**
Net (loss) income	$ (35,709)	$ 69,512	$ (18,265)	$ 167,758
Depreciation, depletion, accretion and amortization expense	29,791	32,015	88,512	89,718
Impairment of long-lived assets	6,542	4,582	6,542	4,769
Inventory obsolescence charges	1,349	—	1,349	—
Acquisition related costs	—	99	45	130
Public offering costs	—	260	—	991
Equity based compensation	—	—	—	17,487
Stock based compensation	1,134	1,415	3,367	4,331
Interest expense, net	1,398	458	3,472	2,654
Other (income) expense, net	(6,368)	400	(34,944)	914
Interest on trade accounts receivable	5,896	—	34,865	—
(Benefit) provision for income taxes	(7,794)	74,835	2,625	174,265
Adjusted EBITDA	$ (3,761)	$ 183,576	$ 87,568	$ 463,017

Infrastructure Services

	Three Months Ended September 30,		Nine Months Ended September 30,	
Reconciliation of Adjusted EBITDA to net (loss) income:	**2019**	**2018**	**2019**	**2018**
Net (loss) income	$ (10,763)	$ 78,405	$ 31,113	$ 178,064
Depreciation and amortization expense	7,953	6,591	23,490	13,092
Acquisition related costs	—	—	12	(4)
Public offering costs	—	123	—	483
Stock based compensation	217	555	688	1,618
Interest expense	599	159	1,024	341
Other (income) expense, net	(6,239)	181	(35,108)	513
Interest on trade accounts receivable	5,896	—	34,865	—
Provision for income taxes	1,477	77,612	6,670	178,200
Adjusted EBITDA	$ (860)	$ 163,626	$ 62,754	$ 372,307

Pressure Pumping Services

Reconciliation of Adjusted EBITDA to net (loss) income:	Three Months Ended September 30, 2019	Three Months Ended September 30, 2018	Nine Months Ended September 30, 2019	Nine Months Ended September 30, 2018
Net (loss) income	$ (8,659)	$ 2,154	$ (7,860)	$ (7,320)
Depreciation and amortization expense	10,176	12,720	30,244	40,535
Impairment of long-lived assets	—	143	—	143
Acquisition related costs	—	6	18	39
Public offering costs	—	62	—	264
Equity based compensation	—	—	—	17,487
Stock based compensation	503	423	1,402	1,294
Interest expense	316	150	965	995
Other (income) expense, net	(3)	2	5	94
Adjusted EBITDA	$ 2,333	$ 15,660	$ 24,774	$ 53,531

Natural Sand Proppant Services

Reconciliation of Adjusted EBITDA to net (loss) income:	Three Months Ended September 30, 2019	Three Months Ended September 30, 2018	Nine Months Ended September 30, 2019	Nine Months Ended September 30, 2018
Net (loss) income	$ (5,990)	$ 956	$ (3,222)	$ 21,257
Depreciation, depletion, accretion and amortization expense	4,022	4,184	11,423	10,381
Acquisition related costs	—	—	8	(38)
Public offering costs	—	49	—	144
Stock based compensation	216	211	656	602
Interest expense	43	37	145	193
Other expense, net	99	199	67	222
Adjusted EBITDA	$ (1,610)	$ 5,636	$ 9,077	$ 32,761

Other Services[a]

Reconciliation of Adjusted EBITDA to net loss:	Three Months Ended September 30, 2019	Three Months Ended September 30, 2018	Nine Months Ended September 30, 2019	Nine Months Ended September 30, 2018
Net loss	$ (10,297)	$ (11,993)	$ (38,356)	$ (24,243)
Depreciation and amortization expense	7,640	8,520	23,355	25,710
Impairment of long-lived assets	6,542	4,439	6,542	4,626
Inventory obsolescence charges	1,349	—	1,349	—
Acquisition related costs	—	93	7	133
Public offering costs	—	26	—	100
Stock based compensation	198	226	621	817
Interest expense, net	440	112	1,338	1,125
Other (income) expense, net	(225)	18	92	85
Benefit for income taxes	(9,271)	(2,777)	(4,045)	(3,935)
Adjusted EBITDA	$ (3,624)	$ (1,336)	$ (9,097)	$ 4,418

a. Includes results for our contract land and directional drilling, coil tubing, pressure control, flowback, cementing, acidizing, equipment rentals, full service transportation, crude oil hauling and remote accommodations services and corporate related activities. Our corporate related activities do not generate revenue.

Adjusted Net Income (Loss) and Adjusted Earnings (Loss) per Share

Adjusted net income (loss) and adjusted earnings (loss) per share are supplemental non-GAAP financial measures that are used by management to evaluate our operating and financial performance. Management believes these measures provide meaningful information about the Company's performance by excluding certain non-cash charges that may not be indicative of the Company's ongoing operating results. Adjusted net income (loss) and adjusted earnings (loss) per share should not be considered in isolation or as a substitute for net income (loss) and earnings (loss) per share prepared in accordance with GAAP and may not be comparable to other similarly titled measures of other companies. The following tables provide a reconciliation of adjusted net income (loss) and adjusted earnings (loss) per share to the GAAP financial measures of net income (loss) and earnings (loss) per share for the periods specified.

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
	(in thousands, except per share amounts)			
Net (loss) income, as reported	$ (35,709)	$ 69,512	$ (18,265)	$ 167,758
Equity based compensation	—	—	—	17,487
Adjusted net (loss) income	$ (35,709)	$ 69,512	$ (18,265)	$ 185,245
Basic (loss) earnings per share, as reported	$ (0.79)	$ 1.55	$ (0.41)	$ 3.75
Equity based compensation	—	—	—	0.39
Adjusted basic (loss) earnings per share	$ (0.79)	$ 1.55	$ (0.41)	$ 4.14
Diluted (loss) earnings per share, as reported	$ (0.79)	$ 1.54	$ (0.41)	$ 3.73
Equity based compensation	—	—	—	0.39
Adjusted diluted (loss) earnings per share	$ (0.79)	$ 1.54	$ (0.41)	$ 4.12

Liquidity and Capital Resources

We require capital to fund ongoing operations, including maintenance expenditures on our existing fleet of equipment, organic growth initiatives, investments and acquisitions. Our primary sources of liquidity have been cash on hand, borrowings under our revolving credit facility and cash flows from operations. Our primary uses of capital have been for investing in property and equipment used to provide our services, to acquire complementary businesses and to pay dividends to our stockholders. In July 2019, as a result of oilfield market conditions, our Board of Directors suspended the quarterly cash dividend. Future declaration of cash dividends are subject to approval by our Board of Directors and may be adjusted at its discretion based on market conditions and capital availability.

As of September 30, 2019, we had outstanding borrowings under our revolving credit facility of $80 million and $96 million of available borrowing capacity under this facility, after giving effect to $9 million of outstanding letters of credit.

The following table summarizes our liquidity for the periods indicated (in thousands):

	September 30, 2019	December 31, 2018
Cash and cash equivalents	$ 9,598	$ 67,625
Revolving credit facility availability	184,809	184,233
Less long-term debt	(80,000)	—
Less letter of credit facilities (environmental remediation)	(4,182)	(3,877)
Less letter of credit facilities (insurance programs)	(4,105)	(4,105)
Less letter of credit facilities (rail car commitments)	(455)	(455)
Net working capital (less cash)[(a)]	275,922	148,108
Total	$ 381,587	$ 391,529

a. Net working capital (less cash) is a non-GAAP measure and is calculated by subtracting total current liabilities of $128 million and cash and cash equivalents of $10 million from total current assets of $413 million as of September 30, 2019. As of December 31, 2018, net working capital (less cash) is calculated by subtracting total current liabilities of $234 million and cash and cash equivalents of $68 million from total current assets of $450 million.

At November 5, 2019, we had cash on hand of $10 million and outstanding borrowings under our revolving credit facility of $80 million, leaving an aggregate of $96 million of available borrowing capacity under this facility, which is net of letters of credit of $9 million.

Liquidity and Cash Flows

The following table sets forth our cash flows at the dates indicated (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Net cash provided by (used in) operating activities	$ 9,610	$ 56,141	$ (92,245)	$ 282,592
Net cash used in investing activities	(4,644)	(41,530)	(33,079)	(162,773)
Net cash (used in) provided by financing activities	(2,578)	(5,668)	67,247	(105,713)
Effect of foreign exchange rate on cash	(35)	47	50	(51)
Net change in cash	$ 2,353	$ 8,990	$ (58,027)	$ 14,055

Operating Activities

Net cash used in operating activities was $92 million for the nine months ended September 30, 2019, compared to net cash provided by operating activities of $283 million for the nine months ended September 30, 2018. Net cash provided by operating activities was $10 million for the three months ended September 30, 2019, compared to net cash provided by operating activities of $56 million for the three months ended September 30, 2018. The decrease in operating cash flows was primarily attributable to a decline in activity for our infrastructure services segment as well as a timing difference between cash outflows for income tax payments and cash inflows for accounts receivable.

Investing Activities

Net cash used in investing activities was $33 million for the nine months ended September 30, 2019, compared to $163 million for the nine months ended September 30, 2018. Net cash used in investing activities was $5 million for the three months ended September 30, 2019, compared to $42 million for the three months ended September 30, 2018. Cash used in investing activities was primarily used to purchase property and equipment that is utilized to provide our services.

The following table summarizes our capital expenditures by operating division for the periods indicated (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Infrastructure services[(a)]	$ 122	$ 21,737	$ 5,553	$ 78,293
Pressure pumping services[(b)]	2,963	8,042	14,305	24,141
Natural sand proppant services[(c)]	728	3,145	2,703	15,803
Other[(d)]	857	7,821	12,329	31,293
Total capital expenditures	$ 4,670	$ 40,745	$ 34,890	$ 149,530

a. Capital expenditures primarily for truck, tooling and other equipment for the nine months ended September 30, 2019 and 2018.
b. Capital expenditures primarily for pressure pumping and water transfer equipment for the nine months ended September 30, 2019 and 2018.
c. Capital expenditures primarily for maintenance for the nine months ended September 30, 2019 and plant upgrades for the nine months ended September 30, 2018.
d. Capital expenditures primarily for equipment for our rental business and upgrades to our rig fleet for the nine months ended September 30, 2019 and 2018.

Financing Activities

Net cash provided by financing activities was $67 million for the nine months ended September 30, 2019, compared to net cash used in financing activities of $106 million for the nine months ended September 30, 2018. Net cash used in financing activities was $3 million for the three months ended September 30, 2019, compared to $6 million for the three months ended September 30, 2018. Net cash provided by financing activities for the nine months ended September 30, 2019 was primarily attributable to net borrowings under our revolving credit facility of $80 million, partially offset by $11 million in dividends paid. Net cash used in financing activities nine months ended September 30, 2018 was primarily attributable to net repayments under our revolving credit facility of $100 million and $6 million in dividends paid.

Effect of Foreign Exchange Rate on Cash

The effect of foreign exchange rate on cash was $0.1 million and ($0.1) million, respectively, for the nine months ended September 30, 2019 and 2018. The change was driven primarily by a favorable (unfavorable) shift in the weakness (strength) of the Canadian dollar relative to the U.S. dollar for the cash held in Canadian accounts.

Working Capital

Our working capital totaled $286 million and $216 million, respectively, at September 30, 2019 and December 31, 2018. Our cash balances were $10 million and $68 million, respectively, at September 30, 2019 and December 31, 2018.

Our Revolving Credit Facility

On October 19, 2018, we and certain of our direct and indirect subsidiaries, as borrowers, entered into an amended and restated revolving credit and security agreement with the lenders party thereto and PNC Bank, National Association, as a lender and as administrative agent for the lenders, which amended and restated our prior revolving credit and security agreement dated as of July 9, 2018, as amended prior to October 19, 2018, to, among other things, (i) extend the maturity date to October 19, 2023, (ii) increase the maximum revolving advance amount to $185 million, with the ability to further increase the maximum revolving advance amount to $350 million under certain circumstances, (iii) increase the letter of credit sublimit to 20% of the maximum revolving advance amount and (iv) decrease the interest rates applicable to loans. On November 5, 2019, we entered into a first amendment to our amended and restated revolving credit and security agreement, which we refer to collectively as our resolving credit facility, to amend the interest coverage ratio definition to give accrual treatment to certain cash taxes included in the ratio calculation. As a result, certain cash tax payments that were made in 2019 are now treated as if they were made in 2018, the year in which the income related to such tax payments was actually received.

Outstanding borrowings under the revolving credit facility bear interest at a per annum rate elected by us that is equal to an alternate base rate or LIBOR, in each case plus the applicable margin. The applicable margin ranges from 1.00% to 1.50% per annum in the case of the alternate base rate, and from 2.00% to 2.50% per annum in the case of LIBOR. The applicable margin depends on the amount of excess availability under our revolving credit facility.

At September 30, 2019, we had outstanding borrowings under our revolving credit facility of $80 million. At November 5, 2019, we had outstanding borrowings under our revolving credit facility of $80 million, leaving an aggregate of $96 million of available borrowing capacity under this facility, which is net of letters of credit of $9 million.

Our revolving credit facility contains various customary affirmative and restrictive covenants. Among the covenants are two financial covenants, including a minimum interest coverage ratio (3.0 to 1.0) and a maximum leverage ratio (4.0 to 1.0), and a minimum availability covenant ($10.0 million). As of September 30, 2019 and December 31, 2018, we were in compliance with the financial covenants under our revolving credit facility.

Capital Requirements and Sources of Liquidity

Earlier this year, we had established a capital expenditure budget of approximately $80 million. During the second quarter of 2019, in response to market conditions and consistent with our disciplined approach to spending, we reduced our 2019 capital expenditure budget to $41 million. These capital expenditures include $6 million in our infrastructure segment for assets for additional crews, $17 million in our pressure pumping segment for the expansion of our water transfer operations and maintenance to our existing pressure pumping fleet, $4 million for our natural sand proppant segment for upgrades and maintenance and $14 million for our other services, primarily for the expansion of our trucking fleet and rental services and upgrades to our drilling rigs. During the nine months ended September 30, 2019, our capital expenditures totaled $35 million.

We believe that our cash on hand, operating cash flow and available borrowings under our credit facility will be sufficient to fund our operations for at least the next twelve months. However, future cash flows are subject to a number of variables (including receipt of payments from PREPA), and significant additional capital expenditures could be required to conduct our operations. There can be no assurance that operations and other capital resources, including potential sales of assets or businesses, will provide cash in sufficient amounts to maintain planned or future levels of capital expenditures. Further, while we regularly evaluate acquisition opportunities, we do not have a specific acquisition budget for 2019 since the timing and size of acquisitions cannot be accurately forecasted. We continue to evaluate acquisition opportunities, including transactions involving entities controlled by Wexford and Gulfport. Our acquisitions may be undertaken with cash, our common stock or a combination of cash, common stock and/or other consideration. In the event we make one or more acquisitions and the amount of capital required is greater than the amount we have available for acquisitions at that time, we could be required to reduce the expected level of capital expenditures and/or seek additional capital. If we seek additional capital for that or other reasons, we may do so through borrowings under our revolving credit facility, joint venture partnerships, asset sales, offerings of debt or equity securities or other means. We cannot assure you that this additional capital will be available on acceptable terms or at all. If we are unable to obtain funds we need, we may not be able to complete acquisitions that may be favorable to us or finance the capital expenditures necessary to conduct our operations.

Off-Balance Sheet Arrangements

Minimum Purchase Commitments

We have entered into agreements with suppliers that contain minimum purchase obligations. Our failure to purchase the minimum amounts may require us to pay shortfall fees. However, the minimum quantities set forth in the agreements are not in excess of our currently expected future requirements.

Capital Spend Commitments

We have entered into agreements with suppliers to acquire capital equipment.

Aggregate future minimum lease payments under these agreements in effect at September 30, 2019 are as follows (in thousands):

Year ended December 31:	Capital Spend Commitments	Minimum Purchase Commitments[(a)]
Remainder of 2019	$ 1,007	$ 5,234
2020	—	20,650
2021	—	656
2022	—	91
2023	—	8
Thereafter	—	—
	$ 1,007	$ 26,639

a. Included in these amounts are sand purchase commitments of $20 million. Pricing for certain sand purchase agreements is variable and, therefore, the total sand purchase commitments could be as much as $23 million. The minimum amount due in the form of shortfall fees under certain sand purchase agreements was $2 million as of September 30, 2019.

Subsequent to September 30, 2019, we ordered additional capital equipment with aggregate commitments of $4.7 million, the majority of which relates to pressure pumping equipment expected to be purchased in 2020.

New Accounting Pronouncements

In February 2016, the Financial Accounting Standards Board, or FASB, issued Accounting Standards Update, or ASU, No. 2016-02 “Leases (Topic 842)” amending the current accounting for leases. Under the new provisions, all lessees will report a right of use asset and lease liability on the balance sheet for all leases with a term longer than one year, while maintaining substantially similar classifications for financing and operating leases. Lessor accounting remains substantially unchanged with the exception that no leases entered into after the effective date will be classified as leveraged leases. ASU 2016-02 is effective for fiscal years beginning after December 15, 2018, and interim periods within that fiscal year. We adopted this ASU effective January 1, 2019 utilizing the transition method permitted by ASU No. 2018-11 "Leases (Topic 842): Targeted Improvements", issued in August 2018, which permits an entity to recognize a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption with no adjustment made to the comparative periods presented in the consolidated financial statements. See Note 14 to the unaudited condensed consolidated financial statements included elsewhere in this report for the impact the adoption of this standard had on our financial statements.

In June 2016, the FASB issued ASU No. 2016-13, “Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments,” which amends current guidance on reporting credit losses on financial instruments. This ASU requires entities to reflect its current estimate of all expected credit losses. The guidance affects most financial assets, including trade accounts receivable. This ASU is effective for fiscal years beginning after December 31, 2019, with early adoption permitted. We are currently evaluating the impact this standard may have on our financial statements and related disclosures.

In June 2018, the FASB issued ASU No. 2018-07, “Compensation - Stock Compensation (Topic 718): Improvements to Non-employee Share-Based Accounting,” which simplifies the accounting for share-based payments granted to non-employees by aligning the accounting with requirements for employee share-based compensation. Upon transition, this ASU requires non-employee awards to be measured at fair value as of the adoption date. This ASU is effective for fiscal years beginning after December 15, 2018, and interim periods within that fiscal year. We adopted this ASU effective January 1, 2019 and estimate the fair value of our non-employee equity awards was approximately $18.9 million as of this date.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

The demand, pricing and terms for our products and services are largely dependent upon the level of activity for the U.S. oil and natural gas industry, energy infrastructure industry and natural sand proppant industry. Industry conditions are influenced by numerous factors over which we have no control, including, but not limited to: the supply of and demand for oil and natural gas services, energy infrastructure services and natural sand proppant; demand for repair and construction of transmission lines, substations and distribution networks in the energy infrastructure industry and the level of expenditures of utility companies; the level of prices of, and expectations about future prices for, oil and natural gas and natural sand proppant, as well as energy infrastructure services; the cost of exploring for, developing, producing and delivering oil and natural gas; the expected rates of declining current production; the discovery rates of new oil and natural gas reserves and frac sand reserves meeting industry specifications and consisting of the mesh size in demand; access to pipeline, transloading and other transportation facilities and their capacity; weather conditions; domestic and worldwide economic conditions; political instability in oil-producing countries; environmental regulations; technical advances affecting energy consumption; the price and availability of alternative fuels; the ability of oil and natural gas producers and other users of our services to raise equity capital and debt financing; and merger and divestiture activity in industries in which we operate.

The level of activity in the U.S. oil and natural gas exploration and production, energy infrastructure and natural sand proppant industries is volatile. Expected trends may not continue and demand for our products and services may not reflect the level of activity in these industries. Any prolonged substantial reduction in pricing environment would likely affect demand for our services. A material decline in pricing levels or U.S. activity levels could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Interest Rate Risk

We had a cash and cash equivalents balance of $10 million at September 30, 2019. We do not enter into investments for trading or speculative purposes. We do not believe that we have any material exposure to changes in the fair value of these investments as a result of changes in interest rates. Declines in interest rates, however, will reduce future income.

Interest under our credit facility is payable at a base rate plus an applicable margin. Additionally, at our request, outstanding balances are permitted to be converted to LIBOR rate plus applicable margin tranches. The applicable margin for either the base rate or the LIBOR rate option can vary from 1.5% to 3.0%, based upon a calculation of the excess availability of the line as a percentage of the maximum credit limit. At September 30, 2019, we had outstanding borrowings under our revolving credit facility of $80 million with a weighted average interest rate of 4.3%. A 1% increase or decrease in the interest rate at that time would have increased or decreased our interest expense by approximately $1 million per year. We do not currently hedge our interest rate exposure.

Foreign Currency Risk

Our remote accommodation business, which is included in our other services division, generates revenue and incurs expenses that are denominated in the Canadian dollar. These transactions could be materially affected by currency fluctuations. Changes in currency exchange rates could adversely affect our consolidated results of operations or financial position. We also maintain cash balances denominated in the Canadian dollar. At September 30, 2019, we had $4 million of cash, in Canadian dollars, in Canadian accounts. A 10% increase in the strength of the Canadian dollar versus the U.S. dollar would have resulted in an increase in pre-tax income of approximately $0.02 million as of September 30, 2019. Conversely, a corresponding decrease in the strength of the Canadian dollar would have resulted in a comparable decrease in pre-tax income. We have not hedged our exposure to changes in foreign currency exchange rates and, as a result, could incur unanticipated translation gains and losses.

Seasonality

We provide completion and production services as well as contract land and drilling services primarily in the Utica, Permian Basin, Eagle Ford, Marcellus, Granite Wash, Cana Woodford and Cleveland sand resource plays located in the continental U.S. We provide infrastructure services primarily in the northeast, southwest and midwest portions of the United States. We provide remote accommodation services in the oil sands in Alberta, Canada. We serve these markets through our facilities and service centers that are strategically located to serve our customers in Ohio, Texas, Oklahoma, Wisconsin, Minnesota, Kentucky and Alberta, Canada. A portion of our revenues are generated in Ohio, Wisconsin, Minnesota, North Dakota, Pennsylvania, West Virginia and Canada where weather conditions may be severe. As a result, our operations may be limited or disrupted, particularly during winter and spring months, in these geographic regions, which would have a material

adverse effect on our financial condition and results of operations. Our operations in Oklahoma and Texas are generally not affected by seasonal weather conditions.

Item 4. Controls and Procedures

Evaluation of Disclosure Control and Procedures

Under the direction of our Chief Executive Officer and Chief Financial Officer, we have established disclosure controls and procedures, as defined in Rule 13a-15(e) and d under the Exchange Act, that are designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. The disclosure controls and procedures are also intended to ensure that such information is accumulated and communicated to management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosures. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply judgment in evaluating the benefits of possible controls and procedures relative to their costs.

As of September 30, 2019, an evaluation was performed under the supervision and with the participation of management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures pursuant to Rule 13a-15(b) under the Exchange Act. Based upon our evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that as of September 30, 2019, our disclosure controls and procedures are effective.

Changes in Internal Control Over Financial Reporting

There was no change in our internal control over financial reporting (as defined in Rules 13a-15(d) and 15d-15(d) under the Exchange Act) that occurred during the quarter ended September 30, 2019 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

Due to the nature of our business, we are, from time to time, involved in litigation or subject to disputes or claims related to our business activities, including breaches of contractual obligations, workers' compensation claims and employment related disputes. In the opinion of our management, none of the pending litigation, disputes or claims against us is expected to have a material adverse effect on our financial condition, cash flows or results of operations, except as disclosed in Note 19 "Commitments and Contingencies," of the Notes to Unaudited Condensed Consolidated Financial Statements.

Item 1A. Risk Factors

Security holders and potential investors in our securities should carefully consider the risk factors in our Annual Report on Form 10-K (Commission File No. 001-37917) filed with the SEC on March 18, 2019.

Other than set forth below and in Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations, there have been no material changes to the Risk Factors previously disclosed in our Annual Report on Form 10-K for the year ended December 31, 2018.

In the course of our business, we may become subject to lawsuits, indemnity or other claims, which could materially and adversely affect our business, results of operations and cash flows.

From time to time, we are subject to various claims, lawsuits and other legal proceedings brought or threatened against us in the course of our business. These actions and proceedings may seek, among other things, compensation for alleged personal injury, workers' compensation, employment discrimination and other employment-related damages, breach of contract, indemnity claims, property damage and violation of federal or state securities laws. We may also be subject to litigation in the normal course of business involving allegations of violations of the Fair Labor Standards Act and state wage and hour laws.

Claimants may seek large damage awards and defending claims can involve significant costs. When appropriate, we establish accruals for litigation and contingencies that we believe to be adequate in light of current information, legal advice and our indemnity insurance coverages. We reassess our potential liability for litigation and contingencies as additional information becomes available and adjust our accruals as necessary. We could experience a reduction in our profitability and liquidity if we do not properly estimate the amount of required accruals for litigation or contingencies, or if our insurance coverage proves to be inadequate or becomes unavailable, or if our self-insurance liabilities are higher than expected. The outcome of litigation is difficult to assess or quantify, as plaintiffs may seek recovery of very large or indeterminate amounts and the magnitude of the potential loss may remain unknown for substantial periods of time. Furthermore, because litigation is inherently uncertain, the ultimate resolution of any such claim, lawsuit or proceeding through settlement, mediation, or court judgment could have a material adverse effect on our business, financial condition or results of operations. In addition, claims, lawsuits and proceedings may harm our reputation or divert management's attention from our business or divert resources away from operating our business, and cause us to incur significant expenses, any of which could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Not applicable.

Item 4. Mine Safety Disclosures

Our operations are subject to the Federal Mine Safety and Health Act of 1977, as amended by the Mine Improvement and New Emergency Response Act of 2006, which imposes stringent health and safety standards on numerous aspects of mineral extraction and processing operations, including the training of personnel, operating procedures, operating equipment and other matters. Our failure to comply with such standards, or changes in such standards or the interpretation or enforcement thereof, could have a material adverse effect on our business and financial condition or otherwise impose significant restrictions on our ability to conduct mineral extraction and processing operations. Following passage of The Mine Improvement and New Emergency Response Act of 2006, MSHA significantly increased the numbers of citations and orders charged against mining operations. The dollar penalties assessed for citations issued has also increased in recent years. Information concerning mine safety violations or other regulatory matters required by Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act and Item 104 of Regulation S-K (17 CFR 229.104) is included in Exhibit 95.1 to this Report.

Item 5. Other Information

Not applicable.

Item 6. Exhibits

The following exhibits are filed as a part of this report:

Exhibit Number	Exhibit Description	Incorporated By Reference				Filed Herewith	Furnished Herewith
		Form	Commission File No.	Filing Date	Exhibit No.		
3.1	Amended and Restated Certificate of Incorporation of the Company	8-K	001-37917	11/15/2016	3.1		
3.2	Amended and Restated Bylaws of the Company	8-K	001-37917	11/15/2016	3.2		
4.1	Specimen Certificate for shares of common stock, par value $0.01 per share, of the Company	S-1/A	333-213504	10/3/2016	4.1		
4.2	Registration Rights Agreement, dated October 12, 2016, by and between the Company and Mammoth Energy Holdings, LLC	8-K	001-37917	11/15/2016	4.1		
4.3	Investor Rights Agreement, dated October 12, 2016, by and between the Company and Gulfport Energy Corporation	8-K	001-37917	11/15/2016	4.2		
31.1	Certification of Chief Executive Officer pursuant to Rule 13(a)-14 and 15(d)-14 under the Securities Exchange Act of 1934.					X	
31.2	Certification of Chief Financial Officer pursuant to Rule 13(a)-14 and 15(d)-14 under the Securities Exchange Act of 1934.					X	
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.					X	
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.					X	
10.1	First Amendment to Amended and Restated Revolving Credit and Security Agreement					X	
95.1	Mine Safety Disclosure Exhibit					X	
101.1	Interactive data files pursuant to Rule 405 of Regulation S-T.						

Signatures

Pursuant to the requirements 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.

			MAMMOTH ENERGY SERVICES, INC.
Date:	November 8, 2019	By:	/s/ Arty Straehla
			Arty Straehla
			Chief Executive Officer
Date:	November 8, 2019	By:	/s/ Mark Layton
			Mark Layton
			Chief Financial Officer

FIRST AMENDMENT TO AMENDED AND RESTATED
REVOLVING CREDIT AND SECURITY AGREEMENT

THIS FIRST AMENDMENT TO AMENDED AND RESTATED REVOLVING CREDIT AND SECURITY AGREEMENT (this "Amendment") is made and entered into effective as of November 5, 2019, by and among MAMMOTH ENERGY SERVICES, INC., a corporation organized under the laws of the State of Delaware (formerly Mammoth Energy Services Inc.) ("Mammoth"), MAMMOTH ENERGY PARTNERS LLC, a limited liability company under the laws of the State of Delaware (formerly Mammoth Energy Partners LP, a limited partnership under the laws of the State of Delaware) ("Mammoth Partners"), REDBACK ENERGY SERVICES LLC, a limited liability company under the laws of the State of Delaware ("Redback Energy"), REDBACK COIL TUBING LLC, a limited liability company under the laws of the State of Delaware (" Redback Coil"), REDBACK PUMPDOWN SERVICES LLC, a limited liability company under the laws of the State of Delaware ("Redback Pumpdown"), MUSKIE PROPPANT LLC, a limited liability company under the laws of the State of Delaware ("Muskie"), PANTHER DRILLING SYSTEMS LLC, a limited liability company under the laws of the State of Delaware ("Panther"), BISON DRILLING AND FIELD SERVICES LLC, a limited liability company under the laws of the State of Delaware ("Bison Drilling"), BISON TRUCKING LLC, a limited liability company under the laws of the State of Delaware ("Bison Trucking"), WHITE WING TUBULAR SERVICES LLC, a limited liability company under the laws of the State of Delaware ("White Wing"), GREAT WHITE SAND TIGER LODGING LTD., a Canadian limited company (" Sand Tiger"), STINGRAY PRESSURE PUMPING LLC, a limited liability company under the laws of the State of Delaware ("Stingray Pressure"), SILVERBACK ENERGY LLC, a limited liability company under the laws of the State of Delaware (formerly Stingray Logistics LLC) ("Silverback Energy"), MAMMOTH ENERGY INC., a corporation under the laws of the State of Delaware ("Mammoth Inc."), BARRACUDA LOGISTICS LLC, a limited liability company organized under the laws of the State of Delaware ("Barracuda"), WTL OIL, LLC, a limited liability company organized under the laws of the State of Delaware (formerly Silverback Energy Services LLC) ("WTL Oil"), MR. INSPECTIONS LLC, a limited liability company under the laws of the State of Delaware ("Mr. Inspections"), SAND TIGER HOLDINGS INC., a corporation under the laws of the State of Delaware ("Sand Tiger Holdings"), MAMMOTH EQUIPMENT LEASING LLC, a Delaware limited liability company ("Mammoth Equipment"), COBRA ACQUISITIONS LLC, a Delaware limited liability company ("Cobra"), COBRA ENERGY LLC, a Delaware limited liability company (" Cobra Energy"), PIRANHA PROPPANT LLC, a limited liability company under the laws of the State of Delaware ("Piranha"), MAKO ACQUISITIONS LLC, a limited liability company under the laws of the State of Delaware ("Mako"), HIGHER POWER ELECTRICAL, LLC, a limited liability company under the laws of the State of Texas (" Higher Power"), STURGEON ACQUISITIONS LLC, a limited liability company under the laws of the State of Delaware ("Sturgeon"), TAYLOR FRAC, LLC, a limited liability company under the laws of the State of Wisconsin ("Taylor Frac"), TAYLOR REAL ESTATE INVESTMENTS, LLC, a limited liability company under the laws of the State of Wisconsin ("Taylor Real Estate"), SOUTH RIVER ROAD, LLC, a limited liability company under the laws of the State of Wisconsin ("South River"), STINGRAY ENERGY SERVICES LLC, a limited liability company under the laws of the State of Delaware ("Stingray Energy"), STINGRAY CEMENTING LLC, a limited liability company under the laws of the State of Delaware (" Stingray Cementing"), 5 STAR ELECTRIC, LLC, a limited liability company under the laws of the State of Kentucky (" 5 Star"), DIRE WOLF ENERGY SERVICES LLC, a limited liability company under the laws of the State of Delaware ("Dire Wolf"), MAMMOTH EQUIPMENT LEASING II LLC, a limited liability company under the laws of the State of Delaware ("MEL II"), COBRA LOGISTICS HOLDINGS LLC, a limited liability company under the laws of the State of Delaware ("Cobra Logistics"), BISON SAND LOGISTICS LLC, a limited liability company under the laws of the State of Delaware ("Bison Sand"), COBRA CARIBBEAN LLC, a limited liability company under the laws of Puerto Rico (" Cobra Caribbean"),

TIGER SHARK LOGISTICS LLC, a limited liability company under the laws of the State of Delaware ("Tiger Shark"), WOLVERINE SAND LLC, a limited liability company under the laws of the State of Delaware ("Wolverine"), ANACONDA MANUFACTURING LLC, a limited liability company under the laws of the State of Delaware (formerly Anaconda Energy LLC) ("Anaconda"), BLACK MAMBA ENERGY LLC, a limited liability company under the laws of the State of Delaware ("Black Mamba"), COBRA CONTROLS LLC, a limited liability company under the laws of the State of Delaware ("Cobra Controls"), COBRA SERVICES LLC, a limited liability company under the laws of the State of Delaware ("Cobra Services"), STINGRAY CEMENTING AND ACIDIZING LLC, a limited liability company under the laws of the State of Delaware, (formerly RTS Energy Services LLC) ("Stingray Acidizing"), AQUAHAWK ENERGY LLC, a limited liability company under the laws of the State of Delaware ("Aquahawk"), AQUAWOLF LLC, a limited liability company under the laws of the State of Delaware (formerly Aquawolf Energy LLC) ("Aquawolf"), IVORY FREIGHT SOLUTIONS LLC, a limited liability company under the laws of the State of Delaware ("Ivory Freight"), ORCA ENERGY SERVICES LLC, a limited liability company under the laws of the State of Delaware ("Orca Energy"), COBRA PACIFIC LLC, a limited liability company formed under the laws of the Commonwealth of the Northern Mariana Islands ("Cobra Pacific"), IFX TRANSPORT LLC, a limited liability company formed under the laws of the State of Delaware ("IFX"), PYTHON EQUIPMENT LLC, a limited liability company formed under the laws of the State of Delaware ("Python"), SEAWOLF ENERGY SERVICES LLC, a limited liability company under the laws of the State of Delaware ("Seawolf"), and SILVERBACK LOGISTICS LLC, a limited liability company under the laws of the State of Delaware ("Silverback Logistics" and, together with Mammoth, Mammoth Partners, Redback Energy, Redback Coil, Redback Pumpdown, Muskie, Panther, Bison Drilling, Bison Trucking, White Wing, Sand Tiger, Stingray Pressure, Silverback Energy, Mammoth Inc., Barracuda, WTL Oil, Mr. Inspections, Sand Tiger Holdings, Mammoth Equipment, Cobra, Cobra Energy, Piranha, Mako, Higher Power, Sturgeon, Taylor Frac, Taylor Real Estate, South River, Stingray Energy, Stingray Cementing, 5 Star, Dire Wolf, MEL II, Cobra Logistics, Bison Sand, Cobra Caribbean, Tiger Shark, Wolverine, Anaconda, Black Mamba, Cobra Controls, Cobra Services, Stingray Acidizing, Aquahawk, Aquawolf, Ivory Freight, Orca Energy, Cobra Pacific, IFX, Python, and Seawolf, the "Borrowers", and each a "Borrower"), the financial institutions which are now or which hereafter become a party hereto (collectively, the "Lenders" and each individually a "Lender") and PNC BANK, NATIONAL ASSOCIATION ("PNC"), as agent for Lenders (PNC, in such capacity, together with its successors and assigns in such capacity, the "Agent").

WITNESSETH:

WHEREAS, Borrowers, Lenders and Agent are parties to that certain Amended and Restated Revolving Credit and Security Agreement dated as of October 19, 2018 (as amended, restated, supplemented, or otherwise modified from time to time, the "Credit Agreement"); and

WHEREAS, Borrowers have requested that Agent make certain amendments to the Credit Agreement and subject to the terms and conditions set forth herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Agent and Lenders are willing to do so, all as set forth herein;

NOW, THEREFORE, in consideration of the premises and the mutual covenants and agreements set forth herein and for other good and valuable consideration, the mutuality, receipt and sufficiency of which are hereby acknowledged, the parties hereto hereby agree as follows:

Section 1. **Definitions.** All capitalized terms not defined herein shall have the meanings given to such terms in the Credit Agreement. The Credit Agreement, as amended by Section 3 of

this Amendment after occurrence of the First Amendment Effective Date (as defined herein), is referred to herein as the "Amended Credit Agreement."

Section 2. **Reserved.**

Section 3. **Amendment to Credit Agreement**.

3.1. Effective as of the First Amendment Effective Date, Section 1.1 of the Credit Agreement is hereby amended by adding the following definition thereto in the appropriate alphabetical order:

"'Specified Cash Taxes" shall mean cash taxes paid by Borrowers in connection with income derived from services primarily performed in Puerto Rico in the amounts of (i) $8,939,774 paid in January, 2019 (ii) $83,015,321 paid in March, 2019 and (iii) $24,487,179 paid in April, 2019."

3.2. Effective as of the First Amendment Effective Date, the Credit Agreement is hereby amended by amending and restating the definition of "Interest Coverage Ratio" contained in Section 1.1 thereto in its entirety to read as follows:

"'Interest Coverage Ratio" shall mean, with respect to the Borrowers on a Consolidated Basis, the ratio of (a) Adjusted EBITDA for the trailing four fiscal quarter period for which financial statements are available, less the sum of (x) Unfinanced Capital Expenditures made during such period, and (y) cash taxes paid or distributions made by Mammoth in respect of taxes, to (b) Interest Expense; it being understood that all dividends and distributions made by the Borrowers will not be included in the calculation of Interest Coverage Ratio; provided, further, that for purposes of calculating the cash taxes paid pursuant to clause (y) above, the Specified Cash Taxes shall be deemed to have been paid in fiscal year 2018 when the income related to such Specified Cash Taxes was actually received."

Section 4. **Ratification and Further Assurances**.

4.1. Each Borrower confirms that, except to the extent modified pursuant to this Amendment, all of its obligations under the Credit Agreement and the Other Documents are, and upon giving effect to this Amendment and the occurrence of the First Amendment Effective Date will be, in full force and effect and are performable in accordance with their respective terms without setoff, defense, counter-claim or claims in recoupment. Each Borrower further confirms that the term "Obligations" as used in the Credit Agreement shall include all Obligations of the Borrowers under the Amended Credit Agreement, any promissory notes issued under the Credit Agreement, and under each Other Document.

4.2. Each Borrower agrees that at any time and from time to time, upon the written request of any Agent, each Borrower will execute and deliver such further documents and do such further acts and things as the Agent may reasonably request in order to effect the provisions of this Amendment.

Section 5. **No Waiver**. Nothing contained in this Amendment, or any other communication between or among any Agent, Lenders and any Borrower, shall be construed as a waiver by

the Agent or Lenders of any covenant or provision of the Credit Agreement, the Other Documents, this Amendment or any other contract or instrument between or among any Borrower, any Agent and/or Lenders, or of any similar future transaction, and the failure of any Agent and/or Lenders at any time or times hereafter to require strict performance by any Borrower of any provision thereof shall not waive, affect or diminish any right of the Agent and/or Lenders to thereafter demand strict compliance therewith. Nothing contained in this Amendment shall directly or indirectly in any way whatsoever either: (i) impair, prejudice or otherwise adversely affect the Agent's or any Lender's right at any time to exercise any right, privilege or remedy in connection with the Credit Agreement or any Other Documents, each as amended hereby, (ii) except as expressly provided herein, amend or alter any provision of the Credit Agreement or any Other Documents or any other contract or instrument, or (iii) constitute any course of dealings or other basis for altering any obligation of any Borrower under the Credit Agreement or any Other Documents or any right, privilege or remedy of any Agent or any Lender under the Credit Agreement, any Other Documents or any other contract or instrument. The Agent and Lenders hereby reserve all rights granted under the Credit Agreement, the Other Documents, this Amendment and any other contract or instrument between or among any Borrower, any Agent and Lenders, each as amended hereby.

Section 6. **Representations and Warranties**. Each Borrower represents and warrants (immediately after giving effect to this Amendment, the occurrence of the First Amendment Effective Date and the transactions contemplated hereby) to the Agent and Lenders the following: (i) there does not exist any Default or Event of Default that is continuing, (ii) each Borrower is individually, and the Borrowers as a whole, are, solvent, able to pay its debts as they mature, has capital sufficient to carry on its business and all businesses in which it is about to engage, as of the First Amendment Effective Date, the fair present saleable value of its assets, calculated on a going concern basis, is in excess of the amount of its liabilities and subsequent to the First Amendment Effective Date, the fair saleable value of its assets (calculated on a going concern basis) will be in excess of the amount of its liabilities, (iii) all other representations and warranties contained in the Amended Credit Agreement and the Other Documents are true and correct in all material respects (except representations and warranties which are already qualified by a materiality standard, which representations and warranties are true and correct in all respects) on and as of the First Amendment Effective Date as though made on and as of such date (or to the extent that such representations and warranties relate solely to an earlier date, on and as of such earlier date), and (iv) the good standing (or equivalent status) of such Borrower in its jurisdiction of organization and each applicable jurisdiction where the conduct of such Borrower's business activities or the ownership of its properties necessitates qualification except where the failure to so qualify would not reasonably be expected to have a Material Adverse Effect.

Section 7. **Conditions to Effectiveness**. This Amendment shall become effective, and shall constitute the legal, valid and binding obligation of each party hereto, enforceable against each such party in accordance with its terms, immediately upon the Agent receiving a fully executed copy of this Amendment. The amendments to the Credit Agreement set forth in Section 3 of this Amendment shall become effective on the date conditioned upon the satisfaction or waiver of the following conditions precedent (such date, the "First Amendment Effective Date"). The determination as to whether each condition has been satisfied may be made in the Agent's Permitted Discretion, all of which shall be satisfactory in form and substance to the Agent:

7.1. Agent shall have received the following documents or items, each in form and substance satisfactory to Agent and its legal counsel: (i) this Amendment, along with the acknowledgement and ratification attached hereto and (ii) that certain Fee Letter dated as of the First Amendment Effective Date.

7.2. After giving effect to this Amendment, the occurrence of the First Amendment Effective Date and the transactions contemplated by this Amendment, the representations and warranties made by Borrowers contained herein and in the Amended Credit Agreement and the Other Documents shall be true and correct in all material respects on and as of the First Amendment Effective Date as though made on and as of such date (or to the extent that such representations and warranties relate solely to an earlier date, on and as of such earlier date).

7.3. After giving effect to this Amendment, the occurrence of the First Amendment Effective Date and the transactions contemplated by this Amendment, no Default or Event of Default shall exist under the Amended Credit Agreement or any of the Other Documents, and no Default or Event of Default will result under the Amended Credit Agreement or any Other Documents from the execution, delivery or performance of this Amendment.

7.4. The Borrowers shall have paid to the Agent, for distribution to the Agent and Lenders, all expenses (including reasonable attorneys' fees) and other amounts owed to or incurred by Agent or Lenders in connection with this Amendment.

7.5. Agent shall have received such other documents and instruments as Agent or any Lender may reasonably request.

Section 8. **Miscellaneous**.

8.1. Except as expressly provided in this Amendment, (i) the Credit Agreement shall continue in full force and effect, and (ii) the terms and conditions of the Credit Agreement are expressly incorporated herein and ratified and confirmed in all respects. This Amendment is not intended to be or to create, nor shall it be construed as, a novation or an accord and satisfaction. From and after the First Amendment Effective Date, references to the Credit Agreement in each Other Document shall be references to the Amended Credit Agreement. The Lenders party hereto hereby direct and instruct Administrative Agent to execute and deliver this Amendment and all documents to be executed in connection herewith, and to induce Administrative Agent to execute and deliver this Amendment and the other applicable documents, each Lender ratifies and confirms its obligations under, and the immunities and exculpatory provisions accruing to the Agent under, the terms of the Credit Agreement and the Other Documents and agrees that, as of the First Amendment Effective Date, such obligations, immunities and other provisions are without setoff, counterclaim, defense or recoupment. This Amendment shall constitute an Other Document.

8.2. Each Borrower hereby ratifies and confirms the Liens and security interests granted under the Credit Agreement and the Other Documents and further ratifies and agrees that such Liens and security interests secure all obligations and indebtedness now, hereafter or from time to time made by, owing to or arising in favor of the Agent or Lenders pursuant to the Credit Agreement and the Other Documents (as now, hereafter or from time to time amended).

8.3. This Amendment constitutes the entire agreement among the parties hereto with respect to the subject matter hereof. Neither this Amendment nor any provision hereof may be changed, waived, discharged, modified or terminated orally, but only by an instrument in writing signed by the parties required to be a party thereto pursuant to the Credit Agreement.

8.4. This Amendment may be executed in any number of counterparts (including by facsimile or as a .pdf attachment), and by the different parties hereto on the same or separate counterparts, each of which shall be deemed to be an original instrument but all of which together shall constitute one and the same agreement.

8.5. If any term or provision of this Amendment is adjudicated to be invalid under applicable laws or regulations, such provision shall be inapplicable to the extent of such invalidity without affecting the validity or enforceability of the remainder of this Amendment which shall be given effect so far as possible.

8.6. THIS AMENDMENT AND THE RIGHTS AND OBLIGATIONS OF THE PARTIES UNDER THIS AMENDMENT SHALL BE GOVERNED BY AND CONSTRUED AND INTERPRETED IN ACCORDANCE WITH THE CHOICE OF LAW PROVISIONS SET FORTH IN THE CREDIT AGREEMENT AND SHALL BE SUBJECT TO ANY WAIVER OF JURY TRIAL (OR IF APPLICABLE, THE JUDICIAL REFEREE PROVISIONS) AND NOTICE PROVISIONS OF THE CREDIT AGREEMENT.

8.7. This Amendment shall be binding upon and inure to the benefit of each Borrower, the Agent and Lenders and their respective successors and assigns, except that, other than as permitted under Section 7.1 of the Credit Agreement, no Borrower shall have the right to assign any rights hereunder or any interest herein without the Agent's and the required Lenders' prior written consent. Except as provided in the preceding sentence and except as to the ability of the Releasees to rely upon Section 9 hereof (with each being an intended third-party beneficiary of the applicable provisions), no Person shall be entitled to any third-party beneficiary status or other rights under this Amendment.

Section 9. **General Release; Covenant not to Sue**.

9.1. In consideration of, among other things, Agent's and the Lenders' execution and delivery of this Amendment, each Borrower, on behalf of itself and its respective agents, representatives, officers, directors, advisors, employees, subsidiaries, affiliates, successors and assigns (collectively, "Releasors"), hereby forever waives, releases and discharges, to the fullest extent permitted by law, each Releasee (as hereinafter defined) from any and all claims (including, without limitation, crossclaims, counterclaims, rights of set-off and recoupment), actions, causes of action, suits, debts, accounts, interests, liens, promises, warranties, damages and consequential damages, demands, agreements, bonds, bills, specialties, covenants, controversies, variances, trespasses, judgments, executions, costs, expenses or claims whatsoever (collectively, the "Claims"), that such Releasor now has, of whatsoever nature and kind, whether known or unknown, now existing, whether arising at law or in equity, against any or all of any Agent or any or all of the Lenders in any capacity and their respective affiliates, subsidiaries, shareholders and "controlling persons" (within the meaning of the federal securities laws), and their respective successors and assigns and each and all of the officers, directors, employees, agents, attorneys and other representatives of each of the foregoing (collectively, the "Releasees"), based in whole or in part on facts, whether or not now known, existing on or before the date hereof, that relate to, arise out of or otherwise are in connection with: (i) the Credit Agreement and any or all Other Documents or transactions contemplated thereby or any actions or omissions in connection therewith, (ii) any aspect of the dealings or relationships between or among the Borrowers, on the one hand, and any or all of the Releasees, on the other hand, relating to any or all of the documents, transactions, actions or omissions referenced in clause (i) hereof, or (iii) any aspect of the dealings or relationships between or among any or all of Releasors, on the one hand, and the Releasees, on the other hand, but only to the extent such dealings or relationships relate to any or all of the documents, transactions, actions or omissions referenced in clause (i) hereof. In entering into this Amendment, each Borrower consulted with, and has been represented by, legal counsel and expressly disclaims any reliance on any representations, acts or omissions by any of the Releasees and hereby agrees and acknowledges that the validity and effectiveness of the releases set forth above do not depend in any way on any such representations, acts and/or omissions or the accuracy, completeness or validity hereof. The provisions of this Section 9 shall

survive the termination of this Amendment, the Credit Agreement, the Other Documents and payment in full of the Obligations.

9.2. Each Borrower, on behalf of itself and its successors, assigns, and other legal representatives, hereby absolutely, unconditionally and irrevocably, covenants and agrees with and in favor of each Releasee that it will not sue (at law, in equity, in any regulatory proceeding or otherwise) any Releasee on the basis of any Claim released, remised and discharged by the Borrowers pursuant to Section 9.1 hereof. If any Borrower or any of their respective successors, assigns or other legal representatives violates the foregoing covenant, each Borrower, each for itself and its successors, assigns and legal representatives, agrees to pay, in addition to such other damages as any Releasee may sustain as a result of such violation, all reasonable and documented attorneys' fees and costs incurred by any Releasee as a result of such violation.

9.3. The foregoing release shall apply to all unknown or unanticipated results of any events occurring prior to the time this Amendment is signed, as well as those known or anticipated. Each Borrower understands that the facts in respect of which the foregoing release is given may hereafter turn out to be different from the facts now known or believed to be true. Each Borrower hereby accepts and assumes the risk that those facts may ultimately be found to be different, and agrees that the foregoing Release shall be in all respects effective, and not subject to termination or rescission by virtue of any such factual differences.

[SIGNATURES APPEAR ON FOLLOWING PAGES]

IN WITNESS WHEREOF, this Amendment has been duly executed effective as of the day and year first written above.

BORROWERS:

MAMMOTH ENERGY SERVICES, INC.
MAMMOTH ENERGY PARTNERS LLC
REDBACK ENERGY SERVICES LLC
REDBACK COIL TUBING LLC
REDBACK PUMPDOWN SERVICES LLC
MUSKIE PROPPANT LLC
PANTHER DRILLING SYSTEMS LLC
BISON DRILLING AND FIELD SERVICES LLC
BISON TRUCKING LLC
WHITE WING TUBULAR SERVICES LLC
GREAT WHITE SAND TIGER LODGING LTD.
STINGRAY PRESSURE PUMPING LLC
SILVERBACK ENERGY LLC
MAMMOTH ENERGY INC.
BARRACUDA LOGISTICS LLC
WTL OIL, LLC
MR. INSPECTIONS LLC
SAND TIGER HOLDINGS INC.
MAMMOTH EQUIPMENT LEASING LLC
COBRA ACQUISITIONS LLC
COBRA ENERGY LLC

By: /s/ Mark Layton
Name: Mark Layton
Title: Chief Financial Officer

BORROWERS:

PIRANHA PROPPANT LLC
MAKO ACQUISITIONS LLC
HIGHER POWER ELECTRICAL, LLC
STURGEON ACQUISITIONS LLC
TAYLOR FRAC, LLC
TAYLOR REAL ESTATE INVESTMENTS, LLC
SOUTH RIVER ROAD, LLC
STINGRAY ENERGY SERVICES LLC
STINGRAY CEMENTING LLC
5 STAR ELECTRIC, LLC
DIRE WOLF ENERGY SERVICES LLC
MAMMOTH EQUIPMENT LEASING II LLC
COBRA LOGISTICS HOLDINGS LLC
BISON SAND LOGISTICS LLC
COBRA CARIBBEAN LLC
TIGER SHARK LOGISTICS LLC
WOLVERINE SAND LLC
ANACONDA MANUFACTURING LLC
BLACK MAMBA ENERGY LLC
COBRA CONTROLS LLC
COBRA SERVICES LLC
STINGRAY CEMENTING AND ACIDIZING LLC
AQUAHAWK ENERGY LLC
AQUAWOLF LLC
IVORY FREIGHT SOLUTIONS LLC
ORCA ENERGY SERVICES LLC
SEAWOLF ENERGY SERVICES LLC
SILVERBACK LOGISTICS LLC
COBRA PACIFIC LLC
IFX TRANSPORT LLC
PYTHON EQUIPMENT LLC

By: /s/ Mark Layton
Name: Mark Layton
Title: Chief Financial Officer

LENDER and AGENT:

PNC BANK, NATIONAL ASSOCIATION

By: /s/ Ronald Eckhoff
Name: Ronald Eckhoff
Title: Vice President

[SIGNATURE PAGE TO FIRST AMENDMENT TO A&R CREDIT AGREEMENT]

LENDER:

BARCLAYS BANK PLC

By: /s/ Sydney G. Dennis
Name: Sydney G. Dennis
Title: Director

LENDER:

CREDIT SUISSE AG, Cayman Islands Branch

By: /s/ Nupur Kumar
Name: Nupur Kumar
Title: Authorized Signatory

By: /s/ Christopher Zybrick
Name: Christopher Zybrick
Title: Authorized Signatory

LENDER:

UMB BANK, N.A.

By: /s/ Brian Pillmore
Name: Brian Pillmore
Title: President, Oklahoma

[SIGNATURE PAGE TO FIRST AMENDMENT TO A&R CREDIT AGREEMENT]

EXHIBIT 31.1

CERTIFICATIONS

I, Arty Straehla, Chief Executive Officer, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Mammoth Energy Services, Inc. (the "registrant");
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 Rule 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.

MAMMOTH ENERGY SERVICES, INC.

By: /s/ Arty Straehla

Arty Straehla
Chief Executive Officer
November 8, 2019

EXHIBIT 31.2

CERTIFICATIONS

I, Mark Layton, Chief Financial Officer, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Mammoth Energy Services, Inc. (the "registrant");
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 Rule 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.

MAMMOTH ENERGY SERVICES, INC.

By: /s/ Mark Layton

Mark Layton

Chief Financial Officer

November 8, 2019

EXHIBIT 32.1

**CERTIFICATION OF THE CHIEF 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 Quarterly Report on Form 10-Q of Mammoth Energy Services, Inc. (the “Company”) for the quarterly period ended September 30, 2019 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Arty Straehla, as Chief Executive Officer of the Company, hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of 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 (the “Exchange Act”); and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

MAMMOTH ENERGY SERVICES, INC.

By: /s/ Arty Straehla

Arty Straehla
Chief Executive Officer
November 8, 2019

This certification accompanies the Report pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and shall not be deemed filed by the Company for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to liability under that section. This certification shall not be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended or the Exchange Act, except to the extent that the Company specifically incorporates it by reference.

EXHIBIT 32.2

CERTIFICATION OF THE CHIEF FINANCIAL 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 Quarterly Report on Form 10-Q of Mammoth Energy Services, Inc. (the “Company”) for the quarterly period ended September 30, 2019 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Mark Layton, as Chief Financial Officer of the Company, hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of 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 (the “Exchange Act”); and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

MAMMOTH ENERGY SERVICES, INC.

By: /s/ Mark Layton
Mark Layton
Chief Financial Officer
November 8, 2019

This certification accompanies the Report pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and shall not be deemed filed by the Company for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to liability under that section. This certification shall not be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended or the Exchange Act, except to the extent that the Company specifically incorporates it by reference.

EXHIBIT 95.1

Mine Safety Disclosure

The following disclosures are provided pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Act") and Item 104 of Regulation S-K, which requires certain disclosures by companies required to file periodic reports under the Securities Exchange Act of 1934, as amended, that operate mines regulated under the Federal Mine Safety and Health Act of 1977 (the "Mine Act").

Mine Safety Information. Whenever the Federal Mine Safety and Health Administration ("MSHA") believes a violation of the Mine Act, any health or safety standard or any regulation has occurred, it may issue a citation which describes the alleged violation and fixes a time within which the U.S. mining operator must abate the alleged violation. In some situations, such as when MSHA believes that conditions pose a hazard to miners, MSHA may issue an order removing miners from the area of the mine affected by the condition until the alleged hazards are corrected. When MSHA issues a citation or order, it generally proposes a civil penalty, or fine, as a result of the alleged violation, that the operator is ordered to pay. Citations and orders can be contested and appealed, and as part of that process, are often reduced in severity and amount, and are sometimes dismissed. The number of citations, orders and proposed assessments vary depending on the size and type (underground or surface) of the mine as well as by the MSHA inspector(s) assigned.

Mine Safety Data. The following provides additional information about references used in the table below to describe the categories of violations, orders or citations issued by MSHA under the Mine Act:

- Section 104 S&S Citations: Citations received from MSHA under section 104 of the Mine Act for violations of mandatory health or safety standards that could significantly and substantially contribute to the cause and effect of a mine safety or health hazard.
- Section 104(b) Orders: Orders issued by MSHA under section 104(b) of the Mine Act, which represents a failure to abate a citation under section 104(a) within the period of time prescribed by MSHA. This results in an order of immediate withdrawal from the area of the mine affected by the condition until MSHA determines that the violation has been abated.
- Section 104(d) Citations and Orders: Citations and orders issued by MSHA under section 104(d) of the Mine Act for unwarrantable failure to comply with mandatory health or safety standards.
- Section 110(b)(2) Violations: Flagrant violations issued by MSHA under section 110(b)(2) of the Mine Act.
- Section 107(a) Orders: Orders issued by MSHA under section 107(a) of the Mine Act for situations in which MSHA determined an "imminent danger" (as defined by MSHA) existed.

The following table details the violations, citations and orders issued to us by MSHA during the quarter endedSeptember 30, 2019:

Mine[(a)]	Section 104 S&S Citations(#)	Section104(b)Orders (#)	Section104(d)Citations and Orders(#)	Section 110(b)(2) Violations(#)	Section107(a)Orders (#)	Proposed Assessments[(b)]($, amounts in dollars)	Mining Related Fatalities (#)
Taylor, WI	—	—	—	—	—	$ —	—
Menomonie, WI	—	—	—	—	—	$ —	—
New Auburn, WI	—	1	—	—	—	$ —	—

a. The definition of mine under section 3 of the Mine Act includes the mine, as well as other items used in, or to be used in, or resulting from, the work of extracting minerals, such as land, structures, facilities, equipment, machines, tools and minerals preparation facilities. Unless otherwise indicated, any of these other items associated with a single mine have been aggregated in the totals for that mine. MSHA assigns an identification number to each mine and may or may not assign separate identification numbers to related facilities such as preparation facilities. We are providing the information in the table by mine rather than MSHA identification number because that is how we manage and operate our mining business and we believe this presentation will be more useful to investors than providing information based on MSHA identification numbers.

b. Represents the total dollar value of proposed assessments from MSHA under the Mine Act relating to any type of citation or order issued during the quarter ended September 30, 2019.

Pattern or Potential Pattern of Violations. During the quarter ended September 30, 2019, none of the mines operated by us received written notice from MSHA of (a) a pattern of violations of mandatory health or safety standards that are of such nature

as could have significantly and substantially contributed to the cause and effect of mine health or safety hazards under section 104(e) of the Mine Act or (b) the potential to have such a pattern.

Pending Legal Actions. There were no legal actions pending before the Federal Mine Safety and Health Review Commission (the Commission) as ofSeptember 30, 2019. The Commission is an independent adjudicative agency established by the Mine Act that provides administrative trial and appellate review of legal disputes arising under the Mine Act.