BETTER. FASTER. CLEANER.

ANNUAL REPORT 2019

DJ BASIN
LIBERTY OILFIELD SERVICES

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LETTER FROM THE CEO

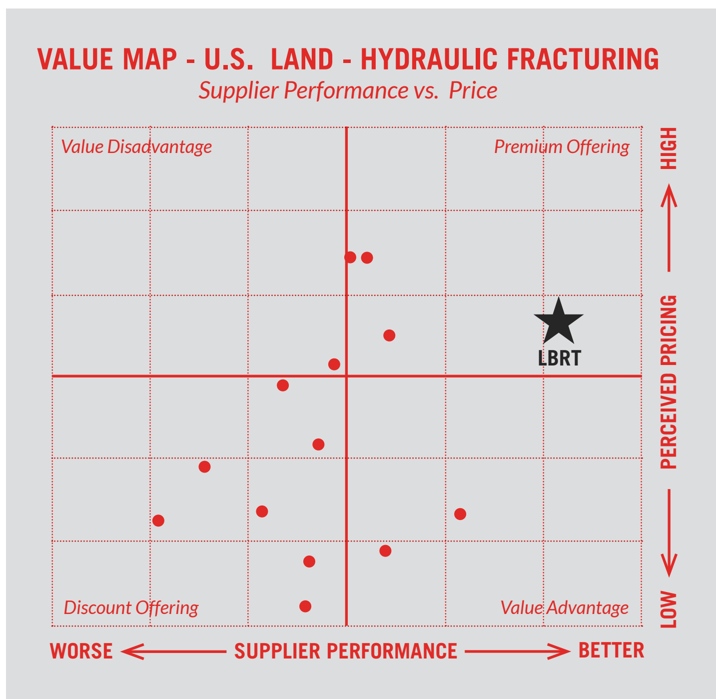
LIBERTY MADE GREAT STRIDES IN 2019.

Liberty was again viewed as the premier provider of hydraulic fracturing services and technology, as shown in Kimberlite's extensive customer survey below. We grew our throughput as measured by pounds of proppant pumped by 30% with only a 7% increase in average frac fleets deployed. We expanded our use of natural gas to power our frac fleets, displacing even more diesel fuel. Our passionate company culture, industry-leading technology, and shareholder-aligned incentives enable Liberty, together with our customers, to get BETTER, FASTER, and CLEANER.

We are proud of Liberty's performance in 2019, despite the significant headwinds in the marketplace. The American Shale Revolution is a story of technology enabling large efficiency gains in U.S. oil and gas production that upended world energy markets. U.S. oil production more than doubled over the last decade. This surge in production resulted in lower oil prices, which have benefitted consumers across the globe, while challenging our customers.

In 2019, the oil-directed rig count dropped 25%, which combined with an increase in fleet efficiency, led to an oversupply of available frac fleets, putting downward pressure on the pricing of our services. Liberty's 2019 revenue was $2 billion, an 8% drop from 2018. Pre-tax net income was $89 million in 2019 and Adjusted EBITDA* was $277 million, both down significantly from 2018. Our Return on Capital Employed (ROCE*) dropped from 39% in 2018 to 10% in 2019. The oil and gas industry always has and always will be cyclical, and Liberty was built to withstand these cycles. We ended 2019 with more cash on hand than we have debt outstanding, while also investing in technology and returning cash to shareholders. As in the previous downturn, we are growing our market share and building our competitive advantage by playing prudent offense.

The technology update in this year's report highlights interactions between new (child) wells and existing (parent) producing wells within a field. Parent/child oil and gas well relationships are complicated and critically important, just as they are in human families. Building partnerships with our customers and communities is what sets Liberty apart. We win when they win. There is a growing focus among our customers and investors on the Environment, Social and Governance (ESG) impacts of our business. We welcome the increased scrutiny. Liberty has focused on ESG issues since the company was founded.



On the environmental front, we built our first dual-fuel (burns natural gas to displace diesel) frac fleet during our second year of operations. In our third year, we began developing novel sound suppression technologies to make a safer onsite work environment and have frac fleet noise fade to background at 500 feet away. Liberty led the way in transporting all our frac sand in sealed containers to mitigate dust and noise. We continue our efforts to minimize environmental impacts with innovation in frac equipment, fluid chemistry, and further efficiency improvements.

Our social efforts are reflected in who we are as a company. We chose our name, Liberty, because we believe in human liberty: everyone should have the freedom and opportunity to pursue their dreams. Liberty provides nearly 100 K-12 scholarships to low-income kids through ACE Scholarships. This year, we launched The Liberty Scholars program with Montana Tech to provide assistance to first-generation college students. Liberty's

Source: Kimberlite

*Adjusted EBITDA and ROCE are non-GAAP financial and operational measures. Please see endnotes 1 and 2, respectively, following this annual report for important additional information, including a reconciliation to the most comparable GAAP measure.

efforts support schools and youth programs, poverty abatement programs, criminal justice reform, and our veterans and military. Our efforts are targeted to BETTER human lives, to grow individual liberty and opportunity.

Corporate Governance should recognize that incentives drive human behavior. We strive to align our financial incentives with our shareholders and align our social and cultural incentives with our communities. Executive compensation is largely variable based on profitability and returns on capital.

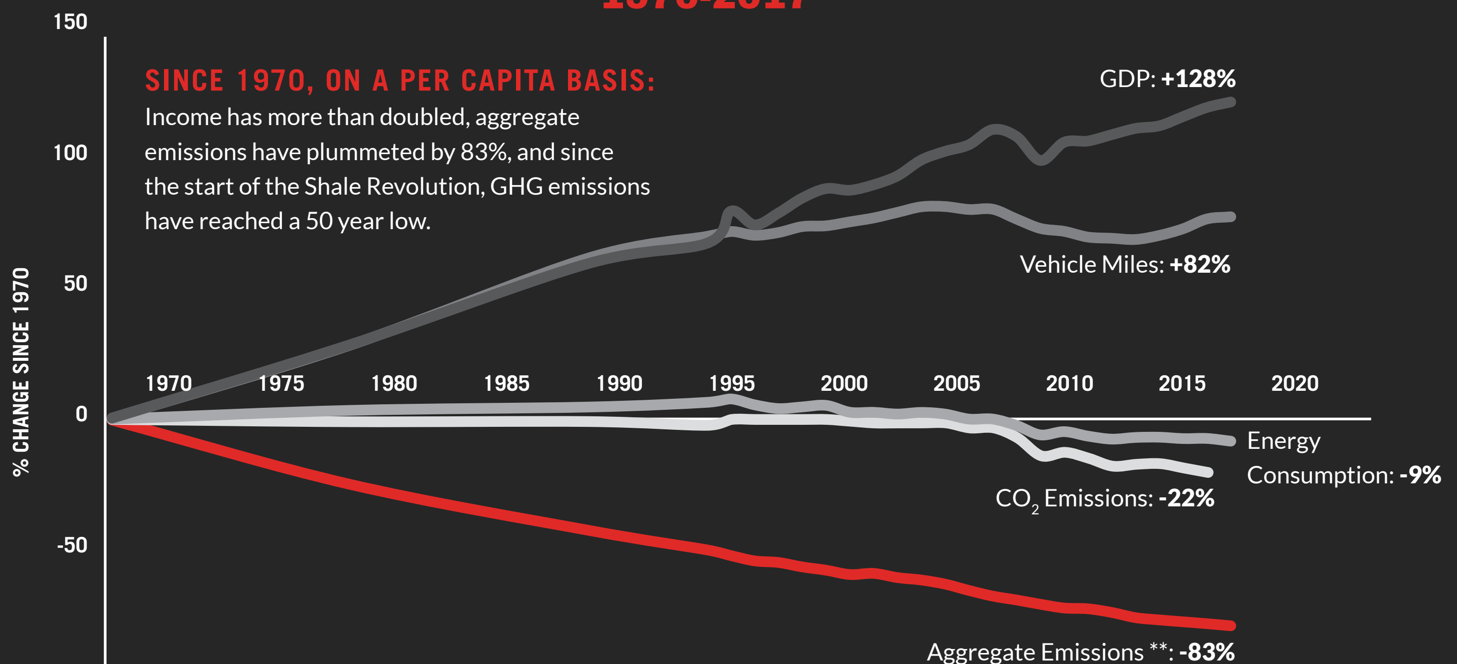
We celebrate the tremendous advancements in the human condition enabled by an oil and gas-energized world. Over the last 150 years, human life expectancy doubled and the percentage of humanity living in extreme poverty plunged from 90% to less than 10%. A modern energized society can make enormous environmental progress together with economic advancement, as shown in the graph below. However, there is still much to be done. Roughly a billion people still lack access to electricity and another billion only have intermittent access. A third of humanity still cooks with wood, dung, or agricultural waste, which creates deadly indoor air pollution resulting in three million preventable deaths per year. Reducing energy poverty is the crux to solving the scourges of humanity: malnutrition, lack of access to clean water, indoor air pollution, and malaria.

Liberty is honored to be a part of an industry that plays a pivotal role in alleviating energy poverty. The key to Liberty's industry-leading performance is our people and the culture that binds us together in a cohesive, competitive team. We come to work every day searching for ways to get BETTER, and to complete our tasks FASTER and CLEANER. We look forward to an exciting year ahead.

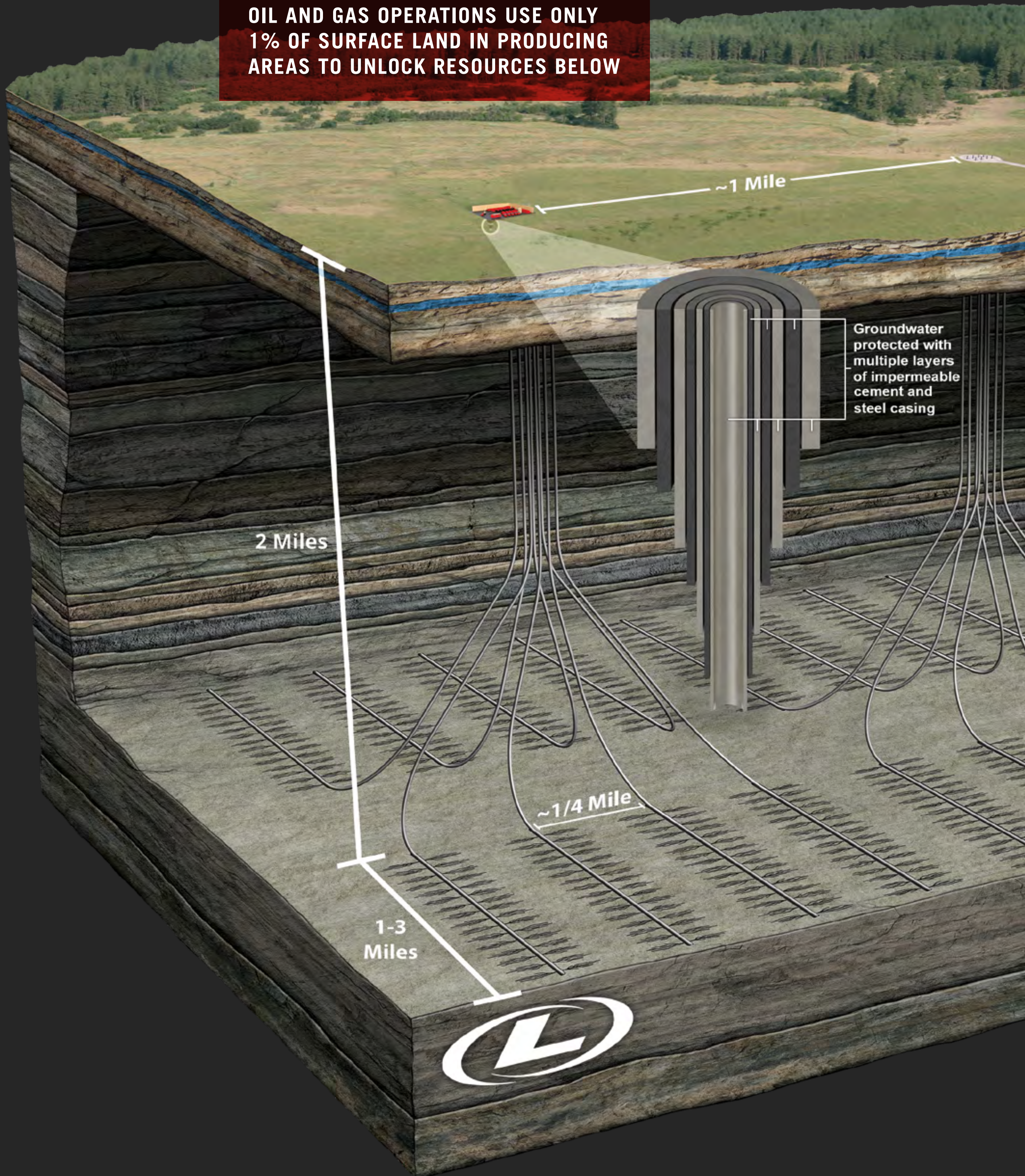
SINCERELY,

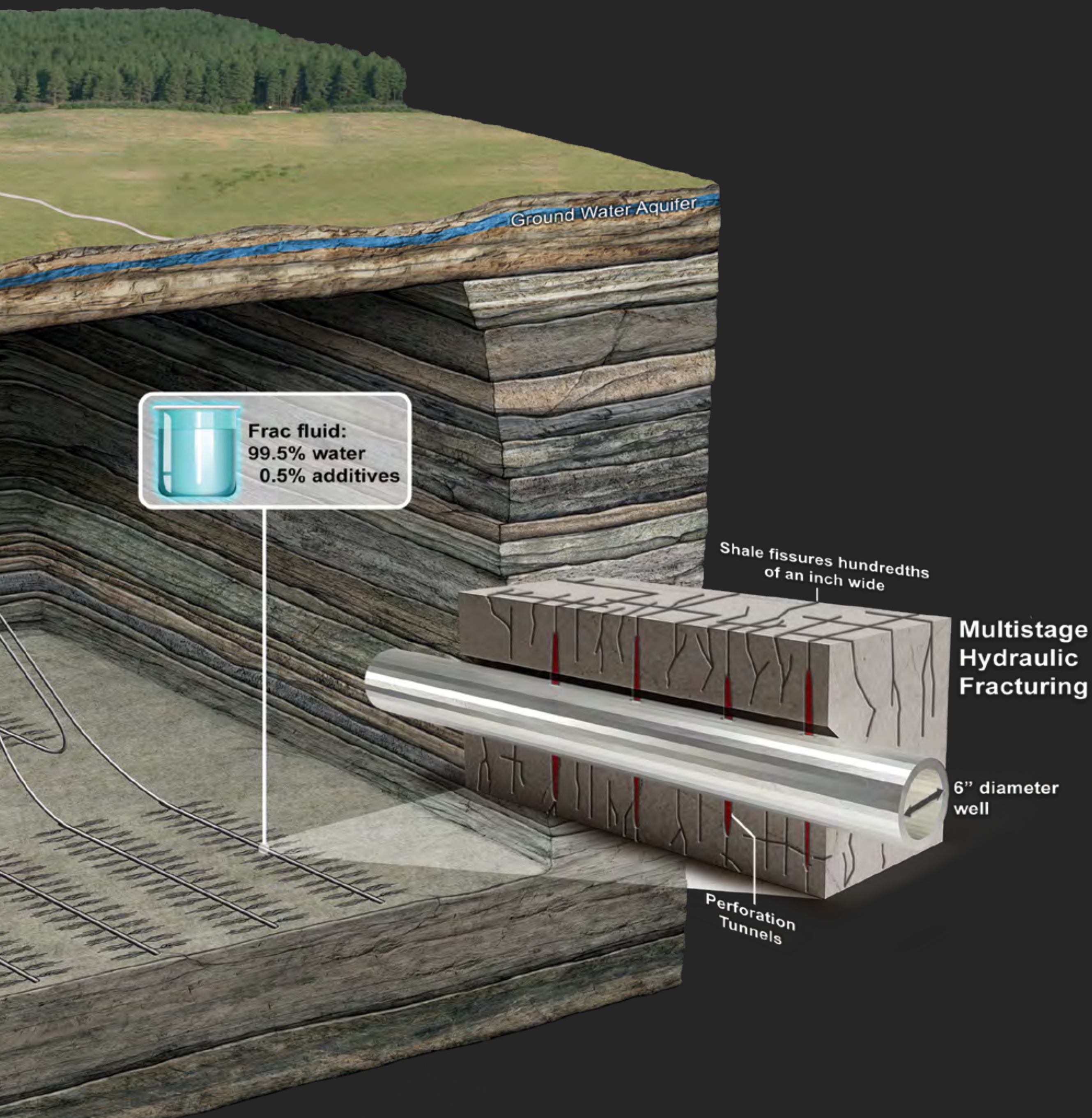
Chris

CHRIS WRIGHT
CHAIRMAN AND CEO, LIBERTY OILFIELD SERVICES



OIL AND GAS OPERATIONS USE ONLY 1% OF SURFACE LAND IN PRODUCING AREAS TO UNLOCK RESOURCES BELOW





"THE SHALE REVOLUTION SAVES THE WORLD'S CONSUMERS OVER A TRILLION DOLLARS PER YEAR, ALL WHILE DRAMATICALLY SHRINKING OUR SURFACE LAND FOOTPRINT AND DRIVING U.S. GREENHOUSE GAS EMISSIONS TO A 50-YEAR LOW!"

- CHRIS WRIGHT, CHAIRMAN AND CEO

SAFETY & ENVIRONMENT

182x AROUND THE WORLD ▶

4.5 MILLION MILES DRIVEN
WITH 2 ACCIDENTS= INDUSTRY
LEADING MVAR OF .44 IN 2019

SAFETY

FRAC ACADEMY

Our people are our most important asset. Ensuring their safety and the safety of those around them is the most important thing we do. It starts with the Liberty culture, designed to attract and retain the best personnel at all levels of the organization. But it's much more than that. Ensuring the Liberty team is well trained to handle the complexities of daily field operations, and that their training and competency remains current with the latest technology and standards is a key component. The Liberty Frac Academy is where it all happens. From safety to equipment operations to leadership skills, this program ensures that every Liberty employee has access to the appropriate training for his or her job. The Frac Academy not only ensures dissemination of high-quality training material, but also provides a forum for sharing best practices. As leaders from across the Liberty family come together to advance their skills, experiences are shared and lessons are learned.

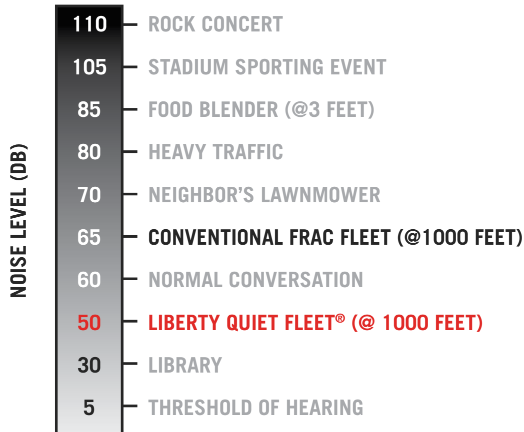
REDUCING OUR IMPACT

Liberty is constantly evaluating our operations in order to provide our partners with the technology for a CLEANER future. Liberty is a leader in low-emission frac equipment. Every Liberty new build since 2013 has been low-emissions, and our fleets are constantly transforming as technology progresses. Liberty's holistic solutions go beyond our fleets. We partner with our customers in the most challenging urban interfaces, where environmental and social considerations are paramount in enabling the development of their assets.

Over the last year, we analyzed industry data and published a report on emissions from next generation fleets. Data drives every operational and investment decision, informing future development to make Liberty and our partners BETTER. As a technology company, Liberty is dedicated to continuing our investment in tech that is BETTER, FASTER, and CLEANER.

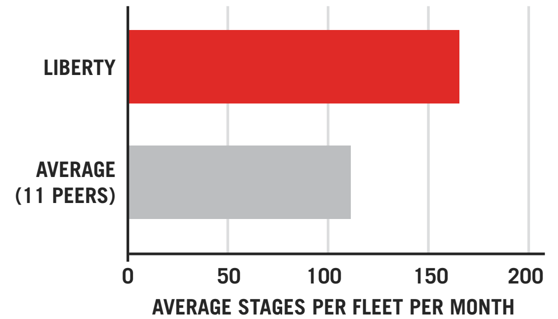
LIBERTY QUIET FLEETS® ARE BETTER.

3x QUIETER THAN A CONVENTIONAL FRACTURING FLEET



LIBERTY COMPLETIONS ARE FASTER.

REDUCES COMMUNITY IMPACT



Source: Coras Research

NEXT GENERATION FLEETS ARE CLEANER.

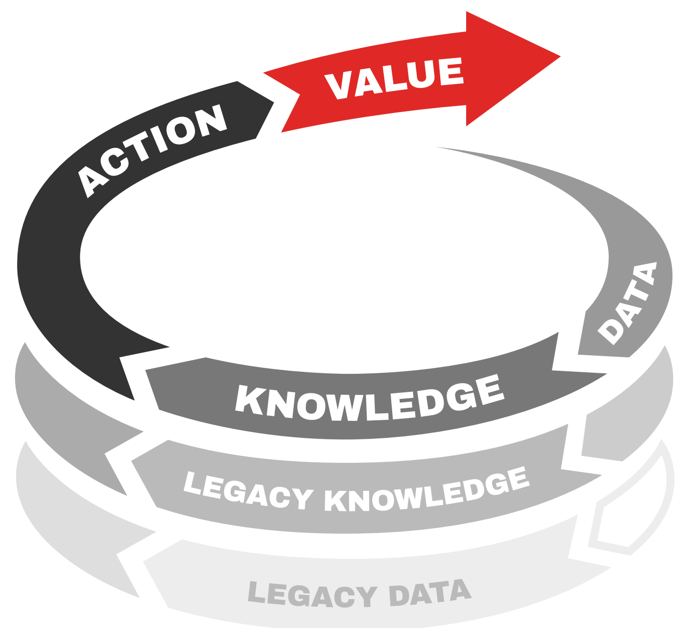
IN THE PAST DECADE, ADVANCES IN DIESEL TECHNOLOGIES LED TO 3x REDUCTION IN NO_x & 10x REDUCTION IN PARTICULATE MATTER EMISSIONS.

TECHNOLOGY

LIBERTY IS A TECHNOLOGY LEADER.

Our technology solutions ensure FASTER and CLEANER operational delivery of BETTER, more economic wells for our customers.

Liberty's Spiral Up℠ workflow combines our customers' data and experience with Liberty's optimization tools, databases, and expertise to create value. Value comes from lowering the cost to produce a barrel of oil. Increasing well productivity in the most capital efficient way means BETTER wells.



HOW DO WE SPIRAL UP℠ TO VALUE?

Using our proprietary database consisting of 100,000 shale wells, we first perform a production assessment in the area surrounding our customers' operations. Deeper machine learning comes from our highly-sophisticated LibertyMVA™ tool, which turns data into knowledge by revealing what is truly driving production performance.

Spiral Up℠ uses this acquired knowledge to help our customers BETTER optimize well and frac designs together with efficient, CLEANER field operations. Liberty's Fraconomics™ tool allows efficient use of technical knowledge to make BETTER, FASTER economic decisions. Liberty's real-time engineering provides FASTER

feedback to continuously improve operations. All of this is done collaboratively with our customers.

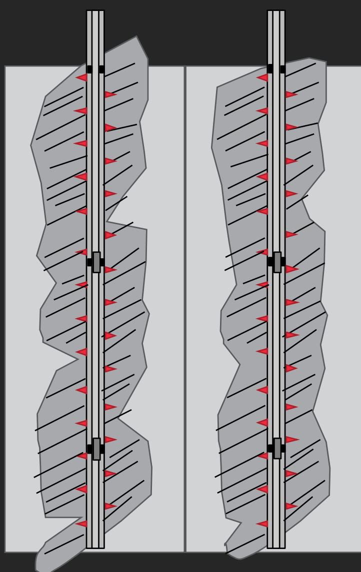
One of our newest technologies, WellWatch™, allows our customers to be proactive in achieving the appropriate level of frac stimulation. “Too little” stimulation means large resources of oil and gas left underground. “Too much” stimulation means costly and inefficient parent-child well interference problems. WellWatch™ helps our customers to optimize their completion design to arrive at stimulation coverage that is “just right.”

Liberty’s technology goals are aligned with our customers’ goals: lower the cost and impact of producing a barrel of oil. Long-term customer partnerships are critical to success in this endeavor.

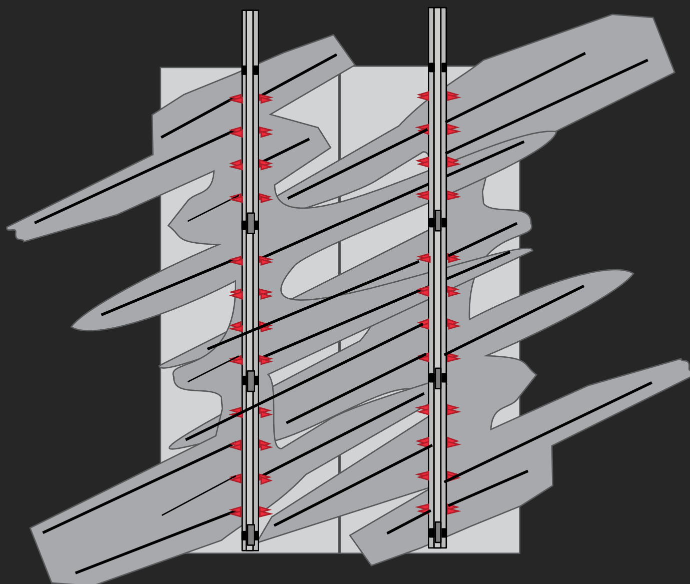
WELLWATCH™
THE SEARCH FOR GOLDILOCKS

Parent / Child well interference, “frac hits,” have become a much bigger issue as industry seeks to optimize full-field development. We developed WellWatch™ to provide synchronized, cloud-stored, offset-well pressure monitoring data during frac operations to enable real-time visualization and decision making. Optimizing infill well spacing and appropriate frac sizing, Child / Child relationships, is closely related to Parent / Child relationships. The insights gained from WellWatch™ aid in engineering both Parent / Child and Child / Child relationships. Managing these relationships is a search for Goldilocks. Too little stimulation and / or too wide well spacing means precious oil reserves are left behind. Too much stimulation and / or too tight well spacing leads to wasted capital and often expensive well remediation of frac hits. Goldilocks stimulation and well spacing maximizes capital efficiency and oil recovery as shown in the cartoon below.

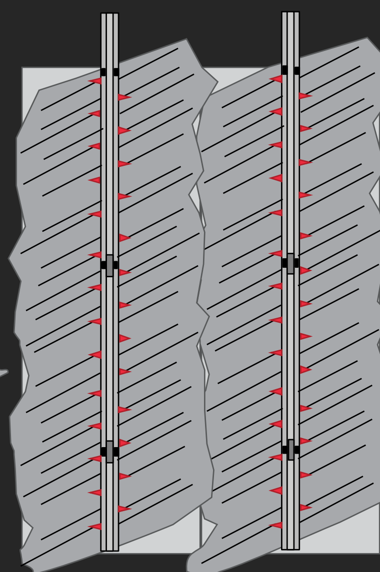
TOO LITTLE



TOO MUCH



JUST RIGHT



INTENDED TARGET ACTUAL COVERAGE

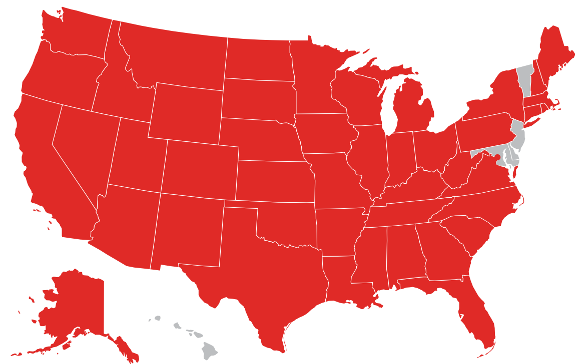
PEOPLE + CULTURE

PEOPLE AND CULTURE ARE WHAT SET US APART. INVESTING IN OUR TEAM IS OUR TOP PRIORITY.

Year after year, Liberty's employee turnover rates are substantially lower than that of our industry, and 2019 was no exception. We built a culture where all team members have an aligned focus and are incentivized to achieve results that are impossible to accomplish alone. Our innovative approach to hiring allows us to seek out individuals who embody Liberty's core values. We believe building a strong culture inside our organization translates to strong communities where Liberty families call home.

WE ARE DRIVEN BY ONE GOAL: BUILD THE BEST DAMN FRAC COMPANY, PERIOD.

LIBERTY FAMILIES LIVE IN 45 STATES FROM COAST TO COAST.



LIBERTY BOARD MEMBER AND FORMER U.S. SECRETARY OF THE INTERIOR, GALE NORTON, ADDRESSES LIBERTY'S 2019 WOMEN'S SUMMIT. THIS EVENT BROUGHT OVER 130 WOMEN TOGETHER FROM ALL OF OUR DISTRICTS AND ACROSS ALL FACETS OF OUR OPERATIONS.

THE LIBERTY FAMILY

OUR DEDICATION GOES BEYOND OUR DIRECT TEAM MEMBERS IN ORDER TO BUILD A STRONGER EXTENDED LIBERTY FAMILY. SINCE 2017, LIBERTY IS ONE OF A SMALL NUMBER OF COMPANIES TO OFFER FINANCIAL ASSISTANCE TO FAMILIES NAVIGATING THEIR WAY THROUGH IN VITRO FERTILIZATION (IVF) AND ADOPTION.

BLAKE FENNEL
MAINTENANCE MANAGER, FARMINGTON, NM

"My wife, Justis, and I had tried to start a family for 5 years without success. We had been saving money to try IVF. I'll never forget the day Liberty announced the new benefit to help families with this expensive process. I immediately called Justis to tell her the news and she started crying! In September of 2018, we welcomed our twins, Willow and Wyatt. Liberty played a huge part in making my wife and I parents, something that has brought so much joy to our lives. Justis and I love this company and will never forget what they have done for us!"

JOE NETHERLAND
SENIOR WAREHOUSE SPECIALIST, WILLISTON, ND

"Without the help of Liberty's Adoption Assistance Program, it would have been much harder for us to proceed with all that we've had to do in order to finalize the adoption of our little girl. It's been a long uphill climb, but every time I see her smile, all the difficulties fade out. I want to express how grateful our entire family is to Liberty. Being a part of the Liberty Family has been one of the best working experiences of my life."

IN 2019, LIBERTY JOINED THE BAN THE BOX INITIATIVE THAT ALLOWS TALENTED INDIVIDUALS TO RETURN TO WORK.

"We employ more than 50 formerly-incarcerated people at Liberty. Early life mistakes should not define and constrain an entire life. Many people deserve a second chance to create value in their lives that they are not getting today. We seek to hire people with integrity, a positive attitude, and a hunger to learn and contribute to a team. There are plenty of people who have been incarcerated that we wouldn't hire, just as there are plenty of people who have never been incarcerated that we wouldn't hire. Liberty is proud to pave the way for other companies to a forward looking hiring processes that enables mutual benefit from so many talented individuals."

- Chris Wright, Chairman and CEO

Chris Wright speaking at the Criminal Justice Reform Symposium in Albuquerque, New Mexico.

FEATURED TEAM MEMBERS

DID YOU KNOW?

64% OF EMPLOYEES ARE MILLENNIALS OR YOUNGER

458 TEAM MEMBER OWNERS

96% OF EMPLOYEES SAVE FOR THEIR FUTURE WITH LIBERTY'S 401(K)

JOSH GONZALES

- BORN AND RAISED IN SOUTH TEXAS
- SERVICE LEADER FOR APACHE CREW

"I BOUNCED AROUND THROUGH THE INDUSTRY SEARCHING FOR A SERVICE COMPANY THAT CARED ABOUT SERVICE QUALITY AS MUCH AS I DID. I HATED NOT BEING THE BEST. I WANTED TO WORK FOR A GROUP AS COMPETITIVE AS I AM. I FOUND IT HERE AT LIBERTY. I LOVE IT HERE. EVERY DAY OUR TEAM STRIVES TO BE BETTER THAN WE WERE THE DAY BEFORE. CONSTANTLY TRYING TO FIND A SAFER, MORE EFFICIENT WAY TO DO THINGS. LIBERTY HAS THE BEST PEOPLE, AND I LOVE HAVING THE PLEASURE OF WORKING WITH THEM EVERYDAY."

LACEY ROBISON

- STARTED IN 2012 AS ADMINISTRATIVE ASSISTANT, NOW IS WAREHOUSE OPERATIONS MANAGER
- MANAGED OVER $400 MILLION OF INVENTORY THROUGH ALL LIBERTY'S WAREHOUSES IN 2019

"BEING A PART OF THE LIBERTY FAMILY FOR THE LAST 7 YEARS HAS BEEN A WONDERFUL EXPERIENCE. I AM THANKFUL TO BE A PART OF THE GROWTH OVER THE YEARS. THERE IS A DESIRE HERE FOR NEW, CREATIVE AND OUTSIDE-THE-BOX THINKING THAT HELPS DRIVE TOWARDS CONTINUED SUCCESS, BOTH AS A COMPANY AND PERSONAL DEVELOPMENT."

MICHAEL SHANKWEILER

- BORN IN CAMP LEJEUNE, NC, GREW UP IN BEAUFORT, SC, LIVED IN CO SINCE AGE 17
- FIELD SAFETY REPRESENTATIVE FOR CONSTITUTION CREW

"I HAVE FOUND A CAREER THAT I ENJOY DOING DAY IN AND DAY OUT. I'M SURROUNDED EACH DAY BY PEERS, MANAGEMENT, MENTORS, AND SUPPORT TEAMS THAT ARE FOCUSED ON THE SAME GOAL AND TAKING PRIDE IN WHAT WE DO. MY FAMILY AND I ARE VERY PROUD TO BE PART OF THE LIBERTY FAMILY."

COMMUNITY

Liberty team members volunteering at Casa de Esperanza in Houston.

When it comes to community, Liberty looks at impact. Our Liberty family is committed to maximizing our community impact by partnering with local organizations making a difference. We minimize our operational impact through developing technologies like The Quiet Fleet®, next-generation low-emission fleets and reducing truck traffic through containerized sand.

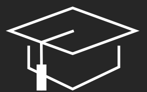
THE LIBERTY STANDARD IS WHAT SETS US APART. THIS IS HOW WE PRESENT OURSELVES WITHIN OUR INDUSTRY AND OUR COMMUNITIES.

WE BELIEVE IN HUMAN LIBERTY. EVERYONE SHOULD HAVE THE OPPORTUNITY AND THE FREEDOM TO FOLLOW THEIR DREAMS.

Every Tuesday, Liberty volunteers spend their lunch hour reading to 3rd grade students at Columbian Elementary in Denver. Liberty has partnered with the Power Lunch program for 5 years. A highlight each year is hosting our buddies for an interactive field trip at our Denver office.

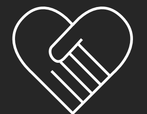
SINCE LIBERTY WAS FOUNDED IN 2011, WE HAVE BECOME DEEPLY ROOTED IN OUR COMMUNITIES. EVERY COMMUNITY IS DIFFERENT, AND WHILE WE ARE UNABLE TO ADDRESS EVERY NEED, LIBERTY HAS CHOSEN THREE CORE FOCUS AREAS:

EDUCATION



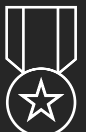
Liberty supports organizations that provide educational opportunities.

ALLEVIATING POVERTY



Liberty supports organizations dedicated to lifting people out of poverty by providing opportunities for individuals to find their own definition of success.

VETERAN/MILITARY SERVICES



Liberty supports organizations that provide support and opportunities for veterans, first responders and active military personnel.

FEATURED PARTNER:

The Tennyson Center serves children aged 0-18 through a residential, day treatment (school), and community-based therapeutic programs. Children who come to Tennyson have experienced unimaginable neglect and abuse, and many have never known a safe home or a trustworthy adult.

You can find Liberty employees volunteering multiple times a month: playing games, decorating for holidays, eating dinner with the kids in their cottages, or celebrating summer by barbecuing for the entire Tennyson family.

"LIBERTY TRANSFORMS LIVES EVERY DAY! LIBERTY EMBRACES TENNYSON'S KIDS THROUGH THEIR SUPPORT AND VOLUNTEER TIME, OFFERS THESE KIDS A HOPEFUL FUTURE IN THE ENERGY INDUSTRY AND A CARING PRESENCE AS THEIR HEALING JOURNEYS UNFOLD. LIBERTY INSPIRES STUDENTS, ENGAGES THEM IN LEARNING, AND BUILDS PERSONAL RELATIONSHIPS WITH THEM IN WAYS THAT HIGHLIGHT WHY WE, AT TENNYSON, ARE SO INCREDIBLY GRATEFUL FOR OUR PARTNERSHIP!"

- NED BRESLIN, CEO, TENNYSON CENTER FOR CHILDREN

Liberty team members at Tennyson Center for Children's summer BBQ

THE LIBERTY STANDARD

Holding ourselves and our partners to the highest standard of excellence across all facets of our business. Liberty's commitment to communities is part of our business foundation: to strive to be the best . The three core focus areas – education, alleviating poverty and supporting veterans and military – ensure we are supporting a spectrum of organizations making a difference in our communities.

THE LIBERTY TEAMS IN MIDLAND (TOP) AND DENVER (BOTTOM) VOLUNTEERING WITH HABITAT FOR HUMANITY.

LIBERTY'S VALUES

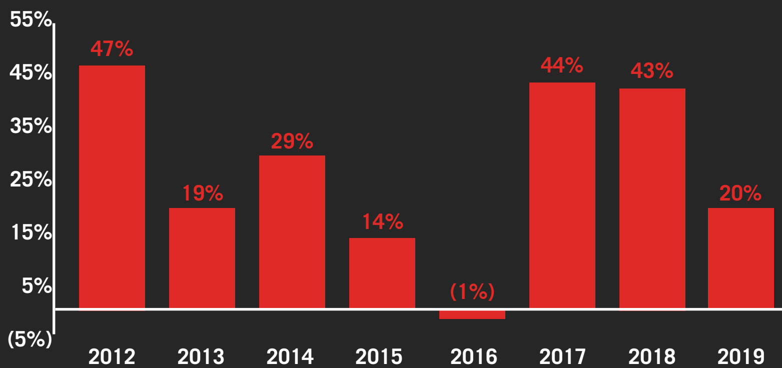
- WORK EVERY DAY TO BETTER SERVE OUR CUSTOMERS, TEAMMATES, SUPPLIERS AND COMMUNITIES
- NEVER COMPROMISE ON ETHICS OR HONESTY
- NEVER GIVE LESS THAN OUR BEST

BUSINESS STRATEGY & FINANCIAL SNAPSHOT

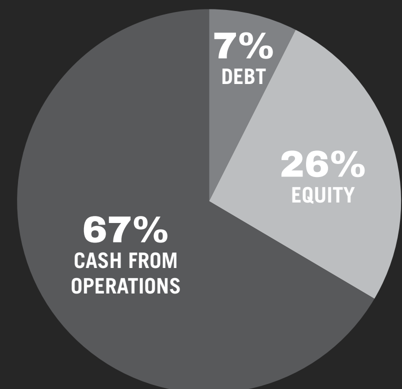
INVESTMENT HIGHLIGHTS

1. DISCIPLINED ORGANIC GROWTH
2. REINVEST AT HIGH RATES OF RETURN
3. RETURN CAPITAL TO SHAREHOLDERS
4. BALANCE SHEET STRENGTH
5. UNMATCHED RATE OF INNOVATION
6. LONG-TERM PARTNERSHIPS

CASH RETURN ON CAPITAL INVESTED*



HISTORICAL FUNDING SOURCES



*Cash return on capital invested is derived in part from non-GAAP financial measures. Please see endnote 3 following this annual report for important additional information.

FROM THE BEGINNING, LIBERTY HAS FOCUSED ON GENERATING FREE CASH FLOW AND REINVESTING AT HIGH RATES OF RETURN.

The majority of capital used to build Liberty is from cash generated by operations. Our disciplined focus on organic growth and opportunistic acquisitions has minimized the need to raise equity and debt capital.

In Liberty's eight years of operations, we averaged a pre-tax cash return on capital invested (CROCI*) of approximately 27%. Two of these eight years were the severe downturn of 2015/2016 when oil prices dropped below $30/bbl, causing frac activity to plunge by 66% in the basins in which we operated. We are currently navigating through another challenging time for the industry. The combination of industry-wide increased throughput from frac fleets and strong capital discipline from our customers challenged returns in 2019. Liberty manages the industry cycles by ensuring we have the balance sheet strength to take advantage of the changes in oilfield demand.

Service company financial performance is driven primarily by operational efficiency and asset utilization. Liberty outperforms on both metrics. Our experienced, motivated and team-oriented personnel excel at BETTER, FASTER and CLEANER operations. This differential operational performance keeps Liberty's customer demand high, ensuring strong asset utilization even in a downturn. We grew our fleet in 2019 with the deployment of our latest next-generation fleet.

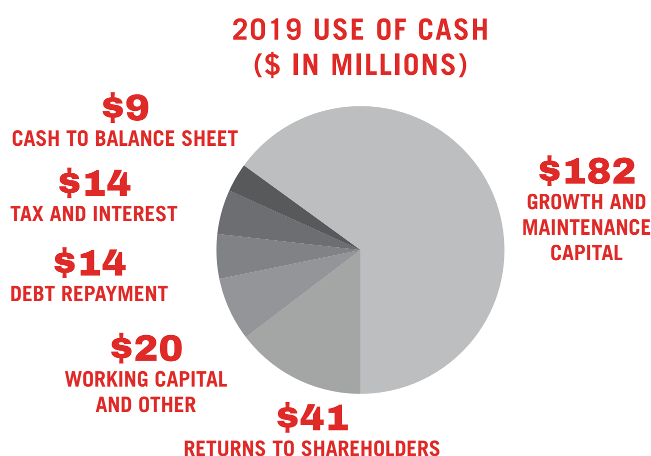
We invest in innovative technology to optimize our customers' production economics, strengthening customer relationships. This investment also includes technology that maximizes operational efficiency and minimizes the total cost of ownership for our equipment. Liberty's low employee turnover helps build long-term efficient operational partnerships with our customers, allowing us to be selective and work with customers who share our drive for high-throughput operations.

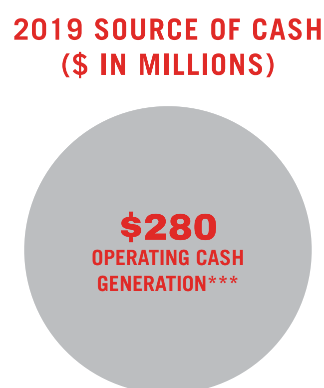
Our drive to be the best is evidenced by our industry-leading returns. Strong sustaining free cash flow in 2019 enabled Liberty to return $41 million to shareholders while investing in organic growth, improving our market share and enhancing our technological advantages. It is a culture of innovation and the empowerment of our employees that sets our returns apart from the rest of the industry.

($ in Millions)	2019	2018
Total revenue	$1,990	$2,155
Total gross profit	$369	$526
Pre-tax net income	$89	$289
Adjusted EBITDA **	$277	$438
Operating metrics (annualized)		
Average active frac fleets	22.8	21.3
Revenue/active fleet	$87	$101
Adj. EBITDA **/active fleet	$12	$21

**Adjusted EBITDA is a non-GAAP financial measure. Please see endnote 1 following this annual report for important additional information, including a reconciliation to the most comparable GAAP measure.

*** Operating Cash Generation is a non-GAAP financial measure. Please see endnote 4 following this annual report for important additional information, including a reconciliation to the most comparable GAAP measure.





[1] Adjusted EBITDA is not presented in accordance with generally accepted accounting principles in the United States ("U.S. GAAP"). Please see the table below for a Reconciliation of Net Income to EBITDA and Adjusted EBITDA, its most directly comparable U.S. GAAP financial measure.

($ in Millions)	Year Ended 31-Dec-19	Year Ended 31-Dec-18
Net Income (loss)	**$75**	**$249**
Depreciation & amortization	$165	$125
Interest expense	$15	$17
Income tax expense	$14	$40
EBITDA	**$269**	**$431**
Fleet start-up costs	$4	$10
Asset acquisition costs	-	$1
Loss/(Gain) on disposal of assets	$3	$(4)
Bad debt reserve	$1	-
Adjusted EBITDA	**$277**	**$438**

[2] Pre-Tax Return on Capital Employed ("ROCE") is an operational measure. Please see the table below for a Calculation of Pre-Tax Return on Capital Employed. Certain amounts in the table below may not sum to the amounts presented due to the cumulative effects of rounding.

($ in Millions)	Twelve Months Ended 31-Dec-19
Net income	**$75**
Add back: Income tax expense	$14
Pre-tax net income	**$89**

($ in Millions) **Capital Employed**	Twelve Months Ended 31-Dec-19	Twelve Months Ended 31-Dec-18
Total debt, net of discount	$106	$107
Total equity	$781	$741
Total capital employed	**$888**	**$847**
Average capital employed	**$867**	
Pre-tax return on capital employed	**10%**	

[3] Cash Return on Capital Invested is defined as the ratio of Adjusted EBITDA, a non-U.S. GAAP measure, to gross capital invested (total assets plus accumulated depreciation less non-interest bearing current liabilities). Please see note 1 above for a reconciliation of Adjusted EBITDA to its most comparable U.S. GAAP measure.

[4] Operating Cash Generation is not presented in accordance with U.S. GAAP. Please see the table below for a reconciliation to Cash Flow from Operations, its most directly comparable U.S. GAAP financial measure.

($ in Millions)	Twelve Months Ended 31-Dec-19
Cash flow from operations	**$261**
Fleet start-up costs	$4
Cash paid for interest	$13
Cash income taxes	$1
Proceeds from disposal of assets	$1
Operating cash generation	**$280**

32
WELLHEAD
LIBERTY
VALVE OPEN
Do Not Operate

Shares Listed
New York Stock Exchange
Symbol: LBRT

Transfer Agent and Registrar
American Stock Transfer & Trust Company, LLC
Attn: Client Support
6201 15th Avenue
Brooklyn, NY 11219
Phone: 1-800-937-5449 or 1-718-921-8124 (outside of U.S.)
astfinancial.com

Investor Relations Contact Information
To contact Liberty's Investor Relations department, stockholders may call the company at 303-515-2851 or send a message via email to IR@libertyfrac.com.

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

FORM 10-K

(Mark One)

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the Fiscal Year Ended December 31, 2019

OR

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

Commission File No. 001-38081

Liberty Oilfield Services Inc.

(Exact Name of Registrant as Specified in its Charter)

Delaware	**81-4891595**
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)
950 17th Street, Suite 2400 Denver, Colorado	**80202**
(Address of Principal Executive Offices)	(Zip Code)

(303) 515-2800

(Registrant's Telephone Number, Including Area 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
Class A Common Stock, par value $0.01	**LBRT**	**New York Stock Exchange**

Securities registered pursuant to Section 12(g) of the Act: None

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

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

Indicate by check mark whether the registrant (1) has filed all reports to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. ☒ Yes ☐ No

Indicate by check mark whether the registrant has submitted electronically, every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this Chapter) during the presiding 12 months (or for such shorter period that the registrant was required to submit and post 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 for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

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

As of June 28, 2019, the last business day of the registrant's most recently completed second fiscal quarter, the aggregate market value of voting and non-voting common stock held by non-affiliates of the registrant was approximately $732.8 million, determined using the per share closing price on the New York Stock Exchange on that date of $16.18. Shares of common stock held by each director and executive officer (and their respective affiliates) and each person who owns 10 percent or more of the outstanding common stock or who is otherwise believed by the registrant to be in a control position have been excluded. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

At February 21, 2020, the Registrant had 81,920,347 shares of Class A Common Stock and 30,638,960 shares of Class B Common Stock outstanding.

Documents Incorporated by Reference: Part III of this Annual Report on Form 10-K incorporates certain information by reference from the registrant's proxy statement for the 2020 annual meeting of stockholders to be filed no later than 120 days after the end of the registrant's fiscal year.

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K and certain other communications made by us contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange of 1934, as amended (the “Exchange Act”), including statements about our growth, future operating results, estimates, beliefs and expected performance. For this purpose, any statement that is not a statement of historical fact should be considered a forward-looking statement. We may use the words “believe,” “anticipate,” “plan,” “expect,” “intend,” “may,” “will,” “should” and similar expressions to help identify forward-looking statements. We cannot assure you that our assumptions and expectations will prove to be correct. Important factors could cause our actual results to differ materially from those indicated or implied by forward-looking statements. We undertake no intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise and readers should not rely on the forward-looking statements as representing the Company’s views as of any date subsequent to the date of the filing of this Annual Report on Form 10-K. These forward-looking statements are based on management’s current belief, based on currently available information, as to the outcome and timing of future events.

Forward-looking statements may include statements about:

- our business strategy;
- our operating cash flows, the availability of capital and our liquidity;
- our future revenue, income and operating performance;
- our ability to sustain and improve our utilization, revenue and margins;
- our ability to maintain acceptable pricing for our services;
- our future capital expenditures;
- our ability to finance equipment, working capital and capital expenditures;
- competition and government regulations;
- our ability to obtain permits and governmental approvals;
- pending legal or environmental matters;
- oil and natural gas prices;
- acquisitions;
- general economic conditions;
- credit markets;
- demand for services in our industry;
- our ability to successfully develop our research and technology capabilities and implement technological developments and enhancements;
- uncertainty regarding our future operating results;
- return of capital to shareholders; and
- plans, objectives, expectations and intentions contained in this Annual Report on Form 10-K that are not historical.

We caution you that these forward-looking statements are subject to all of the risks and uncertainties, most of which are difficult to predict and many of which are beyond our control. These risks include, but are not limited to, decline in demand for our services, the cyclical nature and volatility of the oil and natural gas industry, a decline in, or substantial volatility of, oil and natural gas commodity prices, environmental risks, regulatory changes, the inability to comply with the financial and other covenants and metrics in our Credit Facilities (as defined herein), cash flow and access to capital, the timing of development expenditures and the other risks described under “Risk Factors” in this Annual Report on Form 10-K.

All forward-looking statements, expressed or implied, included in this Annual Report on Form 10-K are expressly qualified in their entirety by this cautionary statement. This cautionary statement should also be considered in connection with any subsequent written or oral forward-looking statements that we or persons acting on our behalf may issue.

This Annual Report on Form 10-K includes market and industry data and certain other statistical information based on third-party sources including independent industry publications, government publications and other publish independent

sources, such as content and estimates provided by Coras Research, LLC as of December 31, 2019. Coras Research, LLC is not a member of the Financial Industry Regulator Authority (FINRA) or the Securities Investor Protection Corporation (SIPC) and is not a registered broker dealer or investment advisor. Although we believe these third-party sources are reliable as of their respective dates, we have not independently verified the accuracy or completeness of this information. Some data is also based on our own good faith estimates, which are supported by our management's knowledge of and experience in the markets and business in which we operate.

PART I

As used in this Annual Report on Form 10-K, unless the context otherwise requires, references to the term "Liberty Inc." refers to Liberty Oilfield Services Inc. and references to the terms "Company," "we," "us" and "our" refer to, collectively, Liberty Oilfield Services LLC and LOS Acquisition Co I LLC and its subsidiaries (collectively, the "Predecessor") for periods prior to the IPO (as defined herein), and, for periods as of and following the IPO, Liberty Inc. and its consolidated subsidiaries. References to "Liberty LLC" refer to Liberty Oilfield Services New HoldCo LLC. References to "Liberty Holdings" refer to Liberty Oilfield Services Holdings LLC.

Item 1. Business

Our Company

We are an independent provider of hydraulic fracturing services and goods to onshore oil and natural gas exploration and production ("E&P") companies in North America. We provide our services primarily in the Permian Basin, the Eagle Ford Shale, the Denver-Julesburg Basin (the "DJ Basin"), the Williston Basin, the San Juan Basin and the Powder River Basin.

We have grown organically from one active hydraulic fracturing fleet in December 2011 to 24 active fleets in February 2020.

Our founders and existing management were pioneers in the development of data-driven hydraulic fracturing technologies for application in shale plays. Prior to founding Liberty Holdings, the majority of our management team founded and built Pinnacle Technologies, Inc. ("Pinnacle Technologies") into a leading fracturing technology company. In 1992, Pinnacle Technologies developed the first commercial hydraulic fracture mapping technologies, analytical tools that played a major role in launching the shale revolution. Our extensive experience with fracture technologies and customized fracture design has enabled us to develop new technologies and processes that provide our customers with real time solutions that significantly enhance their completions. These technologies include hydraulic fracture propagation models, reservoir engineering tools, large, proprietary shale production databases and multi-variable statistical analysis techniques. Taken together, these technologies have enabled us to be a leader in hydraulic fracture design innovation and application.

We believe the following characteristics distinguish us from our competitors and are the foundations of our business: forming ongoing partnerships of trust and innovation with our customers; developing and utilizing technology to maximize well performance; and promoting a people-centered culture focused on our employees, customers and suppliers. We have developed strong relationships with our customers by investing significant time in fracture design collaboration, which substantially enhances their production economics. Our technological innovations have become even more critical as E&P companies have increased the completion complexity and fracture intensity of horizontal wells. We are proactive in developing innovative solutions to industry challenges, including developing: (i) our proprietary databases of U.S. unconventional wells to which we apply our proprietary multi-variable statistical analysis technologies to provide differential insight into fracture design optimization; (ii) our Liberty Quiet Fleet® design which significantly reduces noise levels compared to conventional hydraulic fracturing fleets; and (iii) hydraulic fracturing fluid systems tailored to the specific reservoir properties in the basins in which we operate. We foster a people-centered culture built around honoring our commitments to customers, partnering with our suppliers and hiring, training and retaining people that we believe to be the best talent in our field, enabling us to be one of the safest and most efficient hydraulic fracturing companies in the United States.

Recent Developments

In January 2020, we put our 24th fleet into production for a long-term existing customer. This fleet will utilize our Liberty Quiet Fleet® technology and have dual fuel capability. We expect our 25th fleet to be deployed later in 2020.

Initial Public Offering and Corporate Reorganization Transaction

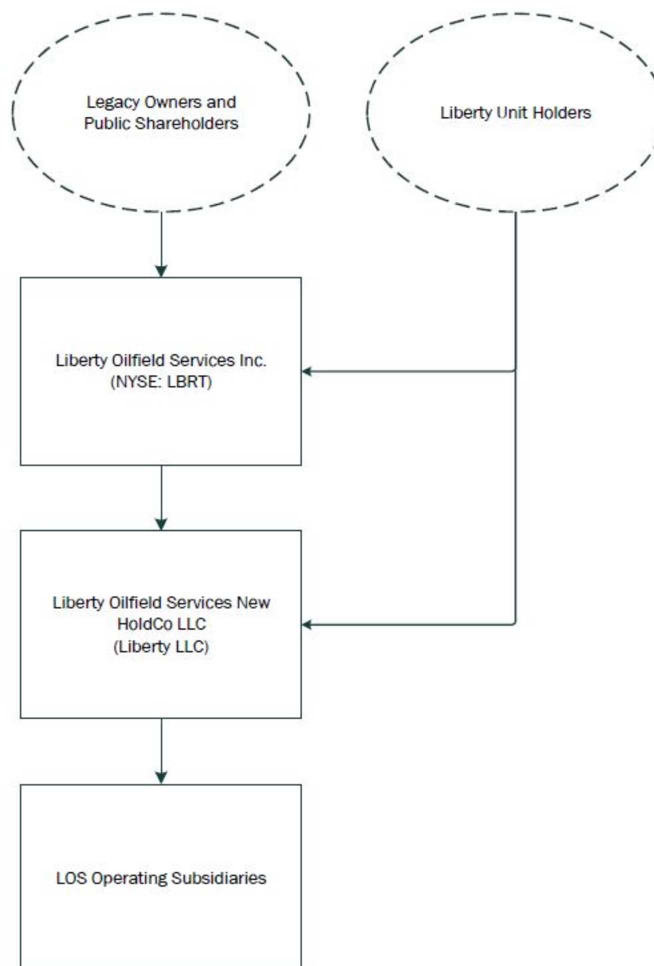
Liberty Inc. was incorporated as a Delaware corporation on December 21, 2016, to become a holding corporation for Liberty LLC and its subsidiaries upon completion of a corporate reorganization (as detailed below, the "Corporate Reorganization") and planned initial public offering of the Company ("IPO"). Liberty Inc. has no material assets other than its ownership in Liberty LLC.

On January 17, 2018, we completed our IPO of 14,640,755 shares of our Class A common stock, par value $0.01 per share (the "Class A Common Stock") at a public offering price of $17.00 per share, of which 14,340,214 shares were offered by us and 300,541 shares were offered by the selling shareholder. We received approximately $220.0 million in net proceeds after deducting approximately $23.8 million of underwriting discounts and commissions and other offering costs. We did not receive any proceeds from the sale of the shares of Class A Common Stock by the selling shareholder.

We are a holding company with no direct operations. In connection with the IPO, we completed the Corporate Reorganization, including the following series of transactions:

- Liberty Holdings contributed all of its assets to Liberty LLC in exchange for units in Liberty LLC (the "Liberty LLC Units");
- Liberty Holdings liquidated and distributed to its then-existing owners (the "Legacy Owners") Liberty LLC Units pursuant to the terms of the limited liability company agreement of Liberty Holdings and the Master Reorganization Agreement dated as of January 11, 2018, by and among the Company, Liberty Holdings, Liberty LLC, and the other parties named therein (the "Master Reorganization Agreement");
- certain of the Legacy Owners directly or indirectly contributed all or a portion of their Liberty LLC Units to Liberty Inc. in exchange for 55,685,027 shares of our Class A Common Stock, and 1,258,514 shares of restricted stock. Subsequent to the initial exchange, 1,609,122 shares of Class A Common Stock were redeemed for an aggregate purchase price of $25.9 million upon the exercise of the underwriters' overallotment option;
- Liberty Inc. issued the Legacy Owners that continued to own Liberty LLC Units (the "Liberty Unit Holders") an aggregate amount of 48,207,372 shares of our Class B common stock, par value $0.01 per share (the "Class B Common Stock" and, together with the Class A Common Stock, the "Common Stock"); and
- Liberty Inc. contributed the net proceeds it received from the IPO to Liberty LLC in exchange for additional Liberty LLC Units such that Liberty Inc. held a total number of Liberty LLC Units equal to the number of shares of Class A Common Stock outstanding immediately following the IPO.

The below structure chart shows our organization upon the completion of our IPO. This chart is provided for illustrative purposes only and does not represent all legal entities affiliated with us.



Each share of Class B Common Stock has no economic rights but entitles its holder to one vote on all matters to be voted on by shareholders generally. Holders of Class A Common Stock and Class B Common Stock will vote together as a single

class on all matters presented to our shareholders for their vote or approval, except as otherwise required by applicable law or by our amended and restated certificate of incorporation. We do not intend to list our Class B Common Stock on any exchange.

Under the Second Amended and Restated Limited Liability Company Agreement of Liberty LLC (the "Liberty LLC Agreement"), each Liberty Unit Holder has, subject to certain limitations, the right (the "Redemption Right") to cause Liberty LLC to acquire all or a portion of its Liberty LLC Units for, at Liberty LLC's election, (i) shares of our Class A Common Stock at a redemption ratio of one share of Class A Common Stock for each Liberty LLC Unit redeemed, subject to conversion rate adjustments for stock splits, stock dividends and reclassification and other similar transactions or (ii) an equivalent amount of cash. Alternatively, upon the exercise of the Redemption Right, Liberty Inc. (instead of Liberty LLC) will have the right (the "Call Right") to, for administrative convenience, acquire each tendered Liberty LLC Unit directly from the redeeming Liberty Unit Holder for, at its election, (i) one share of Class A Common Stock or (ii) an equivalent amount of cash. In addition, upon a change of control of Liberty Inc., Liberty Inc. has the right to require each holder of Liberty LLC Units (other than Liberty Inc.) to exercise its Redemption Right with respect to some or all of such unit holder's Liberty LLC Units. In connection with any redemption of Liberty LLC Units pursuant to the Redemption Right or the Call Right, the corresponding number of shares of Class B Common Stock will be canceled.

In connection with the IPO, Liberty Inc. entered into two tax receivable agreements, (the "TRAs") with the Liberty Unit Holders and the selling shareholder (each such person and any permitted transferee, a "TRA Holder" and together, the "TRA Holders").

The first of the TRAs, which Liberty Inc. entered into with the Liberty Unit Holders, generally provides for the payment by Liberty Inc. to such TRA Holders of 85% of the net cash savings, if any, in U.S. federal, state and local income and franchise tax (computed using simplifying assumptions to address the impact of state and local taxes) that Liberty Inc. actually realizes (or is deemed to realize in certain circumstances) in periods after the IPO as a result of, as applicable to each such TRA Holder, (i) certain increases in tax basis that occur as a result of Liberty Inc.'s acquisition (or deemed acquisition for U.S. federal income tax purposes) of all or a portion of such TRA Holder's Liberty LLC Units in connection with the IPO or pursuant to the exercise of the Redemption Right or Liberty Inc.'s Call Right and (ii) imputed interest deemed to be paid by Liberty Inc. as a result of, and additional tax basis arising from, any payments Liberty Inc. makes under such TRAs.

The second of the TRAs, which Liberty Inc. entered into with the selling shareholder, generally provides for the payment by Liberty Inc. to such TRA Holder of 85% of the net cash savings, if any, in U.S. federal, state and local income and franchise tax (computed using simplifying assumptions to address the impact of state and local taxes) that Liberty Inc. actually realizes (or is deemed to realize in certain circumstances) in periods after the IPO as a result of, as applicable to such TRA Holder, (i) any net operating losses available to Liberty Inc. as a result of the Corporate Reorganization and (ii) imputed interest deemed to be paid by Liberty Inc. as a result of any payments Liberty Inc. makes under such TRAs. For further discussion regarding the potential acceleration of payments under the TRAs and its potential impact, please read "Risk Factors—Risks Related to Our Class A Common Stock."

Because Liberty Inc. is a holding company with no operations of its own, Liberty Inc.'s ability to make payments under the TRAs is dependent on the ability of Liberty LLC to make distributions to Liberty Inc. in an amount sufficient to cover its obligations under the TRAs. See "Risk Factors—Risks Related to Our Class A Common Stock—Liberty Inc. is a holding company. Liberty Inc.'s only material asset is its equity interest in Liberty LLC, and Liberty Inc. is accordingly dependent upon distributions from Liberty LLC to pay taxes, make payments under the TRAs and cover its corporate and other overhead expenses." If Liberty Inc. experiences a change of control (as defined under the TRAs, which includes certain mergers, asset sales and other forms of business combinations) or the TRAs terminate early (at Liberty Inc.'s election or as a result of its breach), Liberty Inc. would be required to make a substantial, immediate lump-sum payment.

Cyclical Nature of Industry

We operate in a highly cyclical industry. The key factor driving demand for our services is the level of drilling activity by E&P companies, which in turn depends largely on the current and anticipated economics of new well completions. Global supply and demand for oil and the domestic supply and demand for natural gas are critical in assessing industry outlook. Demand for oil and natural gas is cyclical and subject to large, rapid fluctuations. E&P companies tend to increase capital expenditures in response to increases in oil and natural gas prices, which generally results in greater revenues and profits for oilfield service companies such as ours. Increased capital expenditures also ultimately lead to greater production, which historically has resulted in increased supplies and reduced prices which in turn tend to reduce demand for oilfield services. For these reasons, the results of our operations may fluctuate from quarter to quarter and from year to year, and these fluctuations may distort comparisons of results across periods.

Seasonality

Our results of operations have historically reflected seasonal tendencies relating to holiday seasons, inclement weather and the conclusion of our customers' annual drilling and completion capital expenditure budgets. Our most notable declines typically occur in the fourth quarter of the year for the reasons described above. Additionally, some of the areas in which we have operations, including the DJ Basin, Powder River Basin and Williston Basin, are adversely affected by seasonal weather conditions, primarily in the winter and spring. During periods of heavy snow, ice or rain and frost law enforcement, we may be unable to move our equipment between locations, thereby reducing our ability to provide services and generate revenues. The exploration activities of our customers may also be affected during such periods of adverse weather conditions. Additionally, extended drought conditions in our operating regions could impact our ability or our customers' ability to source sufficient water or increase the cost for such water.

Intellectual Property

Over the last several years we have significantly invested in our research and technology capabilities. Our efforts to date have been focused on developing innovative, fit-for-purpose solutions designed to enhance our core service offerings, increase completion efficiencies, provide cost savings to our operations and add value for our customers.

As a result of these efforts, we introduced several new products and progressed on differentiating technologies that we believe will provide a competitive advantage as our customers focus on extracting oil and natural gas in the most economical and efficient ways possible, including, for example, our Liberty Quiet Fleet®, which materially reduces noise levels compared to conventional fracturing fleets. These investments are delivering value added products and services that support our customers and create increasing demand for our services.

We seek patent and trademark protections for our technology when we deem it prudent, and we aggressively pursue protection of these rights when warranted. We believe our patents, trademarks, and other protections for our proprietary technologies are adequate for the conduct of our business and that no single patent or trademark is critical to our business. In addition, we rely, to a great extent, on the technical expertise and know-how of our personnel to maintain our competitive position, and we take commercially reasonable measures to protect trade secrets and other confidential and/or proprietary information relating to the technologies we develop.

Risk Management and Insurance

Our operations are subject to significant hazards often found in the oil and natural gas industry, such as, but not limited to, accidents, including accidents related to trucking operations provided in connection with our services, blowouts, explosions, craterings, fires, natural gas leaks, oil and produced water spills and releases of hydraulic fracturing fluids or other well fluids into the environment. These conditions can cause:

- disruption in operations;
- substantial repair or remediation costs;
- personal injury or loss of human life;
- significant damage to or destruction of property and equipment;
- environmental pollution, including groundwater contamination;
- unusual or unexpected geological formations or pressures and industrial accidents;
- impairment or suspension of operations; and
- substantial revenue loss.

In addition, our operations are subject to, and exposed to, employee/employer liabilities and risks such as wrongful termination, discrimination, labor organizing, retaliation claims and general human resource related matters.

Claims for loss of oil and natural gas production and damage to formations can occur in the well services industry. Litigation arising from a catastrophic occurrence at a location where our equipment and services are being used or trucking services provided in connection therewith may result in our being named as a defendant in lawsuits asserting large claims.

We do not have insurance against all foreseeable risks, either because insurance is not available or because of the high premium costs. The occurrence of an event not fully insured against or the failure of an insurer to meet its insurance obligations could result in substantial losses. In addition, we may not be able to maintain adequate insurance in the future at rates we consider reasonable. Insurance may not be available to cover any or all of the risks to which we are subject, or, even if

available, it may be inadequate, or insurance premiums or other costs could rise significantly in the future so as to make such insurance prohibitively expensive.

We enter into Master Service Agreements (“MSAs”) with substantially all of our customers for our hydraulic fracturing services. Such MSAs delineate our and our customer’s respective indemnification obligations with respect to the services we provide. Generally, under our MSAs relating to our hydraulic fracturing services, we assume responsibility for pollution or contamination originating above the surface from our equipment or handling. However, our customers assume responsibility for all other pollution or contamination that may occur during operations, including that which may result from seepage or any other uncontrolled flow of drilling and completion fluids. The assumed responsibilities include the control, removal and clean-up of any pollution or contamination. In such cases, we may be exposed to additional liability if we are grossly negligent or commit willful acts causing the pollution or contamination. Generally, our customers also agree to indemnify us against claims arising from their employees’ personal injury or death, in the case of our hydraulic fracturing operations, to the extent that their employees are injured by such operations, unless the loss is a result of our gross negligence or willful misconduct. Similarly, we generally agree to indemnify our customers for liabilities arising from personal injury to or death of any of our employees, unless resulting from the gross negligence or willful misconduct of our customer. The same principles apply to mutual indemnification for loss or destruction of property or equipment. Losses due to catastrophic events, such as blowouts, are generally the responsibility of the customer. However, despite this general allocation of risk, we may be unsuccessful in enforcing contractual terms, incur an unforeseen liability that is not addressed by the scope of the contractual provisions or be required to enter into an MSA with terms that vary from our standard allocations of risk, as described above. Consequently, we may incur substantial losses that could materially and adversely affect our financial condition and results of operations.

Employees

As of December 31, 2019, we had 2,571 employees and no unionized labor. We believe we have good relations with our employees.

Our Services

We primarily provide hydraulic fracturing services and goods to onshore oil and natural gas E&P companies operating in unconventional oil and natural gas reservoirs and requiring technically and operationally advanced services. Hydraulic fracturing services are performed to enhance production of oil and natural gas from formations with low permeability and restricted flow of hydrocarbons. Our customers benefit from our expertise in fracturing horizontal wells in shales and other unconventional geological formations.

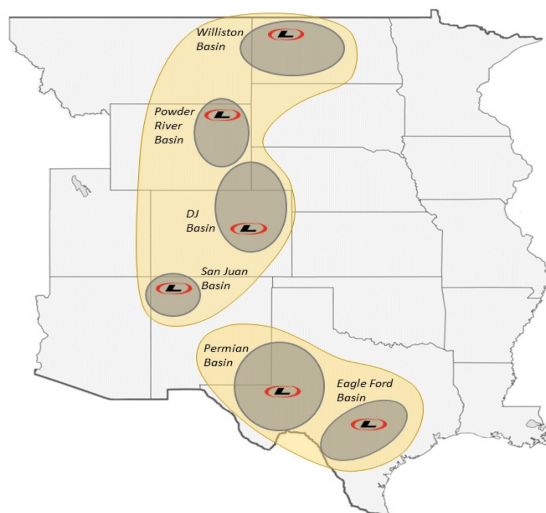
The process of hydraulic fracturing involves pumping a pressurized stream of fracturing fluid—typically a mixture of water, chemicals and proppant—into a well casing or tubing in order to cause the underground formation to fracture or crack. These fractures release trapped hydrocarbon particles and provide a conductive channel for the oil or natural gas to flow freely to the wellbore for collection. The propping agent, or proppant,—typically sand—becomes lodged in the cracks created by the hydraulic fracturing process, “propping” them open to facilitate the flow of hydrocarbons from the reservoir to the well. The fracturing fluid is engineered to lose viscosity, or “break,” and is subsequently flowed back from the formation, leaving the proppant suspended in the mineral fractures. Once our customer has flushed the fracturing fluids from the well using a controlled flow-back process, the customer manages fluid and water recycling or disposal.

Our hydraulic fracturing fleets consist of mobile hydraulic fracturing units and other auxiliary heavy equipment to perform fracturing services. Our hydraulic fracturing units consist primarily of high-pressure hydraulic pumps, diesel engines, transmissions, radiators and other supporting equipment that are typically mounted on trailers. We refer to the group of units and other equipment, such as blenders, data vans, sand storage, tractors, manifolds and high pressure fracturing iron, which are necessary to perform a typical hydraulic fracturing job, as a “fleet,” and the personnel assigned to each fleet as a “crew.” As of February 2020, we had 24 active fleets.

An important element of our hydraulic fracturing services is our focus on providing custom-tailored completions solutions to our customers to maximize their well results. Our technologically innovative approach involves our review of a series of continually updated, proprietary databases of U.S. unconventional wells to which we apply our multi-variable data analysis, allowing us to gain differential insight into fracture design. The innovative completions solutions we provide to our customers help them complete more productive and cost efficient wells in shorter times with less environmental impact on their surroundings while increasing the useful lives of our equipment.

In addition to custom-tailored completions solutions, we also develop custom fluid systems, proppant logistics solutions, perforating strategies and pressure analysis techniques for our customers. An example of this is a hydraulic fracturing fluid that we developed for use in our DJ Basin operations called Liberty Spirit™, a specifically designed fracturing fluid system that enables material reductions in completion costs in the DJ Basin without compromising job execution or well results.

We provide our services in several of the most active basins in the United States, including the Permian Basin, the Eagle Ford Shale, the DJ Basin, the Williston Basin, the San Juan Basin and the Powder River Basin. The map below represents our current areas of operations:



Properties and Equipment

Properties

Our corporate headquarters are located at 950 17th Street, Suite 2400, Denver, Colorado 80202. We lease our general office space at our corporate headquarters. The lease expires in December 2024. We currently own or lease the following additional principal properties:

District Facility Location	Size	Leased or Owned	Expiration of Lease
Odessa, TX	77,500 sq. ft on 47 acres	Owned	N/A
Henderson, CO	50,000 sq. ft on 13 acres	Leased	December 31, 2034
Williston, ND	30,000 sq. ft on 15 acres	Owned	N/A
Gillette, WY	32,757 sq. ft on 15 acres	Leased	December 31, 2034
Cibolo, TX	90,000 sq. ft on 34 acres	Owned	N/A

We also lease several smaller facilities, which leases generally have terms of one to three years. We believe that our existing facilities are adequate for our operations and their locations allow us to efficiently serve our customers. We do not believe that any single facility is material to our operations and, if necessary, we could readily obtain a replacement facility.

Equipment

As of February 2020, we have 24 hydraulic fracturing fleets. Eleven of our fleets currently utilize our Liberty Quiet Fleet® technology, approximately 28% of our capacity has dual fuel capability, and approximately 22% of our capacity utilizes the latest Tier 4 diesel engines.

Our hydraulic fracturing fleets are comprised of high-quality, heavy-duty equipment designed to reduce operational downtime and maintenance costs, while enhancing our ability to provide reliable, consistent service. Each hydraulic fracturing fleet includes the necessary blending units, manifolds, data vans and other ancillary equipment needed to provide a high level of service to our customers.

Our newbuild fleets are manufactured to a custom Liberty specification that identifies the input components, including such key parts as engines, transmissions and pumps and control systems. These components have been selected with our lowest total cost of ownership philosophy in mind. We have built a strong partnership with each of the key component suppliers that we believe will help ensure timely access to necessary components, early opportunities to adopt the latest technology, and high-level technical support. For example, our close partnership with Caterpillar Inc. enabled us to have ready access to their technical team as we worked through the development of the Liberty Quiet Fleet® technology and to be on the early test site for their new low-emission Tier 4 diesel and dynamic gas blending engines. This relationship ensured that the end product was delivered without compromise to engine performance, reliability or maintainability. We have also a built a strong relationship

with the assembler of the core equipment for our fracturing fleets. We believe the collaborative partnerships we have developed with our vendors should give us ready access to sufficient fabrication capacity for our growth.

Our Acquisitions

On February 22, 2017, we acquired all membership interests of Titan Frac Services LLC, a wholly owned subsidiary of TPIH Group Inc., for $65.0 million in cash.

Marketing and Customers

Our sales and marketing activities typically are performed through our local sales representatives in each geographic region, and are supported by our corporate headquarters. For the years ended December 31, 2019, 2018 and 2017, our top five customers collectively accounted for approximately 35%, 42% and 53% of our revenues, respectively. No customer accounted for more than 10% of our revenues for the year ended December 31, 2019. For the year ended December 31, 2018, Extraction Oil & Gas, Inc. accounted for more than 10% of our revenues. Extraction Oil & Gas, Inc. and SM Energy Company each accounted for more than 10% of our revenues for the year ended December 31, 2017.

Suppliers

We have a dedicated supply chain team that manages sourcing and logistics to ensure flexibility and continuity of supply in a cost effective manner across our areas of operation. We have built long-term relationships with multiple industry leading suppliers of proppant, chemicals and hydraulic fracturing equipment and have started to internally design and assemble key pump and maintenance parts. In addition, we have built a strong relationship with the assembler of our custom-designed hydraulic fracturing fleets and believe we will continue to have timely access to new, high capability fleets as we continue to grow.

We purchase a wide variety of raw materials, parts and components that are manufactured and supplied for our operations. We are not dependent on any single source of supply for those parts, supplies or materials. To date, we have generally been able to obtain the equipment, parts and supplies necessary to support our operations on a timely basis. While we believe that we will be able to make satisfactory alternative arrangements in the event of any interruption in the supply of these materials and/or products by one of our suppliers, we may not always be able to do so. In addition, certain materials for which we do not currently have long-term supply agreements could experience shortages and significant price increases in the future. As a result, we may be unable to mitigate any future supply shortages and our results of operations, prospects and financial condition could be adversely affected.

Competition

The markets in which we operate are highly competitive. We provide services in various geographic regions across the United States, and our competitors include many large and small oilfield service providers, including some of the largest integrated service companies. Our hydraulic fracturing services compete with large, integrated companies such as Halliburton Company and Schlumberger Limited as well as other companies including BJ Services Company, Calfrac Well Services Ltd., FTS International, Inc., NexTier Oilfield Solutions Inc., Patterson-UTI Energy, Inc., ProPetro Services, Inc., RPC, Inc. and U.S. Well Services, Inc. In addition, our industry is highly fragmented and we compete regionally with a significant number of smaller service providers.

We believe that the principal competitive factors in the markets we serve are technical expertise, equipment capacity, work force competency, efficiency, safety record, reputation, experience and price. Additionally, projects are often awarded on a bid basis, which tends to create a highly competitive environment. We seek to differentiate ourselves from our competitors by delivering the highest-quality services and equipment possible, coupled with superior execution and operating efficiency in a safe working environment.

Our operations are organized into a single business segment, which consists of hydraulic fracturing services and goods, and we have one reportable geographical business segment, the United States. Operating segments are defined under generally accepted accounting principles in the United States of America (“GAAP”) as components of an enterprise that engage in activities (i) from which it may earn revenues and incur expenses and (ii) for which separate operational financial information is available and is regularly evaluated by the chief operating decision maker for the purpose of allocating resources and assessing performance.

Environmental and Occupational Safety and Health Matters

Our operations in support of oil and natural gas exploration, development and production activities pursued by our customers are subject to stringent federal, tribal, regional, state and local laws and regulations governing occupational safety and health, the discharge of materials into the environment and environmental protection. Numerous governmental entities, including the U.S. Environmental Protection Agency ("EPA"), the U.S. Occupational Safety and Health Administration ("OSHA"), and analogous state agencies have the power to enforce compliance with these laws and regulations and the permits issued under them, often requiring difficult and costly actions, including the incurrence of potentially significant capital or operating expenditures to mitigate or prevent the releases of materials from our equipment, facilities or from customer locations where we provide our services. These laws and regulations may, among other things, (i) require the acquisition of permits or other authorizations for conducting regulated activities; (ii) limit or prohibit our operations on certain lands lying within wilderness, wetlands and other protected areas; (iii) require remedial measures to mitigate pollution from former and ongoing operations; (iv) impose restrictions on the types, quantities and concentrations of various substances that can be released into the environment or injected in formations in connection with oil and natural gas drilling and production activities; (v) impose specific safety and health criteria addressing worker protection; and (vi) impose substantial liabilities for pollution resulting from our operations. Any failure to comply with these laws and regulations may result in the assessment of sanctions, including administrative, civil and criminal penalties; the imposition of investigatory, remedial or corrective action obligations or the incurrence of capital expenditures; the occurrence of restrictions, delays or cancellations in the permitting, performance or development of projects or operations; and the issuance of orders enjoining performance of some or all of our operations in a particular area.

The trend in environmental regulation is to place more restrictions and limitations on activities that may adversely affect the environment, and thus any new laws and regulations, amendment of existing laws and regulations, reinterpretation of legal requirements or increased government enforcement with respect to environmental matters that result in more stringent and costly completion activities, pollution control equipment, waste handling, storage transport, disposal, or remediation requirements could have a material adverse effect on our financial position and results of operations. We may be unable to pass on such increased compliance costs to our customers. Moreover, accidental releases or spills may occur in the course of our operations, and we cannot assure you that we will not incur significant costs and liabilities as a result of such releases or spills, including any third-party claims for injuries to persons or damages to properties or natural resources. Our customers may also incur increased costs, or restrictions, delays or cancellations in permitting or operating activities as a result of more stringent environmental laws and regulations, which may result in a curtailment of exploration, development or production activities that would reduce the demand for our services. Historically, our worker health and safety as well as our environmental compliance costs have not had a material adverse effect on our results of operations; however, there can be no assurance that such costs will not be material in the future or that such future compliance will not have a material adverse effect on our business and operating results.

The following is a summary of the more significant existing environmental and occupational safety and health laws, as amended from time to time, to which our business is subject and for which compliance may have a material adverse impact on our capital expenditures, results of operations or financial position.

Worker Health and Safety

We are subject to the requirements of the federal Occupational Safety and Health Act, and comparable state statutes that regulate the protection of the health and safety of workers. In addition, the OSHA hazard communication standard, the EPA community right-to-know regulations under Title III of the federal Superfund Amendment and Reauthorization Act and comparable state statutes require that information be maintained about hazardous materials used or produced in our operations and that this information be provided to employees, state and local government authorities and the public. These worker health and safety laws and regulations are subject to amendment including, for example, rulemaking adopted by OSHA in 2016 imposing more stringent permissible exposure limits for worker exposure to respirable crystalline silica, and any failure to comply with these laws could lead to the assertion of third-party claims against us, civil or criminal fines and changes in the way we operate our facilities, any of which could have an adverse effect on our financial position.

Motor Carrier Operations

In connection with the services we provide, we operate as a motor carrier and therefore are subject to regulation by the U.S. Department of Transportation ("DOT") and analogous state agencies. These regulatory authorities exercise broad powers, governing activities such as the authorization to engage in motor carrier operations; regulatory safety; hazardous materials labeling, placarding and marking; financial reporting; and certain mergers, consolidations and acquisitions. There are additional regulations specifically relating to the trucking industry, including testing and specification of equipment and product handling requirements. The trucking industry is subject to possible regulatory and legislative changes that may increase our costs as well as affect the economics of the industry by requiring changes in operating practices or by changing the demand for common or contract carrier services or the cost of providing truckload services. Some of these possible changes include increasingly stringent environmental regulations, changes in the hours of service regulations that govern the amount of time a driver may drive in any specific period and requiring onboard electronic logging devices or limits on vehicle weight and size.

Interstate motor carrier operations are subject to safety requirements prescribed by DOT. Intrastate motor carrier operations are subject to state safety regulations that often mirror federal regulations but may be more stringent. Such matters as weight and dimension of motor carrier-related equipment are also subject to federal and state regulations. DOT regulations also mandate drug testing of drivers. From time to time, various legislative proposals are introduced, including proposals to increase federal, state or local taxes, such as, for example, taxes on motor fuels, which may increase our costs or adversely impact the recruitment of drivers. We cannot predict whether, or in what form, any increase in such taxes applicable to us would be enacted.

Radioactive Materials

Certain of our operations utilize equipment that contains sealed, low-grade radioactive sources. Our activities involving the use of radioactive materials are regulated by the U.S. Nuclear Regulatory Commission ("NRC") and state regulatory agencies under agreement with the NRC. Standards implemented by these regulatory agencies require us to obtain licenses or other approvals for the use of such radioactive materials. Additionally, these regulatory agencies impose certain requirements concerning worker protection with respect to radioactive sources and may otherwise issue regulations regarding the handling and storage of this equipment that may result in increased costs. The violation of these laws and regulations may result in the denial or revocation of licenses or other approvals, issuance of corrective action orders, injunctions prohibiting some or all of our operations in a particular area, and assessment of sanctions, including administrative, civil and criminal penalties.

Hazardous Substances and Wastes and Naturally Occurring Radioactive Materials

The federal Resource Conservation and Recovery Act ("RCRA"), and comparable state statutes, regulate the generation, treatment, storage, transportation, disposal and clean-up of hazardous and non-hazardous wastes. Pursuant to rules issued by the EPA, individual states administer some or all of the provisions of RCRA, sometimes in conjunction with their own, more stringent requirements. Drilling fluids, produced waters, and most of the other wastes associated with the exploration, development, and production of oil or natural gas, if properly handled, are currently exempt from regulation as hazardous waste under RCRA and, instead, are regulated under RCRA's less stringent non-hazardous waste provisions, state laws or other federal laws. However, it is possible that certain oil and gas drilling and production wastes now classified as non-hazardous could be classified as hazardous wastes in the future. For example, in response to a federal consent decree issued in 2016, the EPA was required during 2019 to determine whether certain Subtitle D criteria regulations required revision in a manner that could result in oil and natural gas wastes being regulated as RCRA hazardous wastes. In April 2019, the EPA made a determination that such revision of the regulations was unnecessary. A loss of the RCRA exclusion for drilling fluids, produced waters and related wastes could result in an increase in our and the oil and natural gas exploration and production industry's costs to manage and dispose of generated hazardous wastes, which could have a material adverse effect on our results of operations and financial position. Additionally, other wastes handled at exploration and production sites or generated in the course of providing well services may not fall within this exclusion. In the course of our operations, we generate some amounts of ordinary industrial wastes that may be regulated as hazardous wastes.

Moreover, there have been public concerns expressed about naturally occurring radioactive materials ("NORM") being detected in flow back water resulting from hydraulic fracturing that may contaminate extraction and processing equipment used in the oil and natural gas industry. NORM is subject primarily to individual state radiation control regulations while NORM handling and management activities are governed by regulations promulgated by OSHA. These state and federal regulations impose certain requirements concerning worker protection with respect to NORM as well as the treatment, storage, and disposal of NORM and NORM waste, management of NORM-contaminated waste piles, containers and tanks, and limitations on the relinquishment of NORM contaminated land for unrestricted use under RCRA and state laws. Concern over NORM in general, or NORM in groundwater in particular, could result in further regulation in the treatment, storage, handling and discharge of flow back water generated from oil and natural gas activities, including hydraulic fracturing, or handling of NORM-impacted

equipment that, if implemented, could increase our or our customers' costs or liabilities associated with elevated levels of NORM as well as limit drilling by our customers, which developments may reduce demand for our services.

The federal Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), also known as the "Superfund" law, and comparable state statutes impose liability, without regard to fault or legality of the original conduct, on classes of persons that are considered to have contributed to the release of a hazardous substance into the environment. Such classes of persons include the current and past owners or operators of sites where a hazardous substance was released, and anyone who disposed or arranged for the disposal of a hazardous substance released at the site. Under CERCLA, these persons may be subject to joint and several, strict liability for the costs of cleaning up the hazardous substances that have been released into the environment and for damages to natural resources even if the liability results from conduct that was lawful at the time it occurred or is due to the conduct, or conditions caused by, prior operators or third parties. In addition, it is not uncommon for neighboring landowners and other third parties to file claims for personal injury and property damage allegedly caused by the hazardous substances released into the environment. We own, lease, or operate numerous properties and facilities that for many years have been used for industrial activities, including oil and natural gas-related operations. Hazardous substances, wastes, or hydrocarbons may have been released on or under the properties owned or leased by us, or on or under other locations where such substances have been taken for recycling or disposal. In addition, some of these properties have been operated by third parties or by previous owners whose treatment and disposal or release of hazardous substances, wastes, or hydrocarbons, was not under our control. These properties and the substances disposed or released on them may be subject to CERCLA, RCRA and analogous state laws. Under such laws, we could be required to remove previously disposed substances and wastes and remediate contaminated property (including groundwater contamination), including instances where the prior owner or operator caused the contamination, or perform remedial plugging of disposal wells or waste pit closure operations to prevent future contamination.

Water Discharges and Discharges into Belowground Formations

The Federal Water Pollution Control Act, also known as the Clean Water Act ("CWA") and analogous state laws, impose restrictions and strict controls with respect to the discharge of pollutants, including spills and leaks of oil and hazardous substances, into state waters and waters of the United States. The discharge of pollutants into regulated waters is prohibited, except in accordance with the terms of a permit issued by the EPA or an analogous state agency. Spill prevention, control and countermeasure plan requirements imposed under the CWA require appropriate containment berms and similar structures to help prevent the contamination of navigable waters in the event of a petroleum hydrocarbon tank spill, rupture or leak. In addition, the CWA and analogous state laws require individual permits or coverage under general permits for discharges of storm water runoff from certain types of facilities. The CWA also prohibits the discharge of dredge and fill material in regulated waters, including wetlands, unless authorized by a permit issued by the U.S. Army Corps of Engineers ("Corps"). The CWA and analogous state laws also may impose substantial civil and criminal penalties for non-compliance including spills and other non-authorized discharges.

In 2015, the EPA and the Corps under the Obama Administration published a final rule outlining their position on federal jurisdictional reach over waters of the United States, including wetlands. In 2017, the EPA and the Corps under the Trump Administration agreed to reconsider the 2015 rule and, thereafter, on October 22, 2019, the agencies published a final rule made effective on December 23, 2019, rescinding the 2015 rule. On January 23, 2020, the two agencies issued a final rule re-defining the CWA's jurisdiction over waters of the United States, which redefinition is narrower than found in the 2015 rule. Upon being published in the Federal Register and the passage of 60 days thereafter, the January 23, 2020 final rule will become effective, at which point the United States will be covered under a single regulatory scheme as it relates to federal jurisdictional reach over waters of the United States. However, there remains the expectation that the January 23, 2020 final rule also will be legally challenged in federal district court. To the extent that any challenge to the January 23, 2020 final rule is successful and the 2015 rule or a revised rule expands the scope of the CWA's jurisdiction in areas where we or our oil and natural gas exploration and production customers conduct operations, we or our customers could incur increased costs and our customers could incur delays or cancellations in permitting or projects, which could reduce demand for our products and services.

The Oil Pollution Act of 1990 ("OPA") amends the CWA and sets minimum standards for prevention, containment and cleanup of oil spills. OPA applies to vessels, offshore facilities, and onshore facilities, including exploration and production facilities that may affect waters of the United States. Under OPA, responsible parties including owners and operators of onshore facilities may be held strictly liable for oil cleanup costs and natural resource damages as well as a variety of public and private damages that may result from oil spills. The OPA also requires owners or operators of certain onshore facilities to prepare facility response plans for responding to a worst-case discharge of oil into waters of the United States.

Our oil and natural gas producing customers dispose of flowback and produced water or certain other oilfield fluids gathered from oil and natural gas producing operations in accordance with permits issued by government authorities overseeing such disposal activities. While these permits are issued pursuant to existing laws and regulations, these legal requirements are

subject to change based on concerns of the public or governmental authorities regarding such disposal activities. One such concern relates to seismic events near underground disposal wells used for the disposal by injection of flowback and produced water or certain other oilfield fluids resulting from oil and natural gas activities. In 2016, the United States Geological Survey identified six states with more significant rates of induced seismicity that could be attributed to injection of oilfield fluids into underground disposal wells, including Oklahoma, Kansas, Texas, Colorado, New Mexico, and Arkansas. Since that time, the United States Geological Survey indicates that these rates have decreased in these states, although concern continues to exist over quakes arising from induced seismic activities. In response to concerns between use of underground disposal wells and the occurrence of seismic events, regulators in some states have imposed, or are considering imposing, additional requirements in the permitting of produced water disposal wells or otherwise to assess any relationship between seismicity and the use of such wells. For example, Texas and Oklahoma have issued rules for produced water disposal wells that impose certain permitting restrictions, operating restrictions and/or reporting requirements on disposal wells in proximity to faults. Additionally, from time to time, states may develop and implement plans directing certain wells where seismic incidents have occurred to restrict or suspend disposal well operations, as has occurred in Oklahoma. For example, in late 2016, the Oil and Gas Conservation Division of the Oklahoma Corporation Commission ("OCC") and the Oklahoma Geological Survey released well completion seismicity guidance, which requires operators to take certain prescriptive actions, including an operator's planned mitigation practices, following certain unusual seismic activity within 1.25 miles of hydraulic fracturing operations. In recent years the OCC's Oil and Gas Conservation Division has issued orders limiting future increases in the volume of oil and natural gas produced water injected belowground into the Arbuckle formation in an effort to reduce the number of earthquakes in the state. Another consequence of seismic events may be lawsuits alleging that disposal well operations have caused damage to neighboring properties or otherwise violated state and federal rules regulating waste disposal. These developments could result in additional regulation and restrictions on the use of injection wells by our customers to dispose of flowback and produced water and certain other oilfield fluids. Increased regulation and attention given to seismicity events suspected of having been induced by injection of oilfield fluids into underground disposal wells also could lead to greater opposition to, and litigation concerning, oil and natural gas activities utilizing injection wells for waste disposal. Any of these developments may result in our customers having to limit disposal well volumes, disposal rates or locations, or require our customers or third party disposal well operators that are used to dispose of customer produced water to shut down disposal wells, which developments could adversely affect our customers' business and result in a corresponding decrease in the need for our services, which would could have a material adverse effect on our business, financial condition, and results of operations.

Air Emissions

Certain of our operations also result in emissions of regulated air pollutants. The federal Clean Air Act ("CAA") and analogous state and local laws require permits for certain facilities that have the potential to emit substances into the atmosphere that could adversely affect environmental quality. These laws and their implementing regulations also impose generally applicable limitations on air emissions and require adherence to maintenance, work practice, reporting and record keeping, and other requirements. Failure to obtain a permit or to comply with permit or other regulatory requirements could result in the imposition of sanctions, including administrative, civil and criminal penalties. In addition, we or our customers could be required to shut down or retrofit existing equipment, leading to additional expenses and operational delays.

Many of these regulatory requirements, including New Source Performance Standards and Maximum Achievable Control Technology standards, are expected to be made more stringent over time as a result of stricter ambient air quality standards and other air quality protection goals adopted by the EPA. Compliance with these or other new or amended regulations could, among other things, require installation of new emission controls on some of our equipment, result in longer permitting timelines, and significantly increase our capital expenditures and operating costs, which could adversely impact on our business. For example, in 2015, the EPA lowered the National Ambient Air Quality Standard, ("NAAQS") for ozone from 75 to 70 parts per billion for both the 8-hour primary and secondary standards. Since that time, the EPA issued area designations with respect to ground-level ozone and final requirements that apply to state, local, and tribal air agencies for implementing the 2015 NAAQS for ground-level ozone. Reclassification of areas or imposition of more stringent standards may make it more difficult to construct new or modified sources of air pollution in newly designated non-attainment areas. Additionally, states are expected to implement more stringent requirements as a result of the revised NAAQS for ozone, which could result in stricter permitting requirements, delay or prohibit our ability to obtain such permits, and result in increased expenditures for pollution control equipment, the costs of which could be significant. Compliance with this and other air pollution control and permitting requirements has the potential to delay the development of oil and natural gas projects and increase costs for us and our customers. Moreover, our business could be materially affected if our customers' operations are significantly affected by these or other similar requirements. These requirements could increase the cost of doing business for us and our customers, reduce the demand for the oil and natural gas our customers produce, and thus have an adverse effect on the demand for our services.

Climate Change

Climate change continues to attract considerable public, governmental and scientific attention. As a result, numerous proposals have been made and are likely to continue to be made at the international, national, regional and state levels of government to monitor and limit emissions of greenhouse gases ("GHGs") as well as to restrict or eliminate such future emissions. As a result, our operations as well as the operations of our customers are subject to a series of regulatory, political, litigation, and financial risks associated with the production and processing of fossil fuels and emission of GHGs.

The U.S. Congress ("Congress") and the EPA, in addition to some state and regional efforts, have in recent years considered legislation or regulations to reduce emissions of GHGs. These efforts have included consideration of cap-and-trade programs, carbon taxes, GHG reporting and tracking programs and regulations that directly limit GHG emissions from certain sources. In the absence of federal GHG-limiting legislations, the EPA has determined that GHG emissions present a danger to public health and the environment and has adopted regulations that, among other things, establish construction and operating permit reviews for GHG emissions from certain large stationary sources, require the monitoring and annual reporting of GHG emissions from certain petroleum and natural gas system sources, implement CAA emission standards directing the reduction of methane from certain new, modified, or reconstructed facilities in the oil and natural gas sector, and together with the DOT, implement GHG emissions limits on vehicles manufactured for operation in the United States. Additionally, various states and groups of states have adopted or are considering adopting legislation, regulations or other regulatory initiatives that are focused on such areas as GHG cap and trade programs, carbon taxes, reporting and tracking programs, and restriction of emissions. At the international level, there exists the United Nations-sponsored "Paris Agreement," which is a non-binding agreement for nations to limit their GHG emissions through individually-determined reduction goals every five years after 2020, although the United States has announced its withdrawal from such agreement, effective November 4, 2020.

Governmental, scientific, and public concern over the threat of climate change arising from GHG emissions has resulted in increasing political risks in the United States, in the form of pledges made by certain candidates seeking the office of the President of the United States in 2020. Critical declarations made by one or more presidential candidates include proposals to ban hydraulic fracturing of oil and natural gas wells and ban new leases for production of minerals on federal properties. Other actions to limit oil and natural gas production activities that could be pursued by presidential candidates may include more restrictive requirements for the establishment of pipeline infrastructure or the permitting of liquified natural gas export facilities, as well as the rescission of the United States' withdrawal from the Paris Agreement in November 2020. Litigation risks are also increasing, as a number of cities, local governments, and other plaintiffs have sought to bring suit against the largest oil and natural gas E&P companies in state or federal court, alleging, among other things, that such companies created public nuisances by producing fuels that contributed to global warming effects, such as rising sea levels, and therefore are responsible for roadway and infrastructure damages as a result, or alleging that the companies have been aware of the adverse effects of climate change for some time but defrauded their investors by failing to adequately disclose those impacts.

There are also increasing financial risks for fossil fuel producers, as stockholders and bondholders currently invested in fossil fuel energy companies concerned about the potential effects of climate change may elect in the future to shift some or all of their investments into non-fossil fuel energy related sectors. Institutional investors who provide financing to fossil fuel energy companies also have become more attentive to sustainability lending practices and some of them may elect not to provide funding for fossil fuel energy companies. Additionally, the lending and investment practices of institutional lenders have been the subject of intensive lobbying efforts in recent years, oftentimes public in nature, by environmental activists, proponents of the international Paris Agreement, and foreign citizenry concerned about climate change not to provide funding for fossil fuel producers. Limitation of investments in and financings for fossil fuel energy could result in the restriction, delay, or cancellation of drilling programs or development of production activities.

The adoption and implementation of any international, federal or state legislation, regulations or other regulatory initiatives that impose more stringent standards for GHG emissions from the oil and natural gas sector or otherwise restrict the areas in which this sector may produce oil and natural gas or generate GHG emissions could result in increased costs of compliance or costs of consuming, and thereby reduce demand for oil and natural gas, which could reduce demand for our products and services. Additionally, political, litigation, and financial risks may result in our oil and natural gas customers restricting or cancelling production activities, incurring liability for infrastructure damages as a result of climatic changes, or impairing their ability to continue to operate in an economic manner, which also could reduce demand for our products and services. One or more of these developments could have a material adverse effect on our business, financial condition and results of operation. Finally, increasing concentrations of GHGs in the Earth's atmosphere may produce climate changes that have significant physical effects, such as increased frequency and severity of storms, floods and other climatic events. If any such effects were to occur, they could have an adverse effect on our operations.

Endangered Species

The federal Endangered Species Act ("ESA") restricts activities that may affect endangered or threatened species or their habitats. Similar protections are offered to migratory birds under the federal Migratory Bird Treaty Act ("MBTA"). Customer oil and natural gas operations may be adversely affected by seasonal or permanent restrictions on drilling activities designed to protect various wildlife, which may limit their ability to operate in protected areas. Permanent restrictions imposed to protect endangered and threatened species could prohibit drilling in certain areas or require the implementation of expensive mitigation measures. Moreover, the U.S. Fish and Wildlife Service ("FWS") may make determinations on the listing of species as endangered or threatened under the ESA and litigation with respect to the listing or non-listing of certain species as endangered or threatened may result in more fulsome protections for non-protected or lesser-protected species. For example, in 2015, the FWS decided to list the northern long-eared bat, whose range covers more than two-thirds of the states in the eastern and north-central regions of the U.S., as threatened rather than the more protective designation, endangered. However, a federal court decision issued in January 2020 found that the FWS failed to conduct a sufficient analysis that could have resulted in the bat being declared as endangered and the court remanded the listing decision to the FWS for a new determination on the species' protected status. Current ESA listings and the designation of previously unprotected species or re-designation of lesser-protected species as threatened or endangered in areas where we or our customers operate could cause us or our customers to incur increased costs arising from species protection or mitigation measures and could result in restrictions, delays or cancellations in our or our customers' performance of operations, which could adversely affect or reduce demand for our services.

Hydraulic Fracturing

We perform hydraulic fracturing services for our customers. Hydraulic fracturing is an important and common practice that is used to stimulate production of natural gas and/or oil from dense subsurface rock formations. The hydraulic fracturing process involves the injection of water, proppant and chemical additives under pressure into the formation to fracture the surrounding rock and stimulate production.

Hydraulic fracturing typically is regulated by state oil and natural gas commissions or similar agencies, but the EPA has conducted investigations or asserted federal regulatory authority pursuant to the federal Safe Drinking Water Act ("SDWA") Underground Injection Control ("UIC") program over certain aspects of the process. For example, in late 2016, the EPA released its final report on the potential impacts of hydraulic fracturing on drinking water resources, concluding that "water cycle" activities associated with hydraulic fracturing may impact drinking water resources under certain circumstances. Additionally, the EPA has asserted regulatory authority under the SDWA UIC program over hydraulic fracturing activities involving the use of diesel fuel and issued permitting guidance covering such activities, as well as published an Advanced Notice of Proposed Rulemaking regarding Toxic Substances Control Act reporting of the chemical substances and mixtures used in hydraulic fracturing. The EPA also published final CAA regulations in 2012 and 2016 governing performance standards, including standards for the capture of emissions of methane and volatile organic compounds ("VOCs") released during oil and natural gas hydraulic fracturing. However, in September 2019, the EPA proposed an amendment to the methane and VOC standards that would remove the methane-specific requirements that currently apply in favor of relying on the emission limits for VOCs. Moreover, in 2016, the EPA published an effluent limit guideline final rule prohibiting the discharge of produced water from onshore unconventional oil and natural gas extraction facilities to publicly owned wastewater treatment plants. The BLM published a final rule in 2015 that imposed new or more stringent standards for performing hydraulic fracturing on federal and Native American lands but the BLM rescinded the 2015 rule in later 2017; however, litigation challenging the BLM's decisions to rescind the 2015 rule remains pending in federal district court.

From time to time, legislation has been introduced, but not enacted, in Congress to provide for federal regulation of hydraulic fracturing and to require disclosure of the chemicals used in the hydraulic fracturing process. However, concern over the threat of climate change has resulted in the making of pledges by certain candidates seeking the office of the President of the United States in 2020 to ban hydraulic fracturing of oil and natural gas wells. Additionally, presidential candidate Senator Bernie Sanders (D-VT) introduced a bill in the Senate on January 28, 2020 that, if enacted as proposed, would ban hydraulic fracturing nationwide by 2025.

Additionally, various state and local governments have implemented, or are considering, increased regulatory oversight of hydraulic fracturing through additional permit requirements, operational restrictions, disclosure requirements, well construction and temporary or permanent bans on hydraulic fracturing in certain areas. For example, Texas, Colorado and North Dakota, among others, have adopted regulations that impose new or more stringent permitting, disclosure, disposal, and well construction requirements on hydraulic fracturing operations. In April 2019, the Governor of Colorado signed Senate Bill 19-181 ("SB 181") into law, which legislation, among other things, revises the mission of the state oil and gas agency from fostering energy development in the state to instead focusing on regulating the industry in a manner that is protective of public health and safety and the environment, as well as authorizing cities and counties to regulate oil and natural gas operations,

including hydraulic fracturing activities, within their jurisdiction. States could also elect to place certain prohibitions on hydraulic fracturing, following the approach taken by the States of Maryland, New York and Vermont. Local land use restrictions, such as city ordinances, may restrict drilling in general and/or hydraulic fracturing in particular. Also, non-governmental organizations may seek to restrict hydraulic fracturing; notwithstanding the adoption of Colorado SB 181 in 2019, one or more interest groups have already filed new ballot initiatives with the state in January 2020, in hopes of extending drilling setbacks from oil and natural gas development.

If new federal, state or local laws, regulations, presidential executive orders or ballot initiatives that significantly restrict or ban some or all of hydraulic fracturing are adopted, such legal requirements could result in delays, eliminate certain drilling and injection activities and prohibit or make it more difficult or costly to perform hydraulic fracturing. Any such laws, regulations or ballot initiatives limiting or prohibiting hydraulic fracturing could result in decreased oil and natural gas exploration and production activities and, therefore, adversely affect demand for our services and our business. Such laws, regulations, presidential executive orders or ballot initiatives could also materially increase our costs of compliance and doing business as well as result in decreased oil and natural gas activities and, therefore, adversely affect demand for our products and services.

Available Information

We file or furnish annual, quarterly and current reports, proxy statements and other documents with the U.S Security and Exchange Commission (the “SEC”) under the Exchange Act. The SEC also maintains an internet website at www.sec.gov that contains reports, proxy and information statements and other information regarding issuers, including us, that file electronically with the SEC.

Our Class A Common Stock is listed and traded on the New York Stock Exchange (“NYSE”) under the symbol “LBRT.” Our reports, proxy statements and other information filed with the SEC can also be inspected and copied at the offices of the NYSE, at 20 Broad Street, New York, New York 10005.

We also make available free of charge through our website, www.libertyfrac.com, electronic copies of certain documents that we file with the SEC, including our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC.

Item 1A. Risk Factors

Described below are certain risks that we believe apply to our business and the industry in which we operate. You should carefully consider each of the following risk factors in conjunction with other information provided in this Annual Report on Form 10-K and in our other public disclosures. The risks described below highlight potential events, trends or other circumstances that could adversely affect our business, financial condition, results of operations, cash flows, liquidity or access to sources of financing, and consequently, the market value of our Class A Common Stock. These risks could cause our future results to differ materially from historical results and from guidance we may provide regarding our expectations of future financial performance. The risks described below are those that we have identified as material and is not an exhaustive list of all the risks we face. There may be other risks that we have not identified or that we have deemed to be immaterial. Please refer to the explanation of the qualifications and limitation on forward-looking statements set forth on page ii hereof.

Risks Related to Our Business

Our business depends on domestic capital spending by the oil and natural gas industry, and reductions in capital spending could have a material adverse effect on our liquidity, results of operations and financial condition.

Our business is directly affected by our customers' capital spending to explore for, develop and produce oil and natural gas in the United States. The significant decline in oil and natural gas prices that began in late 2014 caused a reduction in the exploration, development and production activities of most of our customers and their spending on our services. These cuts in spending curtailed drilling programs, which resulted in a reduction in the demand for our services, as well as the prices we can charge. These reductions negatively affected our revenue per average active fleet in 2015 and 2016. Although industry conditions improved and activity levels increased from 2017 through the third quarter of 2018, a reduction in customer activity negatively affected our revenue per average active fleet throughout the remainder of 2018 and throughout 2019. In addition, certain of our customers could become unable to pay their vendors and service providers, including us, as a result of a decline in commodity prices. Reduced discovery rates of new oil and natural gas reserves in our areas of operation as a result of decreased capital spending may also have a negative long-term impact on our business, even in an environment of stronger oil and natural gas prices. Any of these conditions or events could adversely affect our operating results. If current activity levels decrease or our customers further reduce their capital spending, it could have a material adverse effect on our liquidity, results of operations and financial condition.

Industry conditions are influenced by numerous factors over which we have no control, including:

- expected economic returns to E&P companies of new well completions;
- domestic and foreign economic conditions and supply of and demand for oil and natural gas;
- the level of prices, and expectations about future prices, of oil and natural gas;
- the level of global oil and natural gas exploration and production;
- the level of domestic and global oil and natural gas inventories;
- the supply of and demand for hydraulic fracturing services and equipment in the United States;
- federal, tribal, state and local laws, regulations and taxes, including the policies of governments regarding hydraulic fracturing and oil and natural gas exploration, development and production activities as well as non-U.S. governmental regulations and taxes;
- governmental regulations, including the policies of governments regarding the exploration for and production and development of their oil and natural gas reserves;
- political and economic conditions in oil and natural gas producing countries;
- actions by the members of the Organization of Petroleum Exporting Countries with respect to oil production levels and potential changes in such levels;
- global weather conditions and natural disasters;
- worldwide political, military and economic conditions;
- the cost of producing and delivering oil and natural gas;
- lead times associated with acquiring equipment and products and availability of qualified personnel;
- the discovery rates of new oil and natural gas reserves;

- stockholder activism or activities by non-governmental organizations to limit certain sources of funding for the energy sector or to restrict the exploration, development and production of oil and natural gas;
- the availability of water resources, suitable proppant and chemical additives in sufficient quantities for use in hydraulic fracturing fluids;
- advances in exploration, development and production technologies or in technologies affecting energy consumption;
- the availability, proximity and capacity of oil and natural gas pipelines and other transportation facilities;
- merger and divestiture activity among oil and natural gas producers;
- the price and availability of alternative fuels and energy sources; and
- uncertainty in capital and commodities markets and the ability of oil and natural gas companies to raise equity capital and debt financing.

The volatility of oil and natural gas prices may adversely affect the demand for our hydraulic fracturing services and negatively impact our results of operations.

The demand for our hydraulic fracturing services is primarily determined by current and anticipated oil and natural gas prices and the related levels of capital spending and drilling activity in the areas in which we have operations. Volatility or weakness in oil prices or natural gas prices (or the perception that oil prices or natural gas prices will decrease) affects the spending patterns of our customers and may result in the drilling of fewer new wells. This, in turn, could lead to lower demand for our services and may cause lower utilization of our assets. We have experienced, and may in the future experience significant fluctuations in operating results as a result of the reactions of our customers to changes in oil and natural gas prices. For example, prolonged low commodity prices experienced by the oil and natural gas industry beginning in late 2014 and uncertainty about future prices even when prices increased, combined with adverse changes in the capital and credit markets, caused many E&P companies to significantly reduce their capital budgets and drilling activity. This resulted in a significant decline in demand for oilfield services and adversely impacted the prices oilfield services companies could charge for their services.

Prices for oil and natural gas historically have been extremely volatile and are expected to continue to be volatile. During the past five years, the posted West Texas Intermediate (“WTI”) price for oil has ranged from a low of $26.19 per barrel (“Bbl”) in February 2016 to a high of $77.41 per Bbl in June 2018. During 2019, WTI prices ranged from $46.31 to $66.24 per Bbl. If the prices of oil and natural gas continue to be volatile, our operations, financial condition, cash flows and level of expenditures may be materially and adversely affected.

We may be adversely affected by uncertainty in the global financial markets and the deterioration of the financial condition of our customers.

Our future results may be impacted by the uncertainty caused by an economic downturn, volatility or deterioration in the debt and equity capital markets, inflation, deflation or other adverse economic conditions that may negatively affect us or parties with whom we do business resulting in a reduction in our customers’ spending and their non-payment or inability to perform obligations owed to us, such as the failure of customers to honor their commitments or the failure of major suppliers to complete orders. Additionally, during times when the oil or natural gas markets weaken, our customers are more likely to experience financial difficulties, including being unable to access debt or equity financing, which could result in a reduction in our customers’ spending for our services. In addition, in the course of our business we hold accounts receivable from our customers. In the event of the financial distress or bankruptcy of a customer, we could lose all or a portion of such outstanding accounts receivable associated with that customer. For example, during 2019 the Company recorded an allowance for doubtful accounts related a portion of the receivables outstanding from one customer in bankruptcy. Further, if a customer was to enter into bankruptcy, it could also result in the cancellation of all or a portion of our service contracts with such customer at significant expense or loss of expected revenues to us.

Our operations are subject to significant risks, some of which are beyond our control. These risks may be self-insured, or may not be fully covered under our insurance policies.

Our operations are subject to significant hazards often found in the oil and natural gas industry, such as, but not limited to, accidents, including accidents related to trucking operations provided in connection with our services, blowouts, explosions, craterings, fires, natural gas leaks, oil and produced water spills and releases of hydraulic fracturing fluids or other well fluids into the environment. These conditions can cause:

- disruption in operations;

- substantial repair or remediation costs;
- personal injury or loss of human life;
- significant damage to or destruction of property, and equipment;
- environmental pollution, including groundwater contamination;
- unusual or unexpected geological formations or pressures and industrial accidents;
- impairment or suspension of operations; and
- substantial revenue loss.

In addition, our operations are subject to, and exposed to, employee/employer liabilities and risks such as wrongful termination, discrimination, labor organizing, retaliation claims and general human resource related matters.

The occurrence of a significant event or adverse claim in excess of the insurance coverage that we maintain or that is not covered by insurance could have a material adverse effect on our liquidity, consolidated results of operations and financial condition. Claims for loss of oil and natural gas production and damage to formations can occur in the well services industry. Litigation arising from a catastrophic occurrence at a location where our equipment and services are being used or trucking services provided in connection therewith may result in our being named as a defendant in lawsuits asserting large claims.

We do not have insurance against all foreseeable risks, either because insurance is not available or because of the high premium costs. The occurrence of an event not fully insured against or the failure of an insurer to meet its insurance obligations could result in substantial losses. In addition, we may not be able to maintain adequate insurance in the future at rates we consider reasonable. Insurance may not be available to cover any or all of the risks to which we are subject, or, even if available, it may be inadequate, or insurance premiums or other costs could rise significantly in the future so as to make such insurance prohibitively expensive.

Reliance upon a few large customers may adversely affect our revenue and operating results.

Our top five customers represented approximately 35%, 42%, and 53% of our consolidated and combined revenue for the years ended December 31, 2019, 2018 and 2017, respectively. It is likely that we will continue to derive a significant portion of our revenue from a relatively small number of customers in the future. If a major customer fails to pay us, revenue would be impacted and our operating results and financial condition could be materially harmed. Additionally, if we were to lose any material customer, we may not be able to redeploy our equipment at similar utilization or pricing levels or within a short period of time and such loss could have a material adverse effect on our business until the equipment is redeployed at similar utilization or pricing levels.

We are exposed to the credit risk of our customers, and any material nonpayment or nonperformance by our customers could adversely affect our financial results.

We are subject to the risk of loss resulting from nonpayment or nonperformance by our customers, many of whose operations are concentrated solely in the domestic E&P industry which, as described above, is subject to volatility and, therefore, credit risk. Our credit procedures and policies may not be adequate to fully reduce customer credit risk. If we are unable to adequately assess the creditworthiness of existing or future customers or unanticipated deterioration in their creditworthiness, any resulting increase in nonpayment or nonperformance by them and our inability to re-market or otherwise use our equipment could have a material adverse effect on our business, financial condition, prospects or results of operations.

We face intense competition that may cause us to lose market share and could negatively affect our ability to market our services and expand our operations.

The oilfield services business is highly competitive. Some of our competitors have a broader geographic scope, greater financial and other resources, or other cost efficiencies. Additionally, there may be new companies that enter our business, or re-enter our business with significantly reduced indebtedness following emergence from bankruptcy, or our existing and potential customers may develop their own hydraulic fracturing business, or direct source proppant, negatively affecting our revenue and potentially resulting in shortfall obligations under some of our supply agreements. Our ability to maintain current revenue and cash flows, and our ability to market our services and expand our operations, could be adversely affected by the activities of our competitors and our customers. If our competitors substantially increase the resources they devote to the development and marketing of competitive services or substantially decrease the prices at which they offer their services, we may be unable to effectively compete. All of these competitive pressures could have a material adverse effect on our business, results of operations and financial condition. Some of our larger competitors provide a broader range of services on a regional, national or worldwide basis. These companies may have a greater ability to continue oilfield service activities during periods of low commodity prices and to absorb the burden of present and future federal, tribal, state, local and other laws and regulations.

Any inability to compete effectively with larger companies could have a material adverse impact on our financial condition and results of operations.

Our assets require significant amounts of capital for maintenance, upgrades and refurbishment and may require significant capital expenditures for new equipment.

Our hydraulic fracturing fleets and other completion service-related equipment require significant capital investment in maintenance, upgrades and refurbishment to maintain their competitiveness. For example, since January 1, 2011 through December 31, 2019, we have deployed 23 hydraulic fracturing fleets to service customers at a total cost to deploy of approximately $1.0 billion. The costs of components and labor have increased in the past and may increase in the future with increases in demand, which will require us to incur additional costs for any fleets we may acquire in the future. Our fleets and other equipment typically do not generate revenue while they are undergoing maintenance, upgrades or refurbishment. Any maintenance, upgrade or refurbishment project for our assets could increase our indebtedness or reduce cash available for other opportunities. Furthermore, such projects may require proportionally greater capital investments as a percentage of total asset value, which may make such projects difficult to finance on acceptable terms. To the extent we are unable to fund such projects, we may have less equipment available for service or our equipment may not be attractive to potential or current customers. Additionally, competition or advances in technology within our industry may require us to update or replace existing fleets or build or acquire new fleets. Such demands on our capital or reductions in demand for our hydraulic fracturing fleets and the increase in cost of labor necessary for such maintenance and improvement, in each case, could have a material adverse effect on our business, liquidity position, financial condition, prospects and results of operations and may increase our costs.

We rely on certain third parties for proppant and chemical additives, and delays in deliveries of such materials, increases in the cost of such materials or our contractual obligations to pay for materials that we ultimately do not require could harm our business, results of operations and financial condition.

We have established relationships with certain suppliers of our raw materials (such as proppant and chemical additives). Should any of our current suppliers be unable to provide the necessary materials or otherwise fail to deliver the materials in a timely manner and in the quantities required, any resulting delays in the provision of services could have a material adverse effect on our business, results of operations and financial condition. Additionally, increasing costs of such materials may negatively impact demand for our services or the profitability of our business operations. In the past, our industry faced sporadic proppant shortages associated with hydraulic fracturing operations requiring work stoppages, which are believed to have adversely impacted the operating results of several competitors. We may not be able to mitigate any future shortages of materials, including proppant. Furthermore, to the extent our contracts require us to purchase more materials, including proppant, than we ultimately require, we may be forced to pay for the excess amount under “take or pay” contract provisions.

We currently utilize one preferred assembler and a limited number of suppliers for major equipment to both build new fleets and upgrade any fleets we acquire to our preferred specifications, and our reliance on these vendors exposes us to risks including price and timing of delivery.

We currently utilize one preferred assembler and a limited number of suppliers for major equipment to both build our new fleets and upgrade any fleets we may acquire to our custom design. If demand for hydraulic fracturing fleets or the components necessary to build such fleets increases or these vendors face financial distress or bankruptcy, these vendors may not be able to provide the new or upgraded fleets on schedule or at the current price. If this were to occur, we could be required to seek another assembler or other suppliers for major equipment to build or upgrade our fleets, which may adversely affect our revenues or increase our costs.

Interruptions of service on the rail lines by which we receive proppant could adversely affect our results of operations.

We receive a portion of the proppant used in our hydraulic fracturing services by rail. Rail operations are subject to various risks that may result in a delay or lack of service, including lack of available capacity, mechanical problems, extreme weather conditions, work stoppages, labor strikes, terrorist attacks and operating hazards. Additionally, if we increase the amount of proppant we require for delivery of our services, we may face difficulty in securing rail transportation for such additional amount of proppant. Any delay or failure in the rail services on which we rely could have a material adverse effect on our financial condition and results of operations.

Delays or restrictions in obtaining permits by us for our operations or by our customers for their operations could impair our business.

In most states, our operations and the operations of our oil and natural gas producing customers require permits from one or more governmental agencies in order to perform drilling and completion activities, secure water rights, or other regulated activities. Such permits are typically issued by state agencies, but federal and local governmental permits may also be required. The requirements for such permits vary depending on the location where such regulated activities will be conducted. As with all

governmental permitting processes, there is a degree of uncertainty as to whether a permit will be granted, the time it will take for a permit to be issued, and the conditions that may be imposed in connection with the granting of the permit. In addition, some of our customers' drilling and completion activities may take place on federal land or Native American lands, requiring leases and other approvals from the federal government or Native American tribes to conduct such drilling and completion activities or other regulated activities. Under certain circumstances, federal agencies may cancel proposed leases for federal lands and refuse to grant or delay required approvals. Therefore, our customers' operations in certain areas of the United States may be interrupted or suspended for varying lengths of time, causing a loss of revenue to us and adversely affecting our results of operations in support of those customers.

Federal or state legislative and regulatory initiatives related to induced seismicity could result in operating restrictions or delays in the drilling and completion of oil and natural gas wells that may reduce demand for our services and could have a material adverse effect on our liquidity, combined results of operations and combined financial condition.

Our oil and natural gas producing customers dispose of flowback and produced water or certain other oilfield fluids gathered from oil and natural gas producing operations in accordance with permits issued by government authorities overseeing such disposal activities. While these permits are issued pursuant to existing laws and regulations, these legal requirements are subject to change based on concerns of the public or governmental authorities regarding such disposal activities. One such concern relates to seismic events near underground disposal wells used for the disposal by injection of flowback and produced water or certain other oilfield fluids resulting from oil and natural gas activities. In 2016, the United States Geological Survey identified six states with more significant rates of induced seismicity that could be attributed to injection of oilfield fluids into underground disposal wells, including Oklahoma, Kansas, Texas, Colorado, New Mexico, and Arkansas. Since that time, the United States Geological Survey indicates that these rates have decreased in these states, although concern continues to exist over quakes arising from induced seismic activities. In response to concerns regarding the use of underground disposal wells and the occurrence of seismic events, regulators in some states have imposed, or are considering imposing, additional requirements in the permitting of produced water disposal wells or otherwise to assess any relationship between seismicity and the use of such wells. For example, Oklahoma has issued rules for produced water disposal wells that imposed certain permitting and operating restrictions and reporting requirements on disposal wells in proximity to faults and also, from time to time, has developed and implemented plans directing certain wells where seismic incidents have occurred to restrict or suspend disposal well operations. The Texas Railroad Commission has adopted similar rules. In late 2016, the Oil and Gas Conservation Division of the OCC and the Oklahoma Geological Survey released well completion seismicity guidance, which requires operators to take certain prescriptive actions, including an operator's planned mitigation practices, following certain unusual seismic activity within 1.25 miles of hydraulic fracturing operations. In recent years, including during 2018, the OCC's Oil and Gas Conservation Division issued orders limiting future increases in the volume of oil and natural gas produced water injected belowground into the Arbuckle formation in an effort to reduce the number of earthquakes in the state. Another consequence of seismic events may be lawsuits alleging that disposal well operations have caused damage to neighboring properties or otherwise violated state and federal rules regulating waste disposal. These developments could result in additional regulation and restrictions on the use of injection wells by our customers to dispose of flowback and produced water and certain other oilfield fluids. Increased regulation and attention given to seismicity events suspected of having been induced by injection of oilfield fluids into underground disposal wells also could lead to greater opposition to, and litigation concerning, oil and natural gas activities utilizing injection wells for waste disposal. Any of these developments may result in our customers having to limit disposal well volumes, disposal rates or locations, or require our customers or third party disposal well operators that are used to dispose of customers' produced water to shut down disposal wells, which developments could adversely affect our customers' business and result in a corresponding decrease in the need for our services, which could have a material adverse effect on our business, financial condition, and results of operations.

Federal, state and local legislative and regulatory initiatives relating to hydraulic fracturing as well as governmental reviews of such activities may serve to limit future oil and natural gas exploration and production activities and could have a material adverse effect on our results of operations and business.

Currently, hydraulic fracturing is generally exempt from regulation under the SDWA UIC program and is typically regulated by state oil and gas commissions or similar agencies. However, federal agencies have conducted investigations or asserted regulatory authority over certain aspects of the process. For example, in late 2016, the EPA released its final report on the potential impacts of hydraulic fracturing on drinking water resources, concluding that "water cycle" activities associated with hydraulic fracturing may impact drinking water resources under certain circumstances. Additionally, the EPA has asserted regulatory authority pursuant to the SDWA's UIC program over hydraulic fracturing activities involving the use of diesel and issued guidance covering such activities, as well as published an Advance Notice of Proposed Rulemaking regarding Toxic Substances Control Act reporting of the chemical substances and mixtures used in hydraulic fracturing. The EPA also published final CAA regulations in 2012 and 2016 governing performance standards, including standards for the capture of methane and VOC emissions released during oil and natural gas hydraulic fracturing. However, in September 2019, the EPA proposed an amendment to the methane and VOC standards that would remove the methane-specific requirements that currently apply in

favor of relying on the emission limits for VOCs. Moreover, in 2016, the EPA published an effluent limit guideline final rule prohibiting the discharge of produced water from onshore unconventional oil and natural gas extraction facilities to publicly owned wastewater treatment plants. The BLM published a final rule in 2015 that established new or more stringent standards relating to hydraulic fracturing on federal and Native American lands, but the BLM rescinded the 2015 rule in late 2017; however, litigation challenging the BLM's decision to rescind the 2015 rule remains pending in federal district court.

From time to time, legislation has been introduced, but not enacted, in Congress to provide for federal regulation of hydraulic fracturing and to require disclosure of the chemicals used in the hydraulic fracturing process and with the upcoming presidential election in 2020, hydraulic fracturing has been a frequent topic of the candidates. Certain presidential candidates are advocating for a complete ban on hydraulic fracturing, and one of the candidates, Senator Bernie Sanders (D-VT), introduced a bill in the Senate on January 28, 2020 that, if enacted as proposed, would ban hydraulic fracturing nationwide by 2025. At this time, it remains unclear how a new administration will address hydraulic fracturing. In the event that new federal restrictions relating to the hydraulic fracturing process are adopted in areas where we or our customers conduct business, we or our customers may incur additional costs or permitting requirements to comply with such federal requirements that may be significant and, in the case of our customers, also could result in added restrictions, delays or curtailments in the pursuit of exploration, development, or production activities, which would in turn reduce the demand for our services.

Moreover, some states and local governments have adopted, and other governmental entities are considering adopting, regulations that could impose more stringent permitting, disclosure and well-construction requirements on hydraulic fracturing operations, including states where we or our customers operate. For example, Texas, Colorado and North Dakota among others have adopted regulations that impose new or more stringent permitting, disclosure, disposal, and well construction requirements on hydraulic fracturing operations. States could also elect to place prohibitions on hydraulic fracturing following the approach taken by the States of Maryland, New York and Vermont. Local land use restrictions, such as city ordinances, may also restrict drilling in general and/or hydraulic fracturing in particular.

Additionally, certain interest groups in Colorado opposed to oil and natural gas development generally, and hydraulic fracturing in particular, have from time to time advanced various options for ballot initiatives that, if approved, would revise either statutory law or the state constitution in a manner that would effectively prohibit or make such exploration and production activities in the state more difficult or expensive in the future. For example, in each of the November 2014, 2016 and 2018 general election cycles, ballot initiatives have been pursued, with the 2018 initiative making the November 2018 ballot, seeking to increase setback distances between new oil and natural gas development and specific occupied structures and/or certain environmentally sensitive or recreational areas that, if adopted, may have had significant adverse impacts on new oil and natural gas developments in the state. However, in each election cycle thus far, the ballot initiative either did not secure a place on the general ballot or, as was the case in November 2018, was defeated. More recently, despite Colorado's adoption of SB 181 during 2019, one or more interest groups in the state have already filed new ballot initiatives with the state in January 2020, in hopes of extending drilling setbacks from oil and natural gas development In the event that ballot initiatives or other regulatory programs arising out of protests or opposition by non-governmental organizations are adopted and result in more stringent limitations on the production and development of oil and natural gas in areas where we or our customers conduct operations, whether in Colorado or in another state, we may incur significant costs to comply with such requirements or our customers may experience restrictions, delays or curtailments in the permitting or pursuit of exploration, development, or production activities, which could reduce demand for our services. Such compliance costs or reduced demand for our services could have a material adverse effect on our business, prospects, results of operations, financial conditions, and liquidity.

Increased regulation and attention given to the hydraulic fracturing process could lead to greater opposition to, and litigation concerning, oil and natural gas production activities using hydraulic fracturing techniques. Additional legislation or regulation could also lead to operational delays for our customers or increased operating costs in the production of oil and natural gas, including from the developing shale plays, or could make it more difficult for us and our customers to perform hydraulic fracturing. The adoption of any federal, state or local laws or the implementation of regulations regarding hydraulic fracturing could potentially cause a decrease in the completion of new oil and natural gas wells and an associated decrease in demand for our services and increased compliance costs and time, which could have a material adverse effect on our liquidity, consolidated results of operations, and consolidated financial condition.

Colorado SB 181 may have a material adverse impact on new oil and gas development in the state and materially reduce the demand for our hydraulic fracturing services in the state.

On April 16, 2019, Governor Jared Polis signed Colorado SB 181, also known as "Protect Public Welfare Oil and Gas Operations" into law. SB 181 has been referred to as an "energy overhaul bill" and includes sweeping oil and gas reform legislation that revises the mission of the Colorado Oil and Gas Conservation Commission ("COGCC") from fostering oil and natural gas development to regulating oil and natural gas development in a reasonable manner to protect and minimize adverse impacts to public health, safety, and welfare, the environment and wildlife resources, which fundamental change increases industry regulation in the State of Colorado. Although it is still unclear how SB 181 will be practically applied, pursuant to its

text, SB 181 gives localities, such as cities and counties, the authority to regulate the oil and gas development in their area as they do other development to the extent necessary and reasonable to protect public health, safety, welfare and the environment and specifies that local governments have the authority to establish requirements that are more stringent than the state requirements for the industry. This newer increased authority provides local governments with the power to establish stringent setback distances for oil and gas facilities; impose fines for leaks, spills and emissions; and impose fees on operators to cover the reasonably foreseeable direct and indirect costs of permitting and regulation and the costs of any monitoring and inspection program necessary to address the impacts of development. SB 181 also repeals an exemption for oil and gas production from local governments' authority to regulate noise. Furthermore, SB 181 restructures the Colorado Oil and Gas Conservation Commission ("COGCC") by reducing the number of oil and gas industry members currently sitting on the COGCC from three members to one and directs the COGCC to revisit its existing rules to consider stricter requirements including pipeline inspection, emissions from pneumatic tools, leak detection and repair, and continuous methane monitoring. Since coming into effect, SB 181 has resulted in more stringent local monitoring of oil and gas operations in certain counties within Colorado in which our customers operate. Passage of this legislation could lead to delays in the state in issuing new drilling permits while the COGCC codifies the new law or reassesses its existing rules. The change in mission of the COGCC requires realignment and reform of the agency's rules. The COGCC has commenced the process for evaluating the revision of its rules, which may include, among other things, the filing of emergency and tactical response plans upon permit filing, requiring takeaway capacity to minimize flaring, improving mechanical integrity testing requirements, reforming spill reporting, using cumulative impacts in permit review and implementing of cumulative impact noise, odor and other nuisance rules. Public hearings on rulemaking changes are currently expected to begin during the second quarter of 2020. Given the passing of SB 181, our customers in the state, from whom we currently derive a significant portion of our consolidated revenue, may experience material curtailment in the permitting of new exploration, development, or production activities or incur additional fines and increased costs. Any such curtailment or added costs may materially reduce the demand for our hydraulic fracturing services in the state and could have a material adverse effect on our business and results of operations.

Changes in transportation regulations may increase our costs and negatively impact our results of operations.

We are subject to various transportation regulations including as a motor carrier by the DOT and by various federal, state and tribal agencies, whose regulations include certain permit requirements of highway and safety authorities. These regulatory authorities exercise broad powers over our equipment transportation operations, generally governing such matters as the authorization to engage in motor carrier operations, safety, equipment testing, driver requirements and specifications and insurance requirements. The trucking industry is subject to possible regulatory and legislative changes that may impact our operations, such as changes in fuel emissions limits, hours of service regulations that govern the amount of time a driver may drive or work in any specific period and requiring onboard electronic logging devices or limits on vehicle weight and size. As the federal government continues to develop and propose regulations relating to fuel quality, engine efficiency and GHG emissions, we may experience an increase in costs related to truck purchases and maintenance, impairment of equipment productivity, a decrease in the residual value of vehicles, unpredictable fluctuations in fuel prices and an increase in operating expenses. Additionally, we rely on third parties to provide trucking services, including hauling proppant to our customer work sites, and these third parties may fail to comply with various transportation regulations, resulting in our inability to use such third party providers. Increased truck traffic may contribute to deteriorating road conditions in some areas where our operations are performed. Our operations, including routing and weight restrictions, could be affected by road construction, road repairs, detours and state and local regulations and ordinances restricting access to certain roads. Proposals to increase federal, state or local taxes, including taxes on motor fuels, are also made from time to time, and any such increase would increase our operating costs. Also, state and local regulation of permitted routes and times on specific roadways could adversely affect our operations. We cannot predict whether, or in what form, any legislative or regulatory changes or municipal ordinances applicable to our logistics operations will be enacted and to what extent any such legislation or regulations could increase our costs or otherwise adversely affect our business or operations.

We are subject to environmental and occupational health and safety laws and regulations that may expose us to significant costs and liabilities.

Our operations and the operations of our customers are subject to numerous federal, tribal, regional, state and local laws and regulations relating to protection of the environment including natural resources, health and safety aspects of our operations and waste management, including the transportation and disposal of waste and other materials. These laws and regulations may impose numerous obligations on our operations and the operations of our customers, including the acquisition of permits or other approvals to conduct regulated activities, the imposition of restrictions on the types, quantities and concentrations of various substances that may be released into the environment or injected in non-productive formations below ground in connection with oil and natural gas drilling and production activities, the incurrence of capital expenditures to mitigate or prevent releases of materials from our equipment, facilities or from customer locations where we are providing services, the imposition of substantial liabilities for pollution resulting from our operations, and the application of specific health and safety criteria addressing worker protection. Any failure on our part or the part of our customers to comply with these laws and regulations could result in assessment of sanctions including administrative, civil and criminal penalties; imposition of investigatory, remedial or corrective action obligations or the incurrence of capital expenditures; the occurrence of restrictions, delays or cancellations in the permitting, performance or development of projects or operations; and the issuance of orders enjoining performance of some or all of our operations in a particular area.

Our business activities present risks of incurring significant environmental costs and liabilities, including costs and liabilities resulting from our handling of oilfield and other wastes, because of air emissions and wastewater discharges related to our operations, and due to historical oilfield industry operations and waste disposal practices. Moreover, accidental releases or spills may occur in the course of our operations or at facilities where our wastes are taken for reclamation or disposal, and we cannot assure you that we will not incur significant costs and liabilities as a result of such releases or spills, including any third-party claims for injuries to persons or damages to properties or natural resources. Some environmental laws and regulations may impose strict liability, which means that in some situations we could be exposed to liability as a result of our conduct that was lawful at the time it occurred or the conduct of, or conditions caused by, prior operators or other third parties. Remedial costs and other damages arising as a result of environmental laws and costs associated with changes in environmental laws and regulations could be significant and have a material adverse effect on our liquidity, consolidated results of operations and financial condition.

Laws and regulations protecting the environment generally have become more stringent in recent years and are expected to continue to do so, which could lead to material increases in costs for future environmental compliance and remediation. New laws and regulations, amendment of existing laws and regulations, reinterpretation of legal requirements or increased governmental enforcement with respect to environmental matters could restrict, delay or curtail exploratory or developmental drilling for oil and natural gas by our customers and could limit our well servicing opportunities. For example, in 2015 the EPA issued a final rule under the CAA, lowering the NAAQS for ground-level ozone from 75 parts per billion to 70 parts per billion under both the primary and secondary standards to provide requisite protection of public health and welfare, respectively. Since that time, the EPA issued area designations with respect to ground-level ozone and issued final requirements that apply to state, local, and tribal air agencies for implementing the 2015 NAAQS for ground-level ozone. State implementation of the revised NAAQS could, among other things, require installation of new emission controls on some of our or our customer’s equipment, result in longer permitting timelines, and significantly increase our or our customers’ capital expenditures and operating costs. In another example, in response to a federal consent decree issued in 2016, the EPA was required during 2019 to determine whether certain Subtitle D criteria regulations required revision in a manner that could result in oil and natural gas wastes being regulated as RCRA hazardous wastes. In April 2019, the EPA made a determination that such revision of the regulations was unnecessary. Any future loss of the RCRA exclusion, whereby certain oil and natural gas exploration and production wastes such as drilling fluids, produced waters and related wastes are regulated as hazardous wastes could result in an increase in our, as well as the oil and natural gas industry’s, costs to manage and dispose of generated wastes, which could have a material adverse effect on the industry as well as on our business. We may not be able to recover some or any of our costs of compliance with these laws and regulations from insurance.

Silica-related legislation, health issues and litigation could have a material adverse effect on our business, reputation or results of operations.

We are subject to laws and regulations relating to human exposure to crystalline silica. For example, in 2016, OSHA published a final rule that established a more stringent permissible exposure limit for exposure to respirable crystalline silica and provided other provisions to protect employees, such as requirements for exposure assessments, methods for controlling exposure, respiratory protection, medical surveillance, hazard communication, and recording. Compliance with most aspects of the 2016 rule relating to hydraulic fracturing was required by June 2018, and the 2016 rule further requires compliance with engineering control obligations to limit exposures to respirable crystalline silica in connection with hydraulic fracturing activities by June 2021. Historically, our environmental compliance costs with respect to existing crystalline silica requirements have not had a material adverse effect on our results of operations; however, federal regulatory authorities, including OSHA,

and analogous state agencies may continue to propose changes in their regulations regarding workplace exposure to crystalline silica, such as permissible exposure limits and required controls and personal protective equipment. We may not be able to comply with any new laws and regulations that are adopted, and any new laws and regulations could have a material adverse effect on our operating results by requiring us to modify or cease our operations.

In addition, the inhalation of respirable crystalline silica is associated with the lung disease silicosis. There is evidence of an association between crystalline silica exposure or silicosis and lung cancer and a possible association with other diseases, including immune system disorders such as scleroderma. These health risks have been, and may continue to be, a significant issue confronting the hydraulic fracturing industry. Concerns over silicosis and other potential adverse health effects, as well as concerns regarding potential liability from the use of hydraulic fracture sand, may have the effect of discouraging our customers' use of our hydraulic fracture sand. The actual or perceived health risks of handling hydraulic fracture sand could materially and adversely affect hydraulic fracturing service providers, including us, through reduced use of hydraulic fracture sand, the threat of product liability or employee lawsuits, increased scrutiny by federal, state and local regulatory authorities of us and our customers or reduced financing sources available to the hydraulic fracturing industry. Furthermore, we may incur additional costs with respect to purchasing specialized equipment designed to reduce exposure to crystalline silica in connection with our operations or invest capital in new equipment.

Anti-indemnity provisions enacted by many states may restrict or prohibit a party's indemnification of us.

We typically enter into agreements with our customers governing the provision of our services, which usually include certain indemnification provisions for losses resulting from operations. Such agreements may require each party to indemnify the other against certain claims regardless of the negligence or other fault of the indemnified party; however, many states place limitations on contractual indemnity agreements, particularly agreements that indemnify a party against the consequences of its own negligence. Furthermore, certain states, including Texas, New Mexico and Wyoming, have enacted statutes generally referred to as "oilfield anti-indemnity acts" expressly prohibiting certain indemnity agreements contained in or related to oilfield services agreements. Such anti-indemnity acts may restrict or void a party's indemnification of us, which could have a material adverse effect on our business, financial condition, prospects and results of operations.

Oil and natural gas companies' operations using hydraulic fracturing are substantially dependent on the availability of water. Restrictions on the ability to obtain water for exploration and production activities and the disposal of flowback and produced water may impact their operations and have a corresponding adverse effect on our business, results of operations and financial condition.

Water is an essential component of shale oil and natural gas production during both the drilling and hydraulic fracturing processes. Our oil and natural gas producing customers' access to water to be used in these processes may be adversely affected due to reasons such as periods of extended drought, privatization, third party competition for water in localized areas or the implementation of local or state governmental programs to monitor or restrict the beneficial use of water subject to their jurisdiction for hydraulic fracturing to assure adequate local water supplies. The occurrence of these or similar developments may result in limitations being placed on allocations of water due to needs by third party businesses with more senior contractual or permitting rights to the water. Our customers' inability to locate or contractually acquire and sustain the receipt of sufficient amounts of water could adversely impact their exploration and production operations and have a corresponding adverse effect on our business, results of operations and financial condition.

Moreover, the imposition of new environmental regulations and other regulatory initiatives could include increased restrictions on our producing customers' ability to dispose of flowback and produced water generated in hydraulic fracturing or other fluids resulting from exploration and production activities. Applicable laws, including the CWA, impose restrictions and strict controls regarding the discharge of pollutants into waters of the United States and require that permits or other approvals be obtained to discharge pollutants to such waters. In 2015, the EPA and the Corps under the Obama Administration released a final rule outlining their position on the federal jurisdictional reach over waters of the United States, including wetlands. In 2017, the EPA and the Corps under the Trump Administration agreed to reconsider the 2015 rule and, thereafter, on October 22, 2019, the agencies published a final rule made effective on December 23, 2019, rescinding the 2015 rule. On January 23, 2020, the two agencies issued a final rule re-defining the CWA's jurisdiction over waters of the United States, which redefinition is narrower than found in the 2015 rule. Upon being published in the Federal Register and the passage of 60 days thereafter, the January 23, 2020 final rule will become effective, at which point the United States will be covered under a single regulatory scheme as it relates to federal jurisdictional reach over waters of the United States. However, there remains the expectation that the January 23, 2020 final rule also will be legally challenged in federal district court. To the extent that any challenge to the January 23, 2020 final rule is successful and the 2015 rule or a revised rule expands the scope of the CWA's jurisdiction in areas where we or our customers conduct operations, we or our customers could incur increased costs and our customers could incur delays or cancellations in permitting or projects, which could reduce demand for our products and services.

Additionally, regulations implemented under the CWA and similar state laws prohibit the discharge of produced water and sand, drilling fluids, drill cuttings and certain other substances related to the natural gas and oil industry into coastal waters.

In 2016, the EPA published final regulations concerning produced water discharges from hydraulic fracturing and certain other natural gas operations to publicly-owned wastewater treatment plants. The CWA and analogous state laws provide for civil, criminal and administrative penalties for any unauthorized discharges of pollutants and unauthorized discharges of reportable quantities of oil and hazardous substances. Compliance with current and future environmental regulations and permit requirements governing the withdrawal, storage and use of surface water or groundwater necessary for hydraulic fracturing of wells and any inability to secure transportation and access to disposal wells with sufficient capacity to accept all of our flowback and produced water on economic terms may increase our customers' operating costs and could result in restrictions, delays, or cancellations of our customers' operations, the extent of which cannot be predicted.

Fuel conservation measures could reduce demand for oil and natural gas which would in turn reduce the demand for our services.

Fuel conservation measures, alternative fuel requirements and increasing consumer demand for alternatives to oil and natural gas could reduce demand for oil and natural gas. The impact of the changing demand for oil and natural gas may have a material adverse effect on our business, financial condition, prospects, results of operations and cash flows. Additionally, the increased competitiveness of alternative energy sources (such as wind, solar geothermal, tidal, and biofuels) could reduce demand for hydrocarbons and therefore for our services, which would lead to a reduction in our revenues.

Our and our customers' operations are subject to a number of risks arising out of the threat of climate change that could result in increased operating and capital costs, limit the areas in which oil and natural gas production may occur and reduce demand for our hydraulic fracturing services.

Climate change continues to attract considerable public, governmental and scientific attention. As a result, numerous proposals have been made and are likely to continue to be made at the international, national, regional and state levels of government to monitor and limit emissions of GHGs as well as to restrict or eliminate such future emissions. As a result, our operations as well as the operations of our customers are subject to a series of regulatory, political, litigation, and financial risks associated with the production and processing of fossil fuels and emission of GHGs.

Congress and the EPA, in addition to some state and regional efforts, have in recent years considered legislation or regulations to reduce emissions of GHGs. These efforts have included consideration of cap-and-trade programs, carbon taxes, GHG reporting and tracking programs and regulations that directly limit GHG emissions from certain sources. In the absence of federal GHG-limiting legislations, the EPA has determined that GHG emissions present a danger to public health and the environment and has adopted regulations that, among other things, establish construction and operating permit reviews for GHG emissions from certain large stationary sources, require the monitoring and annual reporting of GHG emissions from certain petroleum and natural gas system sources, implement CAA emission standards directing the reduction of methane from certain new, modified, or reconstructed facilities in the oil and natural gas sector, and together with the DOT, implement GHG emissions limits on vehicles manufactured for operation in the United States. Additionally, various states and groups of states have adopted or are considering adopting legislation, regulations or other regulatory initiatives that are focused on such areas as GHG cap and trade programs, carbon taxes, reporting and tracking programs, and restriction of emissions. At the international level, there exists the United Nations-sponsored "Paris Agreement," which is a non-binding agreement for nations to limit their GHG emissions through individually-determined reduction goals every five years after 2020, although the United States has announced its withdrawal from such agreement, effective November 4, 2020.

Governmental, scientific, and public concern over the threat of climate change arising from GHG emissions has resulted in increasing political risks in the United States, in the form of pledges made by certain candidates seeking the office of the President of the United States in 2020. Critical declarations made by one or more presidential candidates include proposals to ban hydraulic fracturing of oil and natural gas wells and ban new leases for production of minerals on federal properties. Other actions to oil and natural gas production activities that could be pursued by presidential candidates may include more restrictive requirements for the establishment of pipeline infrastructure or the permitting of liquified natural gas export facilities, as well as the rescission of the United States' withdrawal from the Paris Agreement in November 2020. Litigation risks are also increasing, as a number of cities, local governments, and other plaintiffs have sought to bring suit against the largest oil and natural gas E&P companies in state or federal court, alleging, among other things, that such companies created public nuisances by producing fuels that contributed to global warming effects, such as rising sea levels, and therefore are responsible for roadway and infrastructure damages as a result, or alleging that the companies have been aware of the adverse effects of climate change for some time but defrauded their investors by failing to adequately disclose those impacts.

There are also increasing financial risks for fossil fuel producers, as stockholders and bondholders currently invested in fossil fuel energy companies concerned about the potential effects of climate change may elect in the future to shift some or all of their investments into non-fossil fuel energy related sectors. Institutional investors who provide financing to fossil fuel energy companies also have become more attentive to sustainability lending practices and some of them may elect not to provide funding for fossil fuel energy companies. Additionally, the lending and investment practices of institutional lenders have been the subject of intensive lobbying efforts in recent years, oftentimes public in nature, by environmental activists,

proponents of the international Paris Agreement, and foreign citizenry concerned about climate change not to provide funding for fossil fuel producers. Limitation of investments in and financings for fossil fuel energy re could result in the restriction, delay, or cancellation of drilling programs or development of production activities.

The adoption and implementation of any international, federal or state legislation, regulations or other regulatory initiatives that impose more stringent standards for GHG emissions from the oil and natural gas sector or otherwise restrict the areas in which this sector may produce oil and natural gas or generate GHG emissions could result in increased costs of compliance or costs of consuming, and thereby reduce demand for oil and natural gas, which could reduce demand for our products and services. Additionally, political, litigation, and financial risks may result in our customers restricting or cancelling production activities, incurring liability for infrastructure damages as a result of climatic changes, or impairing their ability to continue to operate in an economic manner, which also could reduce demand for our products and services. One or more of these developments could have a material adverse effect on our business, financial condition and results of operation. Finally, increasing concentrations of GHGs in the Earth's atmosphere may produce climate changes that have significant physical effects, such as increased frequency and severity of storms, floods and other climatic events. If any such effects were to occur, they could have an adverse effect on our operations.

Our current and future indebtedness could adversely affect our financial condition.

As of February 21, 2020, we had $110.0 million outstanding under our Term Loan Facility and no borrowings outstanding under our ABL Facility (defined herein) with a borrowing base of $194.3 million, except for a letter of credit in the amount of $0.3 million. Please see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Debt Agreements."

Moreover, subject to the limits contained in our ABL Facility and Term Loan Facility (collectively, the "Credit Facilities"), we may incur substantial additional debt from time to time. Any borrowings we may incur in the future would have several important consequences for our future operations, including that:

- covenants contained in the documents governing such indebtedness may require us to meet or maintain certain financial tests, which may affect our flexibility in planning for, and reacting to, changes in our industry, such as being able to take advantage of acquisition opportunities when they arise;
- our ability to obtain additional financing for working capital, capital expenditures, acquisitions, general corporate and other purposes may be limited;
- we may be competitively disadvantaged to our competitors that are less leveraged or have greater access to capital resources; and
- we may be more vulnerable to adverse economic and industry conditions.

If we incur indebtedness in the future, we may have significant principal payments due at specified future dates under the documents governing such indebtedness. Our ability to meet such principal obligations will be dependent upon future performance, which in turn will be subject to general economic conditions, industry cycles and financial, business and other factors affecting our operations, many of which are beyond our control. Our business may not continue to generate sufficient cash flow from operations to repay any incurred indebtedness. If we are unable to generate sufficient cash flow from operations, we may be required to sell assets, to refinance all or a portion of such indebtedness or to obtain additional financing.

Our Credit Facilities subject us to financial and other restrictive covenants. These restrictions may limit our operational or financial flexibility and could subject us to potential defaults under our Credit Facilities.

Our Credit Facilities subject us to restrictive covenants, including, but not limited to, restrictions on incurring additional debt and certain distributions. Our ability to comply with these financial condition tests can be affected by events beyond our control and we may not be able to do so.

The Credit Facilities are not subject to financial covenants unless our liquidity, as defined in the agreements governing the Credit Facilities, drops below a specified level, at which time we will be required to maintain certain fixed charge coverage ratios. Please see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Debt Agreements."

If our liquidity falls below the prescribed level and we are unable to remain in compliance with the financial covenants of our Credit Facilities, then amounts outstanding thereunder may be accelerated and become due immediately. Any such acceleration could have a material adverse effect on our financial condition and results of operations.

Increases in interest rates could adversely impact the price of our shares, our ability to issue equity or incur debt for acquisitions or other purposes.

Interest rates on future borrowings, credit facilities and debt offerings could be higher than current levels, causing our financing costs to increase accordingly. Changes in interest rates, either positive or negative, may affect the yield requirements of investors who invest in our shares, and a rising interest rate environment could have an adverse impact on the price of our shares, our ability to issue equity or incur debt for acquisitions or other purposes.

Unsatisfactory safety performance may negatively affect our customer relationships and, to the extent we fail to retain existing customers or attract new customers, adversely impact our revenues.

Our ability to retain existing customers and attract new business is dependent on many factors, including our ability to demonstrate that we can reliably and safely operate our business in a manner that is consistent with applicable laws, rules and permits, which legal requirements are subject to change. Existing and potential customers consider the safety record of their third-party service providers to be of high importance in their decision to engage such providers. If one or more accidents were to occur at one of our operating sites, the affected customer may seek to terminate or cancel its use of our equipment or services and may be less likely to continue to use our services, which could cause us to lose substantial revenues. Furthermore, our ability to attract new customers may be impaired if they elect not to engage us because they view our safety record as unacceptable. In addition, it is possible that we will experience multiple or particularly severe accidents in the future, causing our safety record to deteriorate. This may be more likely as we continue to grow, if we experience high employee turnover or labor shortage, or hire inexperienced personnel to bolster our staffing needs.

The ESA and MBTA and other restrictions intended to protect certain species of wildlife govern our and our oil and natural gas producing customers' operations and additional restrictions may be imposed in the future, which constraints could have an adverse impact on our ability to expand some of our existing operations or limit our customers' ability to develop new oil and natural gas wells.

Oil and natural gas operations in our operating areas can be adversely affected by seasonal or permanent restrictions on drilling activities designed to protect various wildlife, which may limit our ability to operate in protected areas. Permanent restrictions imposed to protect endangered or threatened species could prohibit drilling in certain areas or require the implementation of expensive mitigation measures.

For example, the ESA restricts activities that may affect endangered or threatened species or their habitats. Similar protections are offered to migratory birds under the MBTA. To the extent species that are listed under the ESA or similar state laws, or are protected under the MBTA, live in the areas where we or our oil and natural gas producing customers' operate, our and our customers' abilities to conduct or expand operations and construct facilities could be limited or be forced to incur material additional costs. Moreover, our customer's drilling activities may be delayed, restricted or precluded in protected habitat areas or during certain seasons, such as breeding and nesting seasons. Some of our operations and the operations of our customers are located in areas that are designated as habitats for protected species.

Moreover, the FWS may make determinations on the listing of species as endangered or threatened under the ESA and litigation with respect to the listing or non-listing of certain species as endangered or threatened may result in more fulsome protections for non-protected or lesser-protected species. For example, in 2015, the FWS decided to list the northern long-eared bat, whose range covers more than two-thirds of the states in the eastern and north-central regions of the U.S., as threatened rather than the more protective designation, endangered. However, a federal court decision issued in January 2020 found that the FWS failed to conduct a sufficient analysis that could have resulted in the bat being declared as endangered and the court remanded the listing decision to the FWS for a new determination on the species' status. The designation of previously unidentified endangered or threatened species or the re-designation of under protected species could indirectly cause us to incur additional costs, cause our or our oil and natural gas producing customers' operations to become subject to operating restrictions or bans, and limit future development activity in affected areas. The FWS and similar state agencies may designate critical or suitable habitat areas that they believe are necessary for the survival of threatened or endangered species. Such a designation could materially restrict use of or access to federal, state and private lands.

We may have difficulty managing growth of our business, which could adversely affect our financial condition and results of operations.

Growth of our business could place a significant strain on our financial, technical, operational and management resources. As we continue to expand the scope of our activities and our geographic coverage through organic growth, there will be additional demands on our financial, technical, operational and management resources. The failure to continue to upgrade our technical, administrative, operating and financial control systems or the occurrences of unexpected expansion difficulties, including the failure to recruit and retain experienced managers, engineers and other professionals in the oilfield services

industry, could have a material adverse effect on our business, financial condition, results of operations and our ability to successfully or timely execute our business plan.

We rely on a few key employees whose absence or loss could adversely affect our business.

Many key responsibilities within our business have been assigned to a small number of employees. The loss of their services could adversely affect our business. In particular, the loss of the services of one or more members of our executive team, including our chief executive officer, chief financial officer and president, could disrupt our operations. We do not have any written employment agreement with our executives at this time. Further, we do not maintain "key person" life insurance policies on any of our employees. As a result, we are not insured against any losses resulting from the death of any of our key employees.

We may be subject to risks in connection with acquisitions.

We have completed and may, in the future, pursue asset acquisitions or acquisitions of businesses. The process of upgrading acquired assets to our specifications and integrating acquired assets or businesses may involve unforeseen costs and delays or other operational, technical and financial difficulties and may require a significant amount time and resources. Our failure to incorporate acquired assets, personnel or businesses into our existing operations successfully or to minimize any unforeseen operational difficulties could have a material adverse effect on our financial condition and results of operations. Such events could also mean an acquisition that we expected to be accretive is not accretive and, in extreme cases, is detrimental to our financial condition or results of operations.

Our industry overall has experienced a high rate of employee turnover. Any difficulty we experience replacing or adding personnel could have a material adverse effect on our liquidity, results of operations and financial condition.

We are dependent upon the available labor pool of skilled employees and may not be able to find enough skilled labor to meet our needs, which could have a negative effect on our growth. We are also subject to the Fair Labor Standards Act, which governs such matters as minimum wage, overtime and other working conditions. Our services require skilled workers who can perform physically demanding work. As a result of our industry volatility, including pronounced declines in drilling activity, as well as the demanding nature of the work, many workers have left the hydraulic fracturing industry to pursue employment in different fields. Though our historical turnover rates have been significantly lower than those of our competitors, if we are unable to retain or meet growing demand for skilled technical personnel, our operating results and our ability to execute our growth strategies may be adversely affected.

Technology advancements in well service technologies, including those involving hydraulic fracturing, could have a material adverse effect on our business, financial condition and results of operations.

The hydraulic fracturing industry is characterized by rapid and significant technological advancements and introductions of new products and services using new technologies. As competitors and others use or develop new technologies or technologies comparable to ours in the future, we may lose market share or be placed at a competitive disadvantage. Further, we may face competitive pressure to implement or acquire certain new technologies at a substantial cost. Some of our competitors may have greater financial, technical and personnel resources than we do, which may allow them to gain technological advantages or implement new technologies before we can. Additionally, we may be unable to implement new technologies or services at all, on a timely basis or at an acceptable cost. New technology could also make it easier for our customers to vertically integrate their operations, thereby reducing or eliminating the need for our services. Limits on our ability to effectively use or implement new technologies may have a material adverse effect on our business, financial condition and results of operations.

We may be subject to claims for personal injury and property damage, which could materially adversely affect our financial condition, prospects and results of operations.

Our services are subject to inherent risks that can cause personal injury or loss of life, damage to or destruction of property, equipment or the environment or the suspension of our operations. Litigation arising from operations where our services are provided, may cause us to be named as a defendant in lawsuits asserting potentially large claims including claims for exemplary damages. We maintain what we believe is customary and reasonable insurance to protect our business against these potential losses, but such insurance may not be adequate to cover our liabilities, and we are not fully insured against all risks.

In addition, our customers assume responsibility for, including control and removal of, all other pollution or contamination which may occur during operations, including that which may result from seepage or any other uncontrolled flow of drilling and completion fluids. We may have liability in such cases if we are grossly negligent or commit willful acts. Our customers generally agree to indemnify us against claims arising from their employees' personal injury or death to the extent that, in the case of our hydraulic fracturing operations, their employees are injured by such operations, unless resulting

from our gross negligence or willful misconduct. Our customers also generally agree to indemnify us for loss or destruction of customer-owned property or equipment. In turn, we agree to indemnify our customers for loss or destruction of property or equipment we own and for liabilities arising from personal injury to or death of any of our employees, unless resulting from gross negligence or willful misconduct of the customer. However, we might not succeed in enforcing such contractual liability allocation or might incur an unforeseen liability falling outside the scope of such allocation. As a result, we may incur substantial losses which could materially and adversely affect our financial condition and results of operation.

Seasonal weather conditions, natural disasters, public health crises, and other catastrophic events outside of our control could severely disrupt normal operations and harm our business.

Our operations are located in different regions of the United States. Some of these areas, including the DJ Basin, Powder River Basin and Williston Basin, are adversely affected by seasonal weather conditions, primarily in the winter and spring. During periods of heavy snow, ice or rain, we may be unable to move our equipment between locations, thereby reducing our ability to provide services and generate revenues. The exploration activities of our customers may also be affected during such periods of adverse weather conditions. Additionally, extended drought conditions in our operating regions could impact our ability or our customers' ability to source sufficient water or increase the cost for such water. As a result, a natural disaster or inclement weather conditions could severely disrupt the normal operation of our business and adversely impact our financial condition and results of operations. Furthermore, if the area in which we operate or the market demand for oil and natural gas is affected by a public health crises, such as the coronavirus, or other similar catastrophic event outside of our control, our business and results of operations could suffer.

If we are unable to fully protect our intellectual property rights, we may suffer a loss in our competitive advantage or market share.

We do not have patents or patent applications relating to many of our key processes and technology. If we are not able to maintain the confidentiality of our trade secrets, or if our competitors are able to replicate our technology or services, our competitive advantage would be diminished. We also cannot ensure that any patents we may obtain in the future would provide us with any significant commercial benefit or would allow us to prevent our competitors from employing comparable technologies or processes.

We may be adversely affected by disputes regarding intellectual property rights of third parties.

Third parties from time to time may initiate litigation against us by asserting that the conduct of our business infringes, misappropriates or otherwise violates intellectual property rights. We may not prevail in any such legal proceedings related to such claims, and our products and services may be found to infringe, impair, misappropriate, dilute or otherwise violate the intellectual property rights of others. If we are sued for infringement and lose, we could be required to pay substantial damages and/or be enjoined from using or selling the infringing products or technology. Any legal proceeding concerning intellectual property could be protracted and costly regardless of the merits of any claim and is inherently unpredictable and could have a material adverse effect on our financial condition, regardless of its outcome.

If we were to discover that our technologies or products infringe valid intellectual property rights of third parties, we may need to obtain licenses from these parties or substantially re-engineer our products in order to avoid infringement. We may not be able to obtain the necessary licenses on acceptable terms, or at all, or be able to re-engineer our products successfully. If our inability to obtain required licenses for our technologies or products prevents us from selling our products, that could adversely impact our financial condition and results of operations.

Additionally, we currently license certain third party intellectual property in connection with our business, and the loss of any such license could adversely impact our financial condition and results of operations.

We may be subject to interruptions or failures in our information technology systems.

We rely on sophisticated information technology systems and infrastructure to support our business, including process control technology. Any of these systems may be susceptible to outages due to fire, floods, power loss, telecommunications failures, usage errors by employees, computer viruses, cyber-attacks or other security breaches, or similar events. In addition, we recently implemented new enterprise resource planning software ("ERP") and it is possible that such ERP software may not perform as intended. The failure of any of our information technology systems may cause disruptions in our operations, which could adversely affect our revenues and profitability.

We are subject to cyber security risks. A cyber incident could occur and result in information theft, data corruption, operational disruption and/or financial loss.

The oil and natural gas industry has become increasingly dependent on digital technologies to conduct certain processing activities. For example, we depend on digital technologies to perform many of our services and to process and record financial and operating data. At the same time, cyber incidents, including deliberate attacks, have increased. The U.S. government has

issued public warnings that indicate that energy assets might be specific targets of cyber security threats. Our technologies, systems and networks, and those of our vendors, suppliers and other business partners, may become the target of cyberattacks or information security breaches that could result in the unauthorized release, gathering, monitoring, misuse, loss or destruction of proprietary and other information, or other disruption of business operations. In addition, certain cyber incidents, such as surveillance, may remain undetected for an extended period. Our systems and insurance coverage for protecting against cyber security risks may not be sufficient. As cyber incidents continue to evolve, we will likely be required to expend additional resources to continue to modify or enhance our protective measures or to investigate and remediate any vulnerability to cyber incidents. Our insurance coverage for cyberattacks may not be sufficient to cover all the losses we may experience as a result of such cyberattacks.

A terrorist attack or armed conflict could harm our business.

The occurrence or threat of terrorist attacks in the United States or other countries, anti-terrorist efforts and other armed conflicts involving the United States or other countries, including continued hostilities in the Middle East, may adversely affect the United States and global economies and could prevent us from meeting our financial and other obligations. If any of these events occur, the resulting political instability and societal disruption could reduce overall demand for oil and natural gas, potentially putting downward pressure on demand for our services and causing a reduction in our revenues. Oil and natural gas related facilities could be direct targets of terrorist attacks, and our operations could be adversely impacted if infrastructure integral to our customers' operations is destroyed or damaged. Costs for insurance and other security may increase as a result of these threats, and some insurance coverage may become more difficult to obtain, if available at all.

We engage in transactions with related parties and such transactions present possible conflicts of interest that could have an adverse effect on us.

We have entered into a significant number of transactions with related parties and expect to continue to engage in transactions with related parties in the future. Related party transactions create the possibility of conflicts of interest with regard to our management, including that:

- we may enter into contracts between us, on the one hand, and related parties, on the other, that are not the result of arm's-length transactions;
- our executive officers and directors that hold positions of responsibility with related parties may be aware of certain business opportunities that are appropriate for presentation to us as well as to such other related parties and may present such business opportunities to such other parties; and
- our executive officers and directors that hold positions of responsibility with related parties may have significant duties with, and spend significant time serving, other entities and may have conflicts of interest in allocating time.

Such conflicts could cause an individual in our management to seek to advance his or her economic interests or the economic interests of certain related parties above ours. Further, the appearance of conflicts of interest created by related party transactions could impair the confidence of our investors. Our audit committee reviews these transactions. Notwithstanding this, it is possible that a conflict of interest could have a material adverse effect on our liquidity, results of operations and financial condition.

Our historical financial statements may not be indicative of future performance.

Due to the significant increase in our capacity, our movement into new basins and our acquisitions, comparisons of our current and future operating results with prior periods are difficult. As a result, our limited historical financial performance as the owner of the acquired assets may make it difficult for stockholders to evaluate our business and results of operations to date and to assess our future prospects and viability. Furthermore, as a result of the volatility in the demand for well services and our future implementation of new business initiatives and strategies, our historical results of operations are not necessarily indicative of our ongoing operations and the operating results to be expected in the future.

We may record losses or impairment charges related to idle assets or assets that we sell.

Prolonged periods of low utilization, changes in technology or the sale of assets below their carrying value may cause us to experience losses. These events could result in the recognition of impairment charges that negatively impact our financial results. Significant impairment charges as a result of a decline in market conditions or otherwise could have a material adverse effect on our results of operations in future periods.

Risks Related to Our Class A Common Stock

Liberty Inc. is a holding company. Liberty Inc.'s only material asset is its equity interest in Liberty LLC, and Liberty Inc. is accordingly dependent upon distributions from Liberty LLC to pay taxes, make payments under the TRAs and cover its corporate and other overhead expenses.

Liberty Inc. is a holding company and has no material assets other than its equity interest in Liberty LLC. Please see "Item 1. Business—Initial Public Offering and Corporate Reorganization Transaction." Liberty Inc. has no independent means of generating revenue. To the extent Liberty LLC has available cash, Liberty Inc. intends to cause Liberty LLC to make (i) generally pro rata distributions to its unit holders, including Liberty Inc., in an amount sufficient to allow Liberty Inc. to pay its taxes and to allow it to make payments under the TRAs and (ii) non-pro rata payments to Liberty Inc. to reimburse it for its corporate and other overhead expenses. To the extent that Liberty Inc. needs funds and Liberty LLC or its subsidiaries are restricted from making such distributions or payments under applicable law or regulation or under the terms of any future financing arrangements, or are otherwise unable to provide such funds, Liberty Inc.'s liquidity and financial condition could be materially adversely affected.

Moreover, because Liberty Inc. has no independent means of generating revenue, Liberty Inc.'s ability to make payments under the TRAs is dependent on the ability of Liberty LLC to make distributions to Liberty Inc. in an amount sufficient to cover its obligations under the TRAs. This ability, in turn, may depend on the ability of Liberty LLC's subsidiaries to make distributions to it. The ability of Liberty LLC, its subsidiaries and other entities in which it directly or indirectly holds an equity interest to make such distributions will be subject to, among other things, (i) the applicable provisions of Delaware law (or other applicable jurisdiction) that may limit the amount of funds available for distribution and (ii) restrictions in relevant debt instruments issued by Liberty LLC or its subsidiaries and other entities in which it directly or indirectly holds an equity interest. To the extent that Liberty Inc. is unable to make payments under the TRAs for any reason, such payments will be deferred and will accrue interest until paid.

We are subject to certain requirements of Section 404 of the Sarbanes-Oxley Act. If we are unable to timely comply with Section 404 or if the costs related to compliance are significant, our profitability, stock price, results of operations and financial condition could be materially adversely affected.

We are required to comply with certain provisions of Section 404 of the Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act"). Section 404 requires that we document and test our internal control over financial reporting and issue management's assessment of our internal control over financial reporting. During 2019, we evaluated our existing controls against the standards adopted by the Committee of Sponsoring Organizations of the Treadway Commission and concluded our internal control over financial reporting was effective as of December 31, 2019. Effective internal controls over financial reporting are necessary for us to provide reliable financial reports and, together with adequate disclosure controls and procedures, are designed to prevent fraud, safeguard our assets and operate successfully as a public company. Any failure to implement required controls, or difficulties encountered in implementing new or improved controls, could cause us to fail to meet our reporting obligations. In addition, any testing by us conducted in connection with Section 404 of the Sarbanes-Oxley Act, or the subsequent testing by our independent registered public accounting firm, may reveal deficiencies in our internal controls over financial reporting that are deemed to be material weaknesses or that may require prospective or retroactive changes to our financial statements or identify other areas for further attention or improvement. Inferior internal controls could also cause investors to lose confidence in our reported financial information, which could have a negative effect on the trading price of our Class A Common Stock.

An active, liquid and orderly trading market for our Class A Common Stock may not be maintained, and our stock price may be volatile.

Prior to January 2018, our Class A Common Stock was not traded on any market. An active, liquid and orderly trading market for our Class A Common Stock may not be maintained. Active, liquid and orderly trading markets usually result in less price volatility and more efficiency in carrying out investors' purchase and sale orders. The market price of our Class A Common Stock could vary significantly as a result of a number of factors, some of which are beyond our control. In the event of a drop in the market price of our Class A Common Stock, you could lose a substantial part or all of your investment in our Class A Common Stock.

The following factors could affect our stock price:

- quarterly variations in our financial and operating results;
- the public reaction to our press releases, our other public announcements and our filings with the SEC;
- strategic actions by our competitors;

- changes in revenue or earnings estimates, or changes in recommendations or withdrawal of research coverage, by equity research analysts;
- speculation in the press or investment community;
- the failure of specific research analysts to cover our Class A Common Stock;
- sales of our Class A Common Stock by us or other stockholders, or the perception that such sales may occur;
- changes in accounting principles, policies, guidance, interpretations or standards;
- additions or departures of key management personnel;
- actions by our stockholders;
- general market conditions, including fluctuations in commodity prices;
- domestic and international economic, legal and regulatory factors unrelated to our performance; and
- the realization of any risks described under this "Risk Factors" section.

The stock markets in general have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. These broad market fluctuations may adversely affect the trading price of our Class A Common Stock. Securities class action litigation has often been instituted against companies following periods of volatility in the overall market and in the market price of a company's securities. Such litigation, if instituted against us, could result in very substantial costs, divert our management's attention and resources and harm our business, operating results and financial condition.

The Principal Stockholders collectively hold a significant amount of the voting power of our Common Stock and continue to have influence over us.

As of July 11, 2019, Riverstone/Carlyle Energy Partners IV, L.P., R/C IV Liberty Holdings, L.P. and R/C Energy IV Direct Partnership, L.P. (collectively "Riverstone") and certain of the Legacy Owners (with Riverstone, collectively, the "Principal Stockholders") no longer controlled a majority of our outstanding Common Stock. As a result, we ceased being a "controlled company" within the meaning of the NYSE rules. Even though the Principal Stockholders no longer control a majority of our Common Stock, the Principal Stockholders continue to have significant influence over us with respect to matters requiring stockholder approval, including the election of directors, changes to our organizational documents and significant corporate transactions due to their significant voting power and right to designate nominees to Liberty Inc.'s board of directors (the "Board"). The interests of the Principal Stockholders with respect to matters potentially or actually involving or affecting us, such as future acquisitions, financings and other corporate opportunities and attempts to acquire us, may conflict with the interests of our other stockholders.

For example, the Principal Stockholders may have different tax positions from us, especially in light of the TRAs, that could influence their decisions regarding whether and when to support the disposition of assets, the incurrence or refinancing of new or existing indebtedness, or the termination of the TRAs and acceleration of our obligations thereunder. In addition, the determination of future tax reporting positions, the structuring of future transactions and the handling of any challenge by any taxing authority to our tax reporting positions may take into consideration the Principal Stockholders tax position or other considerations which may differ from the considerations of us or our other stockholders. For further details of the TRAs, see Note 10—Income Taxes to the consolidated and combined financial statements included in "Item 8. Financial Statements and Supplementary Data."

Furthermore, in connection with the IPO and separately in July 2019, we entered into stockholders' agreements with the Principal Stockholders and certain Riverstone affiliates, respectively. The stockholders' agreements provide Riverstone with the right to designate a certain number of nominees to our Board so long as Riverstone and its affiliates collectively beneficially own at least 10% of the outstanding shares of our Class A Common Stock. In addition, the stockholders' agreements provides Riverstone the right to approve certain material transactions so long as Riverstone and its affiliates own at least 20% of the outstanding shares of our Class A Common Stock. The existence of significant stockholders may have the effect of deterring hostile takeovers, delaying or preventing changes in control or changes in management, or limiting the ability of our other stockholders to approve transactions that they may deem to be in the best interests of our company. Moreover, the Principal Stockholders concentration of stock ownership may adversely affect the trading price of our Class A Common Stock to the extent investors perceive a disadvantage in owning stock of a company with significant stockholders.

Certain of our executive officers and directors have significant duties with, and spend significant time serving, entities that may compete with us in seeking acquisitions and business opportunities and, accordingly, may have conflicts of interest in allocating time or pursuing business opportunities.

Certain of our executive officers and directors, who are responsible for managing the direction of our operations, hold positions of responsibility with other entities (including affiliated entities) that are in the oil and natural gas industry. For example, Christopher Wright, our Chairman and Chief Executive Officer, is the Executive Chairman of Liberty Resources LLC ("Liberty Resources"), an E&P company operating primarily in the Williston Basin, a position which may require a portion of his time. These executive officers and directors may become aware of business opportunities that may be appropriate for presentation to us as well as to the other entities with which they are or may become affiliated. Due to these existing and potential future affiliations, they may present potential business opportunities to other entities prior to presenting them to us, which could cause additional conflicts of interest. They may also decide that certain opportunities are more appropriate for other entities with which they are affiliated, and as a result, they may elect not to present those opportunities to us. These conflicts may not be resolved in our favor.

Riverstone and its respective affiliates are not limited in their ability to compete with us, and the corporate opportunity provisions in our amended and restated certificate of incorporation could enable Riverstone to benefit from corporate opportunities that might otherwise be available to us.

Our governing documents provide that Riverstone and its respective affiliates (including portfolio investments of Riverstone and its affiliates) are not restricted from owning assets or engaging in businesses that compete directly or indirectly with us. In particular, subject to the limitations of applicable law, our amended and restated certificate of incorporation, among other things:

- permits Riverstone and its respective affiliates to conduct business that competes with us and to make investments in any kind of property in which we may make investments; and
- provides that if Riverstone or its respective affiliates, or any employee, partner, member, manager, officer or director of Riverstone or its respective affiliates who is also one of our directors or officers, becomes aware of a potential business opportunity, transaction or other matter, they have no duty to communicate or offer that opportunity to us.

Riverstone or its respective affiliates may become aware, from time to time, of certain business opportunities (such as acquisition opportunities) and may direct such opportunities to other businesses in which they have invested, in which case we may not become aware of or otherwise have the ability to pursue such opportunity. Furthermore, such businesses may choose to compete with us for these opportunities, possibly causing these opportunities to not be available to us or causing them to be more expensive for us to pursue. In addition, Riverstone and its respective affiliates may dispose of oil and natural gas properties or other assets in the future, without any obligation to offer us the opportunity to purchase any of those assets. As a result, our renouncing our interest and expectancy in any business opportunity that may be from time to time presented to Riverstone and its respective affiliates could adversely impact our business or prospects if attractive business opportunities are procured by such parties for their own benefit rather than for ours.

Our amended and restated certificate of incorporation and amended and restated bylaws, as well as Delaware law, contain provisions that could discourage acquisition bids or merger proposals, which may adversely affect the market price of our Class A Common Stock and could deprive our investors of the opportunity to receive a premium for their shares.

Our amended and restated certificate of incorporation authorizes the Board to issue preferred stock without stockholder approval in one or more series, designate the number of shares constituting any series, and fix the rights, preferences, privileges and restrictions thereof, including dividend rights, voting rights, rights and terms of redemption, redemption price or prices and liquidation preferences of such series. If the Board elects to issue preferred stock, it could be more difficult for a third party to acquire us. In addition, some provisions of our amended and restated certificate of incorporation and amended and restated bylaws could make it more difficult for a third party to acquire control of us, even if the change of control would be beneficial to our stockholders. These provisions include:

- division of the Board into three classes of directors, with each class serving staggered three-year terms;
- subject to the terms of our stockholders' agreements, all vacancies, including newly created directorships, may, except as otherwise required by law or, if applicable, the rights of holders of a series of preferred stock, only be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum;
- permitting any action by stockholders to be taken only at an annual meeting or special meeting rather than by a written consent of the stockholders, subject to the rights of any series of preferred stock with respect to such rights;

- permitting special meetings of our stockholders to be called only by our Chief Executive Officer, the chairman of the Board and the Board pursuant to a resolution adopted by the affirmative vote of a majority of the total number of authorized directors whether or not there exist any vacancies in previously authorized directorships;
- subject to the rights of the holders of shares of any series of our preferred stock and the terms of our stockholders' agreements, requiring the affirmative vote of the holders of at least 66 2⁄3% in voting power of all then outstanding Common Stock entitled to vote generally in the election of directors, voting together as a single class, to remove any or all of the directors from office at any time, and directors will be removable only for "cause";
- prohibiting cumulative voting in the election of directors;
- establishing advance notice provisions for stockholder proposals and nominations for elections to the Board to be acted upon at meetings of stockholders; and
- providing that the Board is expressly authorized to adopt, or to alter or repeal our bylaws.

In addition, certain change of control events have the effect of accelerating the payments due under the TRAs, which could be substantial and accordingly serve as a disincentive to a potential acquirer of our Company. Please see "—In certain cases, payments under the TRAs may be accelerated and/or significantly exceed the actual benefits, if any, Liberty Inc. realizes in respect of the tax attributes subject to the TRAs."

Our amended and restated certificate of incorporation designates the Court of Chancery of the State of Delaware as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, employees or agents.

Our amended and restated certificate of incorporation provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will, to the fullest extent permitted by applicable law, be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers, employees or agents to us or our stockholders, (iii) any action asserting a claim against us or any director or officer or other employee of ours arising pursuant to any provision of the Delaware General Corporation Law, our amended and restated certificate of incorporation or our bylaws, or (iv) any action asserting a claim against us or any director or officer or other employee of ours that is governed by the internal affairs doctrine, in each such case subject to such Court of Chancery having personal jurisdiction over the indispensable parties named as defendants therein. Any person or entity purchasing or otherwise acquiring any interest in shares of our Common Stock will be deemed to have notice of, and consented to, the provisions of our amended and restated certificate of incorporation described in the preceding sentence. The exclusive forum provision would not apply to suits brought to enforce any liability or duty created by the Securities Act or the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. To the extent that any such claims may be based upon federal law claims, Section 27 of the Exchange Act creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder. Furthermore, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers, employees or agents, which may discourage such lawsuits against us and such persons.The enforceability of similar choice of forum provisions in other companies' certificates of incorporation or similar governing documents has been challenged in legal proceedings, and it is possible that a court could find the choice of forum provisions contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable, including with respect to claims arising under the U.S. federal securities laws. If a court were to find these provisions of our amended and restated certificate of incorporation inapplicable to, or unenforceable, we may incur additional costs associated with resolving such matters in other jurisdictions, which could adversely affect our business, financial condition or results of operations.

If a substantial number of shares of Class A Common Stock becomes available for sale and are sold in a short period of time, the market price of our Class A Common Stock could decline and our stockholders may be diluted.

If our Principal Stockholders sell substantial amounts of our Class A Common Stock in the public market, the market price of our Class A Common Stock could decrease. The perception in the public market that our Principal Stockholders might sell shares of our Class A Common Stock could also create a perceived overhang and depress our market price. Our Legacy Owners, which includes the Principal Stockholders, hold Liberty LLC Units and shares of our Class B Common Stock which were exchangeable for an additional 30,638,960 shares of Class A Common Stock as of December 31, 2019. In addition, our Principal Stockholders, have substantial demand and incidental registration rights for their shares.

Future sales or issuances of our Class A Common Stock in the public market, or the perception that such sales may occur, could reduce our stock price, and any additional capital raised by us through the sale of equity or convertible securities may dilute your ownership in us.

We may sell additional shares of Class A Common Stock in subsequent public offerings. We may also issue additional shares of Class A Common Stock or convertible securities. At February 21, 2020, we had 81,920,347 shares of Class A Common Stock issued and outstanding. The Liberty Unit Holders are party to a registration rights agreement, which requires us to effect the registration of any shares of Class A Common Stock that they receive in exchange for their Liberty LLC Units in certain circumstances.

We have 12,580,935 shares of our Class A Common Stock authorized for issuance under our long term incentive plan, including up to 2,393,089 shares reserved for issuance upon the vesting of granted but unvested restricted and performance units. Subject to the satisfaction of vesting conditions and the requirements of Rule 144, shares registered under the registration statement on Form S-8 may be made available for resale immediately in the public market without restriction.

We cannot predict the size of future issuances of our Class A Common Stock or securities convertible into Class A Common Stock or the effect, if any, that future issuances and sales of shares of our Class A Common Stock will have on the market price of our Class A Common Stock. Sales of substantial amounts of our Class A Common Stock (including shares issued in connection with an acquisition), or the perception that such sales could occur, may adversely affect prevailing market prices of our Class A Common Stock.

Liberty Inc. is required to make payments under the TRAs for certain tax benefits that it may claim, and the amounts of such payments could be significant.

The TRAs generally provide for the payment by Liberty Inc. to each TRA Holder of 85% of the net cash savings, if any, in U.S. federal, state and local income tax and franchise tax (computed using simplifying assumptions to address the impact of state and local taxes) that Liberty Inc. actually realizes (or is deemed to realize in certain circumstances) as a result of certain increases in tax basis, net operating losses available to Liberty Inc. as a result of the Corporate Reorganization, and certain benefits attributable to imputed interest. Liberty Inc. will retain the benefit of the remaining 15% of these cash savings.

The term of each of the TRAs continues until all tax benefits that are subject to such TRAs have been utilized or expired, unless Liberty Inc. experiences a change of control (as defined in the TRAs, which includes certain mergers, asset sales and other forms of business combinations) or the TRAs are terminated early (at Liberty Inc.'s election or as a result of its breach), and Liberty Inc. makes the termination payments specified in such TRAs. In addition, payments Liberty Inc. makes under the TRAs will be increased by any interest earned from the due date (without extensions) of the corresponding tax return. Payments under the TRAs commenced in 2020 and so long as the TRAs are not terminated, are anticipated to continue for 15 years after the date of the last redemption of the Liberty LLC Units.

The payment obligations under the TRAs are Liberty Inc.'s obligations and not obligations of Liberty LLC, and Liberty Inc. expects that the payments Liberty Inc. will be required to make under the TRAs will be substantial. Estimating the amount and timing of payments that may become due under the TRAs is by its nature imprecise. For purposes of the TRAs, cash savings in tax generally are calculated by comparing Liberty Inc.'s actual tax liability (determined by using the actual applicable U.S. federal income tax rate and an assumed combined state and local income tax rate) to the amount it would have been required to pay had it not been able to utilize any of the tax benefits subject to the TRAs. The amounts payable, as well as the timing of any payments, under the TRAs are dependent upon significant future events and assumptions, including the timing of the redemptions of Liberty LLC Units, the price of our Class A Common Stock at the time of each redemption, the extent to which such redemptions are taxable transactions, the amount of the redeeming unit holder's tax basis in its Liberty LLC Units at the time of the relevant redemption, the depreciation and amortization periods that apply to the increase in tax basis, the amount of net operating losses available to Liberty Inc. as a result of the Corporate Reorganization, the amount and timing of taxable income Liberty Inc. generates in the future, the U.S. federal income tax rate then applicable, and the portion of Liberty Inc.'s payments under the TRAs that constitute imputed interest or give rise to depreciable or amortizable tax basis.

The payments under the TRAs will not be conditioned upon a holder of rights under each of the TRAs having a continued ownership interest in Liberty Inc. or Liberty LLC. For further details of the TRAs, see Note 10—Income Taxes to the consolidated and combined financial statements included in "Item 8. Financial Statements and Supplementary Data."

In certain cases, payments under the TRAs may be accelerated and/or significantly exceed the actual benefits, if any, Liberty Inc. realizes in respect of the tax attributes subject to the TRAs.

If Liberty Inc. experiences a change of control (as defined under the TRAs, which includes certain mergers, asset sales and other forms of business combinations) or the TRAs terminate early (at Liberty Inc.'s election or as a result of its breach), Liberty Inc. would be required to make a substantial, immediate lump-sum payment. This payment would equal the present value of hypothetical future payments that could be required to be paid under the TRAs (determined by applying a discount rate

equal to the long-term Treasury rate in effect on the applicable date plus 300 basis points). The calculation of hypothetical future payments will be based upon certain assumptions and deemed events set forth in the TRAs, including (i) that Liberty Inc. has sufficient taxable income to fully utilize the tax benefits covered by the TRAs, (ii) that any Liberty LLC Units (other than those held by Liberty Inc.) outstanding on the termination date are deemed to be redeemed on the termination date, and (iii) certain loss or credit carryovers will be utilized over five years beginning with the taxable year that includes the termination date. Any early termination payments may be made significantly in advance of, and may materially exceed, the actual realization, if any, of the future tax benefits to which the termination payments relate.

If Liberty Inc. experiences a change of control (as defined under the TRAs) or the TRAs otherwise terminate early, Liberty Inc.'s obligations under the TRAs could have a substantial negative impact on its liquidity and could have the effect of delaying, deferring or preventing certain mergers, asset sales, or other forms of business combinations or changes of control. For example, if the TRAs were terminated at December 31, 2019, the estimated termination payments would, in the aggregate, be approximately $79.0 million (calculated using a discount rate equal to the long-term Treasury rate in effect on the applicable date plus 300 basis points, applied against an estimated undiscounted liability of $104.0 million). The foregoing number is merely an estimate and the actual payment could differ materially. There can be no assurance that we will be able to finance our obligations under the TRAs.

For further details of the TRAs, see Note 10—Income Taxes to the consolidated and combined financial statements included in "Item 8. Financial Statements and Supplementary Data."

In the event that Liberty Inc.'s payment obligations under the TRAs are accelerated upon certain mergers, other forms of business combinations or other changes of control, the consideration payable to holders of our Class A Common Stock could be substantially reduced.

If Liberty Inc. experiences a change of control (as defined under the TRAs, which includes certain mergers, asset sales and other forms of business combinations), Liberty Inc. would be obligated to make a substantial, immediate lump-sum payment, and such payment may be significantly in advance of, and may materially exceed, the actual realization, if any, of the future tax benefits to which the payment relates. As a result of this payment obligation, holders of our Class A Common Stock could receive substantially less consideration in connection with a change of control transaction than they would receive in the absence of such obligation. Further, our payment obligations under the TRAs will not be conditioned upon the TRA Holders' having a continued interest in Liberty Inc. or Liberty LLC. Accordingly, the TRA Holders' interests may conflict with those of the holders of our Class A Common Stock. Please read "Risk Factors—Risks Related to our Class A Common Stock—In certain cases, payments under the TRAs may be accelerated and/or significantly exceed the actual benefits Liberty Inc. realizes, if any, in respect of the tax attributes subject to the TRAs" and Note 10—Income Taxes to the consolidated and combined financial statements included in "Item 8. Financial Statements and Supplementary Data."

We will not be reimbursed for any payments made under the TRAs in the event that any tax benefits are subsequently disallowed.

Payments under the TRAs are based on the tax reporting positions that we will determine. The TRA Holders will not reimburse us for any payments previously made under the TRAs if any tax benefits that have given rise to payments under the TRAs are subsequently disallowed, except that excess payments made to any TRA Holder will be netted against payments that would otherwise be made to such TRA Holder, if any, after our determination of such excess. As a result, in such circumstances, Liberty Inc. could make payments that are greater than its actual cash tax savings, if any, and may not be able to recoup those payments, which could adversely affect Liberty Inc.'s liquidity.

If Liberty LLC were to become a publicly traded partnership taxable as a corporation for U.S. federal income tax purposes, Liberty Inc. and Liberty LLC might be subject to potentially significant tax inefficiencies, and Liberty Inc. would not be able to recover payments previously made by it under the TRAs even if the corresponding tax benefits were subsequently determined to have been unavailable due to such status.

Liberty Inc. intends to operate such that Liberty LLC does not become a publicly traded partnership taxable as a corporation for U.S. federal income tax purposes. A "publicly traded partnership" is a partnership the interests of which are traded on an established securities market or are readily tradable on a secondary market or the substantial equivalent thereof. Under certain circumstances, redemptions of Liberty LLC Units pursuant to the Redemption Right, Liberty Inc.'s Call Right or other transfers of Liberty LLC Units could cause Liberty LLC to be treated as a publicly traded partnership. Applicable U.S. Treasury regulations provide for certain safe harbors from treatment as a publicly traded partnership, and Liberty Inc. intends to operate such that redemptions or other transfers of Liberty LLC Units qualify for one or more such safe harbors. For example, Liberty Inc. intends to limit the number of unit holders of Liberty LLC, and the Liberty LLC Agreement, which was entered into in connection with the closing of the IPO, provides for limitations on the ability of holders of Liberty LLC Units to transfer their Liberty LLC Units and provides Liberty Inc., as managing member of Liberty LLC, with the right to impose restrictions (in addition to those already in place) on the ability of holders of Liberty LLC Units to redeem their Liberty LLC Units pursuant to the Redemption Right to the extent Liberty Inc. believes it is necessary to ensure that Liberty LLC will continue to be treated as a partnership for U.S. federal income tax purposes.

If Liberty LLC were to become a publicly traded partnership, significant tax inefficiencies might result for Liberty Inc. and for Liberty LLC, including as a result of Liberty Inc.'s inability to file a consolidated U.S. federal income tax return with Liberty LLC. In addition, Liberty Inc. would no longer have the benefit of certain increases in tax basis covered under the TRAs, and Liberty Inc. would not be able to recover any payments previously made by it under the TRAs, even if the corresponding tax benefits (including any claimed increase in the tax basis of Liberty LLC's assets) were subsequently determined to have been unavailable.

In certain circumstances, Liberty LLC is required to make tax distributions and tax advances to the Liberty Unit Holders, including us, and the tax distributions and tax advances that Liberty LLC is required to make may be substantial.

Pursuant to the Liberty LLC Agreement, Liberty LLC makes generally pro rata cash distributions, or tax distributions, to the holders of Liberty LLC Units, including Liberty Inc., in an amount sufficient to allow Liberty Inc. to pay its taxes and to allow it to make payments under the TRAs. In addition to these pro rata distributions, the Liberty Unit Holders are entitled to receive tax advances in an amount sufficient to allow each of the Liberty Unit Holders to pay its respective taxes on such holder's allocable share of Liberty LLC's taxable income. Any such tax advance is calculated after taking into account certain other distributions or payments received by the Liberty Unit Holders from Liberty LLC or Liberty Inc. Under the applicable tax rules, Liberty LLC is required to allocate net taxable income disproportionately to its members in certain circumstances. Tax advances are determined based on an assumed individual tax rate and are repaid upon exercise of the Redemption Right or the Call Right, as applicable.

Funds used by Liberty LLC to satisfy its tax distribution and tax advance obligations are not available for reinvestment in our business. Moreover, the tax distributions and tax advances Liberty LLC is required to make may be substantial, and is likely to exceed (as a percentage of Liberty LLC's income) the overall effective tax rate applicable to a similarly situated corporate taxpayer. In addition, because these payments are calculated with reference to an assumed tax rate, and because of the disproportionate allocation of net taxable income, these payments may exceed the actual tax liability for some of the holders of Liberty LLC Units.

We may issue preferred stock whose terms could adversely affect the voting power or value of our Class A Common Stock.

Our amended and restated certificate of incorporation authorizes us to issue, without the approval of our stockholders, one or more classes or series of preferred stock having such designations, preferences, limitations and relative rights, including preferences over our Class A Common Stock respecting dividends and distributions, as the Board may determine. The terms of one or more classes or series of preferred stock could adversely impact the voting power or value of our Class A Common Stock. For example, we might grant holders of preferred stock the right to elect some number of our directors in all events or on the happening of specified events or the right to veto specified transactions. Similarly, the repurchase or redemption rights or liquidation preferences we might assign to holders of preferred stock could affect the residual value of the Class A Common Stock.

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

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

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Information regarding our properties is contained in "Item 1. Business" and is incorporated by reference herein.

Item 3. Legal Proceedings

We are named defendants in certain lawsuits, investigations and claims arising in the ordinary course of conducting our business, including certain environmental claims and employee-related matters, and we expect that we will be named defendants in similar lawsuits, investigations and claims in the future. While the outcome of these lawsuits, investigations and claims cannot be predicted with certainty, we do not expect these matters to have a material adverse impact on our business, results of operations, cash flows or financial condition. We have not assumed any liabilities arising out of these existing lawsuits, investigations and claims.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

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

Market Information

On January 17, 2018, we consummated an initial public offering of our Class A Common Stock at a price of $17.00 per share. Our Class A Common Stock is traded on the NYSE under the symbol "LBRT." Prior to that time, there was no public market for our Class A Common Stock. There is no public market for our Class B Common Stock.

Holders of our Common Stock

As of February 21, 2020, there were 39 stockholders of record of our Class A Common Stock and 10 stockholders of record of our Class B Common Stock. The number of record holders is based upon the actual number of holders registered on the books of the Company at such date and does not include holders of shares in "street names" or persons, partnerships, associations, corporations or other entities identified in security position listings maintained by depositories.

Dividend Policy

The Company paid quarterly cash dividends of $0.05 per share of Class A Common Stock on March, June, September and December 20, 2019 to shareholders of record as of March, June, September and December 6, 2019, respectively. The declaration of dividends is subject to approval by the Board and to the Board's continuing determination that such declaration of dividends is in the best interests of the Company and its stockholders. Future dividends may be adjusted at the Board's discretion based on market conditions and capital availability. We are not required to pay dividends, and our stockholders will not be guaranteed, or have contractual or other rights to receive, dividends.

Recent Sales of Unregistered Equity Securities

We had no sales of unregistered equity securities during the period covered by this Annual Report on Form 10-K that were not previously reported in a Current Report on Form 8-K.

Purchase of Equity Securities By the Issuer and Affiliated Purchasers

On September 10, 2018 the Board authorized a share repurchase plan to repurchase up to $100.0 million of the Company's Class A Common Stock through September 30, 2019. On January 22, 2019, the Board authorized an additional $100.0 million under the share repurchase plan through January 31, 2021. During the year ended December 31, 2019, Liberty LLC redeemed and retired 1,303,003 Liberty LLC Units from the Company for $18.4 million, and the Company repurchased and retired 1,303,003 shares of Class A Common Stock for $18.4 million, or $14.66 average price per share. The share repurchase plan authorized on September 10, 2018 was completed in January 2019. Of the total amount of Class A Common Stock repurchased, 117,647 shares were repurchased from R/C Energy IV Direct Partnership, L.P., R/C IV Liberty Holdings, L.P., and Riverstone/Carlyle Energy Partners IV, L.P. ("R/C" and collectively, the "Riverstone Sellers"). For further details of this related party transaction, see Note 12—Related Party Transactions to the consolidated and combined financial statements included in "Item 8. Financial Statements and Supplementary Data."

The Company accounts for the purchase price of repurchased Class A Common Stock in excess of par value ($0.01 per share of Class A Common Stock) as a reduction of additional paid-in capital, and will continue to do so until additional paid-in capital is reduced to zero. Thereafter, any excess purchase price will be recorded as a reduction to retained earnings.

As of December 31, 2019, $98.7 million remains authorized for future repurchases of Class A Common Stock under the share repurchase program.

We did not purchase any shares of our Class A Common Stock during the three months ended December 31, 2019.

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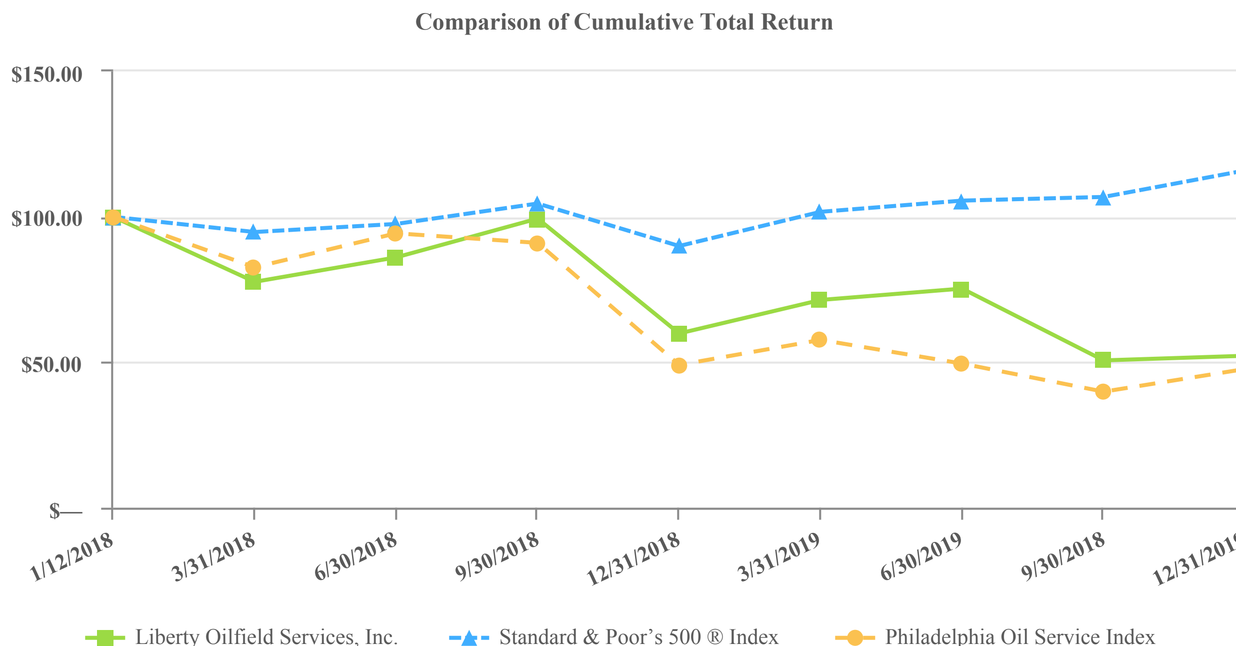
Stock Performance Graph

The following graph and table compares the cumulative total return on our Class A Common Stock with the cumulative total return on the Standard & Poor's 500 ® Index and the Philadelphia Oil Service Index, since January 12, 2018, the first day on which shares of our Common Stock issued in our IPO commenced trading on the NYSE and each fiscal quarter thereafter through December 31, 2019. The graph assumes that $100 was invested in our Class A Common Stock in each index on January 12, 2018 and that any dividends were reinvested. The cumulative total return set forth is not necessarily indicative of future performance.

The following graph and related information shall not be deemed "soliciting material" or to be "filed" with the SEC, nor shall such information be incorporated by reference into any future filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, except to the extent that we specifically incorporate it by reference into such filing.



	For Year Ended 2018					For Year Ended 2019			
	January 12,	March 31,	June 30,	September 30,	December 31,	March 31,	June 30,	September 30,	December 31,
Liberty Oilfield Services, Inc.	$ 100.00	$ 77.66	$ 86.07	$ 99.40	$ 59.91	$ 71.43	$ 75.33	$ 50.65	$ 52.24
Standard & Poor's 500 ® Index	100.00	94.78	97.56	104.58	89.97	101.73	105.58	106.84	115.95
Philadelphia Oil Service Index	100.00	82.65	94.34	91.05	49.10	57.70	49.55	39.90	47.69

Item 6. Selected Consolidated Financial Data

The selected financial data set forth below was derived from our audited consolidated and combined financial statements and should be read in conjunction with “Item 1A. Risk Factors,” “Item 7. Management Discussion and Analysis of Financial Condition and Results of Operations” and our audited consolidated and combined financial statements included in “Item 8. Financial Statements and Supplementary Data.”

	2019	2018	2017	2016	2015
	Years Ended December 31,				
	(in thousands, except per share and fleet data)				
Statement of Operations Data:					
Revenue:					
Revenue	$ 1,972,073	$ 2,132,032	$ 1,465,133	$ 356,890	$ 384,330
Revenue—related parties	18,273	23,104	24,722	17,883	71,074
Total revenue	1,990,346	2,155,136	1,489,855	374,773	455,404
Operating costs and expenses:					
Cost of services (exclusive of depreciation and amortization shown separately below)	1,621,180	1,628,753	1,147,008	354,729	393,340
General and administrative	97,589	99,052	80,089	35,789	28,765
Depreciation and amortization	165,379	125,110	81,473	41,362	36,436
(Gain) loss on disposal of assets	2,601	(4,342)	148	(2,673)	423
Total operating costs and expenses	1,886,749	1,848,573	1,308,718	429,207	458,964
Operating income (loss)	103,597	306,563	181,137	(54,434)	(3,560)
Other expense:					
Interest expense, net of interest income	16,502	17,145	11,875	6,126	5,501
Interest (income) expense—related party	(1,821)	—	761	—	—
Total interest expense	14,681	17,145	12,636	6,126	5,501
Net income (loss) before income taxes	88,916	289,418	168,501	(60,560)	(9,061)
Income tax expense	14,052	40,385	—	—	—
Net income (loss)	74,864	249,033	168,501	(60,560)	(9,061)
Less: Net income (loss) attributable to Predecessor, prior to Corporate Reorganization	—	8,705	168,501	(60,560)	(9,061)
Less: Net income attributable to non-controlling interests	35,861	113,979	—	—	—
Net income attributable to Liberty Oilfield Services Inc.	$ 39,003	$ 126,349	$ —	$ —	$ —
Net Income Per Share Data (1):					
Net income attributable to Liberty Oilfield Services Inc. stockholders per common share					
Basic	$ 0.54	$ 1.84			
Diluted	$ 0.53	$ 1.81			
Weighted average common shares outstanding					
Basic	72,334	68,838			
Diluted (2)	105,256	117,838			
Statement of Cash Flows Data:					
Cash flows provided by (used in) operating activities	$ 261,100	$ 351,258	$ 195,109	$ (40,708)	$ 6,119
Cash flows used in investing activities	194,347	255,492	310,043	96,351	38,492
Cash flows (used in) provided by financing activities	(57,375)	(8,775)	119,771	148,543	21,485
Other Financial Data:					
Capital expenditures	$ 195,173	$ 258,835	$ 311,794	$ 102,428	$ 38,492
EBITDA (3)	$ 268,976	$ 431,673	$ 262,610	$ (13,072)	$ 32,876
Adjusted EBITDA (3)	$ 277,149	$ 438,234	$ 280,728	$ (5,588)	$ 41,213
Total Fleets at beginning of period (4)	22	19	10	6	5
Total Fleets at end of period (4)	23	22	19	10	6
Average Active Fleets (5)	22.8	21.3	15.1	7.4	5.9
Adjusted EBITDA per Average Active Fleet (6)	$ 12,156	$ 20,574	$ 18,591	$ (755)	$ 6,985
Balance Sheet Data (at end of period):					
Total assets	$ 1,283,429	$ 1,116,501	$ 852,103	$ 451,845	$ 296,971
Long-term debt (including current portion)	106,140	106,524	196,357	103,805	110,232
Total liabilities	501,937	375,687	416,851	222,873	162,920
Redeemable common units (7)	—	—	42,486	—	—
Total equity or member equity	781,492	740,814	392,766	228,972	134,051
Cash dividends declared per share of Class A Common Stock	$ 0.20	$ 0.10			

(1) Net Income Per Share Data above reflects the net income to Class A Common Stock and net income per share for the period indicated based on a weighted average number of Class A Common Stock outstanding for period subsequent to the Corporate Reorganization on January 17, 2018.
(2) In accordance with GAAP, diluted weighted average common shares outstanding for the year ended December 31, 2019, excludes the weighted average shares of Class B Common Stock (9,057) exchanged during the period (share counts presented in 000's).
(3) EBITDA and Adjusted EBITDA are non-GAAP financial measures. For definitions of EBITDA and Adjusted EBITDA and a reconciliation of each to our most directly comparable financial measure calculated and presented in accordance with GAAP, please read "Item 7. Management's Discussion and Analysis of Financial Conditions and Results of Operations—Comparison of Non-GAAP Financial Measures."
(4) Total Fleets represents the number of deployed and active fleets as of the designated date.
(5) Average Active Fleets is calculated as the daily average of the active fleets for the period presented.
(6) Adjusted EBITDA per Average Active Fleet is calculated as Adjusted EBITDA for the period divided by the Average Active Fleets, as defined above.
(7) The redeemable common units were deemed extinguished and satisfied in full in the Corporate Reorganization.

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with "Item 6. Selected Financial Data" and our audited consolidated and combined financial statements and related notes appearing elsewhere in this Annual Report on Form 10-K. The following discussion contains "forward-looking statements" that reflect our future plans, estimates, beliefs and expected performance. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of a variety of risks and uncertainties, including those described in this Annual Reporting on Form 10-K under "Cautionary Note Regarding Forward-Looking Statements" and "Item 1A. Risk Factors." We assume no obligation to update any of these forward-looking statements. This section of this Annual Report on Form 10-K generally discusses 2019 and 2018 items and year-to-year comparisons between 2019 and 2018. For discussion of year ended December 31, 2017, as well as the year ended 2018 compared to the year ended December 31, 2017, refer to Part II, Item 7— "Management's Discussion and Analysis of Financial Condition and Results of Operations" of our 2018 Annual Report on Form 10-K.

Overview

We are an independent provider of hydraulic fracturing services and goods to onshore oil and natural gas E&P companies in North America. We have grown from one active hydraulic fracturing fleet in December 2011 to 24 active fleets in February 2020. We added one fleet during the year ended December 31, 2019 and one one fleet in January 2020. We provide our services primarily in the Permian Basin, the Eagle Ford Shale, the DJ Basin, the Williston Basin, the San Juan Basin and the Powder River Basin.

We believe the following characteristics both distinguish us from our competitors and are the foundations of our business: forming ongoing partnerships of trust and innovation with our customers; developing and utilizing technology to maximize well performance; and promoting a people-centered culture focused on our employees, customers and suppliers. We have developed strong relationships with our customers by investing significant time in fracture design collaboration, which substantially enhances their production economics. Our technological innovations have become even more critical as E&P companies have increased the completion complexity and fracture intensity of horizontal wells. We are proactive in developing innovative solutions to industry challenges, including developing: (i) our proprietary databases of U.S. unconventional wells to which we apply our proprietary multi-variable statistical analysis technologies to provide differential insight into fracture design optimization; (ii) our Liberty Quiet Fleet® design which significantly reduces noise levels compared to conventional hydraulic fracturing fleets; and (iii) hydraulic fracturing fluid systems tailored to the specific reservoir properties in the basins in which we operate. We foster a people-centered culture built around honoring our commitments to customers, partnering with our suppliers and hiring, training and retaining people that we believe to be the best talent in our field, enabling us to be one of the safest and most efficient hydraulic fracturing companies in the United States.

Recent Trends and Outlook

Demand for hydraulic fracturing services and goods is predominantly influenced by the level of drilling and completion activity by E&P companies, which, in turn, depends largely on the current and anticipated profitability of developing oil and natural gas reserves, the availability of capital to E&P companies, and takeaway capacity in each basin. More specifically, demand for hydraulic fracturing services is driven by the completion of hydraulic fracturing stages in unconventional wells, which, in turn, is driven by several factors including rig count, well count, service intensity and the timing and style of well completions. Additionally, pricing for hydraulic fracturing services is impacted by the demand factors described above, as well as by the supply of actively marketed and staffed hydraulic fracturing fleets.

The price of WTI in 2019 decreased from 2018. The price of WTI averaged $56.98, $65.23, and $50.80 during 2019, 2018, and 2017, respectively. According to a report by Baker Hughes, a GE company ("Baker Hughes"), the horizontal rig count in North America averaged 826, 900, and 737 during 2019, 2018 and 2017, respectively.

During 2019 and 2018, E&P companies have increasingly come under investor pressure for better returns than those achieved over the last decade. As a result, debt and equity capital markets, which previously funded drilling and completions activity beyond E&P companies' operating cash flow, tightened, causing an increased level of capital discipline that has resulted in a lower level of drilling and completions expenditures. 2019 E&P capital expenditures were lower than those in 2018 and 2020 E&P capital expenditures are expected to be less than 2019.

The pricing dynamic entering into 2020 is challenging. Total industry horizontal frac stages in North America were up marginally in 2019, 6% from 2018, compared to a 34% increase in 2018 from 2017, according to Coras Research, LLC ("Coras"). However, efficiency gains across the industry have raised the number of frac stages completed by each fleet, which implies a decrease in the active frac fleets needed to meet demand. The slowing pace of frac activity led to progressively lower demand for frac fleets through the second half of 2019, resulting in pricing pressure on our services. The substantial oversupply of frac equipment in the second half of 2019 was the pricing backdrop for 2020 dedicated fleet negotiations.

Although we are seeing reductions in the supply of staffed frac fleets in the market and announcements of permanent retirement of older equipment, there continues to be an oversupply of frac fleets in the market which is holding down pricing. As such, while we cannot predict with any certainty when pricing of our frac services will increase, we would not expect pricing to improve until the supply of actively staffed frac equipment better balances with the demand. Until pricing improves, we expect that increased profitability will have to come from technology, increased efficiency and enhanced processes.

Although there is uncertainty in the market about the level of customers' drilling and completion activity in 2020, we expect demand for Liberty's high-efficiency frac fleets to remain strong during 2020 due to the diversity of Liberty's operating footprint, conversations with our customers and other factors and, as a result, we chose to activate our 24th frac fleet earlier this year as part of growing our business with larger customers to support their long-term development programs. Based on our current visibility into our customers' plans for 2020, we believe this level of demand is likely to continue through the year.

Increase in Drilling Efficiency and Service Intensity of Completions

Over the past decade, E&P companies have focused on exploiting the vast resource potential available across many of North America's unconventional resource plays through the application of horizontal drilling and completion technologies, including the use of multi-stage hydraulic fracturing, in order to increase recovery of oil and natural gas. As E&P companies have improved drilling and completion techniques to maximize return and efficiency, we believe several long term trends have emerged which have materially increased the service intensity of current completions.

Improved drilling economics from horizontal drilling and greater rig efficiencies. Unconventional resources are increasingly being targeted through the use of horizontal drilling. According to Baker Hughes, as reported on January 10, 2020, horizontal rigs accounted for approximately 89% of all rigs drilling in the United States, up from 74% as of December 31, 2014. Over the past several years, North American E&P companies have benefited from improved drilling economics driven by technologies that reduce the number of days, and the cost, of drilling wells. North American drilling rigs have incorporated newer technologies, which allow them to drill rock more effectively and quickly, meaning each rig can drill more wells in a given period. These include improved drilling technologies and the incorporation of geosteering techniques which allow better placement of the wellbore. Drilling rigs have also incorporated new technology which allows fully-assembled rigs to automatically "walk" from one location to the next without disassembling and reassembling the rig, greatly reducing the time it takes to move from one drilling location to the next. At the same time, E&P companies are shifting their development plans to incorporate multi-well pad development, which allows them to drill multiple horizontal wellbores from the same pad or location. The aggregate effect of these improved techniques and technologies have reduced the average days required to drill a well, which according to Coras, has dropped from 28 days in 2014 to 20 days in 2019.

Increased complexity and service intensity of horizontal well completions. In addition to improved rig efficiencies discussed above, E&P companies are also improving the subsurface techniques and technologies used to exploit unconventional resources. These improvements have targeted increasing the exposure of each wellbore to the reservoir by drilling longer horizontal lateral sections of the wellbore. To complete the well, hydraulic fracturing is applied in stages along the wellbore to break-up the resource so that oil and gas can be produced. As wellbores have increased in length, the number of stages has also increased. From 2012 to 2019, the average stages per horizontal well have increased from 23 stages per well to 40 stages per well, according to Liberty FracTrends evaluation of wells in 12 liquid rich formations. Further, E&P companies have improved production from each stage by applying increasing amounts of proppant in each stage, which better connects the well to the resource. The aggregate effect of increased number of stages and the increasing amount of proppant in each stage has greatly increased the total amount of proppant used in each well, according to Coras, from six million pounds per well in 2014 to over 14 million pounds per well in 2019.

These industry trends will directly benefit hydraulic fracturing companies like us that have the expertise and technological innovations to effectively service today's more efficient oilfield drilling activity and the increasing complexity and intensity of well completions. Given the expected returns that E&P companies have reported for new well development activities due to improved rig efficiencies and increasing well completion complexity and intensity, we expect these industry trends to continue.

How We Generate Revenue

We currently generate revenue through the provision of hydraulic fracturing services and goods. These services and goods are performed under a variety of contract structures, primarily MSAs as supplemented by statements of work, pricing agreements and specific quotes. A portion of our statements of work, under MSAs, include provisions that establish pricing arrangements for a period of up to one year in length. However, the majority of those agreements provide for pricing adjustments based on market conditions. The majority of our services are priced based on prevailing market conditions and changing input costs at the time the services are provided, giving consideration to the specific requirements of the customer.

Our hydraulic fracturing services are performed in sections, which we refer to as fracturing stages. The estimated number of fracturing stages to be completed for a particular horizontal well is determined by the customer's well completion design. We recognize revenue for each fracturing stage completed, although our revenue per completed fracturing stage varies depending on the actual volumes and types of proppants, chemicals and fluid utilized for each fracturing stage. The number of fracturing stages that we are able to complete in a period is directly related to the number and utilization of our deployed fleets and size of stages.

Costs of Conducting Our Business

The principal expenses involved in conducting our business are direct cost of personnel, services and materials used in the provision of services, general and administrative expenses, and depreciation and amortization. A large portion of the costs we incur in our business are variable based on the number of hydraulic fracturing jobs and the requirements of services provided to our customers. We manage the level of our fixed costs, except depreciation and amortization, based on several factors, including industry conditions and expected demand for our services.

How We Evaluate Our Operations

We use a variety of qualitative, operational and financial metrics to assess our performance. First and foremost of these is a qualitative assessment of customer satisfaction because ensuring we are a valuable partner to our customers is the key to achieving our quantitative business metrics. Among other measures, management considers each of the following:

- Revenue;
- Operating Income;
- EBITDA;
- Adjusted EBITDA;
- Annualized Adjusted EBITDA per Average Active Fleet;
- Net Income Before Taxes; and
- Earnings per Share.

Revenue

We analyze our revenue by comparing actual monthly revenue to our internal projections for a given period and to prior periods to assess our performance. We also assess our revenue in relation to the number of fleets we have deployed (revenue per average active fleet) from period to period.

Operating Income

We analyze our operating income, which we define as revenues less direct operating expenses, depreciation and amortization and general and administrative expenses, to measure our financial performance. We believe operating income is a meaningful metric because it provides insight on profitability and true operating performance based on the historical cost basis of our assets. We also compare operating income to our internal projections for a given period and to prior periods.

EBITDA and Adjusted EBITDA

We view EBITDA and Adjusted EBITDA as important indicators of performance. We define EBITDA as net income (loss) before interest, income taxes, depreciation and amortization. We define Adjusted EBITDA as EBITDA adjusted to eliminate the effects of items such as new fleet or new basin start-up costs, costs of asset acquisition, gain or loss on the disposal of assets, asset impairment charges, bad debt reserves, and non-recurring expenses that management does not consider in assessing ongoing operating performance. Annualized Adjusted EBITDA per Average Active Fleet is calculated as Adjusted EBITDA annualized, divided by the Average Active Fleets for the same period. See "—Comparison of Non-GAAP Financial Measures" for more information and a reconciliation of EBITDA and Adjusted EBITDA to net income, the most directly comparable financial measure calculated and presented in accordance with GAAP.

Results of Operations

Year Ended December 31, 2019, Compared to Year Ended December 31, 2018

Description	Years Ended December 31,		
	2019	2018	Change
	(in thousands)		
Revenue	$ 1,990,346	$ 2,155,136	$ (164,790)
Cost of services, excluding depreciation and amortization shown separately	1,621,180	1,628,753	(7,573)
General and administrative	97,589	99,052	(1,463)
Depreciation and amortization	165,379	125,110	40,269
Loss (gain) on disposal of assets	2,601	(4,342)	6,943
Operating income	103,597	306,563	(202,966)
Interest expense, net	14,681	17,145	(2,464)
Net income before taxes	88,916	289,418	(200,502)
Income tax expense	14,052	40,385	(26,333)
Net income	74,864	249,033	(174,169)
Less: Net income attributable to Predecessor, prior to the Corporate Reorganization	—	8,705	(8,705)
Less: Net income attributable to non-controlling interests	35,861	113,979	(78,118)
Net income attributable to Liberty Oilfield Services Inc. stockholders	$ 39,003	$ 126,349	$ (87,346)

Revenue

Our revenue decreased $164.8 million, or 7.6%, to $2.0 billion for the year ended December 31, 2019 compared to $2.2 billion for the year ended December 31, 2018. The overall decrease was due to a 13.7% decrease in revenue per average active fleet offset by a 7.0% increase in average active fleets deployed. Our revenue per average active fleet decreased to approximately $87.3 million for the year ended December 31, 2019 as compared to approximately $101.2 million for the year ended December 31, 2018, based on 22.8 and 21.3 average active fleets during those respective periods. The decrease in revenue per active fleet was due to decreases in market prices for fracturing services compared to the prior year.

Cost of Services

Cost of services (excluding depreciation and amortization) decreased $7.6 million, or 0.5%, to $1.6 billion for the year ended December 31, 2019 compared to $1.6 billion for the year ended December 31, 2018. The lower expense is primarily due to a $78.2 million decrease in materials for the year ended December 31, 2019 compared to the same period in 2018. While material volumes increased significantly during 2019 as compared to 2018, unit prices have come down with the increased use of lower cost local sand. The decrease in costs were partially offset by higher repairs and maintenance costs which increased by $31.1 million as well as increased personnel costs of approximately $30.6 million compared to the same period in 2018.

General and Administrative Expenses

General and administrative expenses decreased by $1.5 million, or 1.5%, to $97.6 million for the year ended December 31, 2019 compared to $99.1 million for the year ended December 31, 2018. This decrease is primarily attributed to a decrease in start up costs of approximately $5.5 million, partially offset by an increase of approximately $4.9 million in non cash stock based compensation expense attributable to the Company's second year of restricted stock unit grants under its Long Term Incentive Plan.

Depreciation and Amortization

Depreciation and amortization expense increased $40.3 million, or 32.2%, to $165.4 million for the year ended December 31, 2019 compared to $125.1 million for the year ended December 31, 2018, primarily due to three additional hydraulic fracturing fleets deployed during 2018 that were in service for all of 2019, as well as one additional fleet deployed during the year ended December 31, 2019.

Loss (Gain) on Disposal of Assets

Loss (gain) on disposal of assets in 2019 decreased $6.9 million to a loss of $2.6 million for the year ended December 31, 2019 compared to a gain of $4.3 million for the year ended December 31, 2018. The decrease is primarily due to a gain recognized during the year ended December 31, 2018 on insurance proceeds received in excess of losses incurred for damaged equipment resulting from an accidental fire in November 2018.

Operating Income

We realized operating income of $103.6 million for the year ended December 31, 2019 compared to operating income of $306.6 million for the year ended December 31, 2018, primarily due to a decrease in revenue related to a decrease in demand for our services in conjunction with a decrease in market prices as well as an increase in depreciation and amortization costs related to additional fleets deployed during 2019 and 2018.

Interest Expense, net

The decrease in interest expense, net of $2.5 million, or 14.4%, to $14.7 million during the year ended December 31, 2019 compared to $17.1 million during the year ended December 31, 2018, was primarily due to an increase of approximately $2.4 million from higher interest income primarily driven by an agreement entered into with Liberty Resources in 2019 for a note receivable as well as interest income earned on short term cash investments. For further details of this related party transaction, see Note 12—Related Party Transactions to the consolidated and combined financial statements included in "Item 8. Financial Statements and Supplementary Data."

Net Income Before Taxes

We realized net income before taxes of $88.9 million for the year ended December 31, 2019 compared to net income of $289.4 million for the year ended December 31, 2018. The decrease in net income before taxes is primarily attributable to a decrease in market prices for our services related to oversupply of North American hydraulic fracturing fleets for the year ended December 31, 2019.

Income Tax Expense

As a pass-through entity prior to the IPO, the Predecessor was subject only to the Texas margin tax at a statutory rate of 1.0% and was not subject to U.S. federal income tax. Subsequent to the IPO, the pre-tax net income attributable to the Company is taxed at a combined U.S. federal and state tax rate of approximately 23.0%, while no tax is provided for the income attributable to the non-controlling interests, which remains pass-through income attributable to the holders of non-controlling interests. We recognized $14.1 million of tax expense in the year ended December 31, 2019, an effective rate of 15.8%, compared to $40.4 million recognized during the year ended December 31, 2018, an effective rate of 14.0%. This decrease in income tax expense is mainly attributable to the net decrease in operating income, the components of which are discussed above.

Comparison of Non-GAAP Financial Measures

We view EBITDA and Adjusted EBITDA as important indicators of performance. We define EBITDA as net income before interest, income taxes, depreciation and amortization. We define Adjusted EBITDA as EBITDA adjusted to eliminate the effects of items such as new fleet or new basin start-up costs, costs of asset acquisitions, gain or loss on the disposal of assets, asset impairment charges, bad debt reserves and non-recurring expenses that management does not consider in assessing ongoing performance.

Our Board, management, investors and lenders use EBITDA and Adjusted EBITDA to assess our financial performance because it allows them to compare our operating performance on a consistent basis across periods by removing the effects of our capital structure (such as varying levels of interest expense), asset base (such as depreciation and amortization) and other items that impact the comparability of financial results from period to period. We present EBITDA and Adjusted EBITDA because we believe they provide useful information regarding the factors and trends affecting our business in addition to measures calculated under GAAP.

Note Regarding Non-GAAP Financial Measures

EBITDA and Adjusted EBITDA are not financial measures presented in accordance with GAAP. We believe that the presentation of these non-GAAP financial measures will provide useful information to investors in assessing our financial performance and results of operations. Net income (loss) is the GAAP measure most directly comparable to EBITDA and Adjusted EBITDA. Our non-GAAP financial measures should not be considered as alternatives to the most directly comparable GAAP financial measure. Each of these non-GAAP financial measures has important limitations as an analytical tool due to exclusion of some but not all items that affect the most directly comparable GAAP financial measures. You should not consider EBITDA or Adjusted EBITDA in isolation or as substitutes for an analysis of our results as reported under GAAP. Because EBITDA and Adjusted EBITDA may be defined differently by other companies in our industry, our definitions of these non-GAAP financial measures may not be comparable to similarly titled measures of other companies, thereby diminishing their utility.

The following tables present a reconciliation of EBITDA and Adjusted EBITDA to our net income, which is the most directly comparable GAAP measure for the periods presented:

Year Ended December 31, 2019 Compared to Year Ended December 31, 2018: EBITDA and Adjusted EBITDA

Description	Years Ended December 31, 2019	2018	Change
	(in thousands)		
Net income	$ 74,864	$ 249,033	$ (174,169)
Depreciation and amortization	165,379	125,110	40,269
Interest expense, net	14,681	17,145	(2,464)
Income tax expense	14,052	40,385	(26,333)
EBITDA	$ 268,976	$ 431,673	$ (162,697)
Fleet start-up costs	4,519	10,069	(5,550)
Asset acquisition costs	—	632	(632)
(Gain) loss on disposal of assets	2,601	(4,342)	6,943
Bad debt reserve	1,053	—	1,053
Advisory services fees	—	202	(202)
Adjusted EBITDA	$ 277,149	$ 438,234	$ (161,085)

EBITDA was $269.0 million for the year ended December 31, 2019 compared to $431.7 million for the year ended December 31, 2018. Adjusted EBITDA was $277.1 million for the year ended December 31, 2019 compared to $438.2 million for the year ended December 31, 2018. The decreases in EBITDA and Adjusted EBITDA resulted from the decreased revenue and other factors described above under the captions *Revenue*, *Cost of Services, General and Administrative Expenses* and *Depreciation and Amortization* for *Year Ended December 31, 2019, Compared to Year Ended December 31, 2018.*

Liquidity and Capital Resources

Overview

Historically, our primary sources of liquidity to date have been cash flows from operations, proceeds from our IPO, and borrowings under our Credit Facilities. We expect to fund operations and organic growth with cash flows from operations and available borrowings under our Credit Facilities. We may incur additional indebtedness or issue equity in order to fund growth opportunities that we pursue via acquisition. Our primary uses of capital have been capital expenditures to support organic growth and funding ongoing operations, including maintenance and fleet upgrades.

Cash and cash equivalents increased by $9.4 million to $112.7 million as of December 31, 2019 compared to $103.3 million as of December 31, 2018. We believe that our operating cash flow and available borrowings under our Credit Facilities will be sufficient to fund our operations for at least the next twelve months.

Cash Flows

The following table summarizes our cash flows for the periods indicated:

Description	Years Ended December 31, 2019	2018	Change
	(in thousands)		
Net cash provided by operating activities	$ 261,100	$ 351,258	$ (90,158)
Net cash used in investing activities	(194,347)	(255,492)	61,145
Net cash used in financing activities	(57,375)	(8,775)	(48,600)
Net increase in cash and cash equivalents	$ 9,378	$ 86,991	$ (77,613)

Analysis of Cash Flow Changes Between the Years Ended December 31, 2019 and December 31, 2018

Operating Activities. Net cash provided by operating activities was $261.1 million for the year ended December 31, 2019, compared to net cash provided by operating activities of $351.3 million for the year ended December 31, 2018. The $90.2 million decrease in cash from operating activities was primarily attributable to a $164.8 million decrease in revenues, offset by an increase of $24.9 million from changes in working capital between periods, and to a lesser extent by lower cash taxes, costs of goods sold, and general and administrative expenses.

Investing Activities. Net cash used in investing activities was $194.3 million for the year ended December 31, 2019, compared to $255.5 million for the year ended December 31, 2018. The $61.1 million decrease in net cash used in investing activities was primarily due to fewer hydraulic frac fleets deployed during 2019 than were deployed during 2018.

Financing Activities. Net cash used in financing activities was $57.4 million for the year ended December 31, 2019, compared to net cash used in financing activities of $8.8 million for the year ended December 31, 2018. The $48.6 million increase in cash used in financing activities was primarily due to cash provided by financing activities in 2018 from the IPO and Corporate Reorganization offset by increased repayments under the Credit Facilities and increased share repurchases in 2018 compared to 2019. During 2018, $200.2 million of net proceeds were raised from the IPO and Corporate Reorganization. Share repurchases were $82.9 million in 2018 compared to $18.4 million in 2019. Repayments of borrowings under the Credit Facilities were $92.8 million in 2018 compared to $1.8 million in 2019. Quarterly dividends and distributions were $11.6 million in 2018 compared to $22.5 million in 2019. Payments on finance lease obligations were zero in 2018 compared to $12.1 million in 2019. Other distributions and advances to non-controlling interest holders were $21.3 million in 2018 compared to de minimis amounts in 2019.

Debt Agreements

On September 19, 2017, the Company entered into two new credit agreements for a revolving line of credit up to $250.0 million (the “ABL Facility”) and a $175.0 million term loan (the “Term Loan Facility”, and together with the ABL Facility the “Credit Facilities”). Following is a description of the ABL Facility and the Term Loan Facility.

ABL Facility

Under the terms of the ABL Facility, up to $250.0 million may be borrowed, subject to certain borrowing base limitations based on a percentage of eligible accounts receivable and inventory. As of December 31, 2019, the borrowing base was calculated to be $171.1 million, and the Company had no borrowings outstanding, except for a letter of credit in the amount of $0.3 million, with $170.8 million of remaining availability. Borrowings under the ABL Facility bear interest at LIBOR or a base rate, plus an applicable LIBOR margin of 1.5% to 2.0% or base rate margin of 0.5% to 1.0%, as defined in the ABL Facility credit agreement. The unused commitment is subject to an unused commitment fee of 0.375% to 0.5%. Interest and fees are payable in arrears at the end of each month, or, in the case of LIBOR loans, at the end of each interest period. The ABL Facility matures on the earlier of (i) September 19, 2022 and (ii) to the extent the debt under the Term Loan Facility remains outstanding, 90 days prior to the final maturity of the Term Loan Facility, which matures on September 19, 2022. Borrowings under the ABL Facility are collateralized by accounts receivable and inventory, and further secured by the Company, Liberty LLC and R/C IV Non-U.S. LOS Corp., a Delaware corporation (“R/C IV”) and a subsidiary of the Company, as parent guarantors.

Term Loan Facility

The Term Loan Facility provides for a $175.0 million term loan, of which $110.0 million remained outstanding as of December 31, 2019. Amounts outstanding bear interest at LIBOR or a base rate, plus an applicable margin of 7.625% or 6.625%, respectively, and the weighted average rate on borrowings was 9.4% as of December 31, 2019. The Company is required to make quarterly principal payments of 1% per annum of the initial principal balance, commencing on December 31, 2017, with final payment due at maturity on September 19, 2022. The Term Loan Facility is collateralized by the fixed assets of LOS and its subsidiaries, and is further secured by the Company, Liberty LLC and R/C IV, as parent guarantors.

The Credit Facilities include certain non-financial covenants, including but not limited to restrictions on incurring additional debt and certain distributions. Moreover, the ability of the Company to incur additional debt and to make distributions is dependent on maintaining a maximum leverage ratio. The Term Loan Facility requires mandatory prepayments upon certain dispositions of property or issuance of other indebtedness, as defined, and annually a percentage of excess cash flow (25% to 50%, depending on leverage ratio, of consolidated net income less capital expenditures and other permitted payments, commencing with the year ending December 31, 2018). Certain mandatory prepayments and optional prepayments are subject to a prepayment premium of 3% of the prepaid principal declining annually to 1% during the first three years of the term of the Term Loan Facility.

The Credit Facilities are not subject to financial covenants unless liquidity, as defined in the respective credit agreements, drops below a specified level. Under the ABL Facility, the Company is required to maintain a minimum fixed charge coverage ratio, as defined in the credit agreement governing the ABL Facility, of 1.0 to 1.0 for each period if excess availability is less than 10% of the borrowing base or $12.5 million, whichever is greater. Under the Term Loan Facility, the Company is required to maintain a minimum fixed charge coverage ratio, as defined, of 1.2 to 1.0 for each trailing twelve-month period if the Company’s liquidity, as defined, is less than $25.0 million for at least five consecutive business days. The Company was in compliance with these covenants as of December 31, 2019.

Contractual Obligations

The table below provides estimates of the timing of future payments that we are contractually obligated to make based on agreements in place at December 31, 2019.

	Payments Due by Period ($ in thousands)				
	Total	Less than 1	1 – 3 years	4 – 5 years	More than 5 years
ABL Facility(1)	$ —	$ —	$ —	$ —	$ —
Term Loan Facility(1)	109,966	1,750	108,216	—	—
Estimated interest payments(2)	28,024	10,473	17,551	—	—
Operating lease obligations(3)	63,235	18,262	20,945	8,011	16,017
Finance lease obligations(4)	51,168	26,407	24,761	—	—
Purchase commitments(5)	525,507	349,096	157,408	19,003	—
Obligations under the TRAs(6)	50,302	1,821	20,470	8,111	19,900
Total	$ 828,202	$ 407,809	$ 349,351	$ 35,125	$ 35,917

(1) Payments on our ABL Facility and Term Loan Facility exclude interest payments. Payments are based on debt balances as of December 31, 2019.
(2) Estimated interest payments are based on debt balances as of December 31, 2019. Interest rates applied are based on the weighted average rate as of December 31, 2019.
(3) Operating lease obligations include payments for leased facilities, equipment and vehicles.
(4) Finance lease obligations include payments for leased vehicles.
(5) Purchase commitments represent payments under supply agreements for the purchase and transportation of proppants. Some of the agreements include minimum monthly purchase commitments, including agreements under which a shortfall fee may be applied. The shortfall fee may be offset by purchases in excess of the minimum requirement during future periods, as allowed for by each agreement.
(6) The timing and amount(s) of the aggregate payments due under the TRAs may vary based on a number of factors, including the timing and amount of the taxable income we generate each year and the tax rate then applicable.

Tax Receivable Agreements

In connection with the IPO, on January 17, 2018, the Company entered into two TRAs with the TRA Holders. The TRAs generally provide for the payment by the Company of 85% of the net cash savings, if any, in U.S. federal, state, and local income tax and franchise tax (computed using simplifying assumptions to address the impact of state and local taxes) that the Company actually realizes (or is deemed to realize in certain circumstances) in periods after the IPO as a result, as applicable to each of the TRA Holders, of (i) certain increases in tax basis that occur as a result of the Company's acquisition (or deemed acquisition for U.S. federal income tax purposes) of all or a portion of such TRA Holders' Liberty LLC Units in connection with the IPO or pursuant to the exercise of the right of each Liberty Unit Holder (the "Redemption Right"), subject to certain limitations, to cause Liberty LLC to acquire all or a portion of its Liberty LLC Units for, at Liberty LLC's election, (A) shares of our Class A Common Stock at the specific redemption ratio or (B) an equivalent amount of cash, or, upon the exercise of the Redemption Right, the right of Liberty Inc. (instead of Liberty LLC) to, for administrative convenience, acquire each tendered Liberty LLC Unit directly from the redeeming Liberty Unit Holder (the "Call Right") for, at its election, (1) one share of Class A Common Stock or (2) an equivalent amount of cash, (ii) any net operating losses available to the Company as a result of the Corporate Reorganization, and (iii) imputed interest deemed to be paid by the Company as a result of, and additional tax basis arising from, any payments the Company makes under the TRAs.

With respect to obligations the Company expects to incur under the TRAs (except in cases where the Company elects to terminate the TRAs early, the TRAs are terminated early due to certain mergers, asset sales, or other changes of control or the Company has available cash but fails to make payments when due), generally the Company may elect to defer payments due under the TRAs if the Company does not have available cash to satisfy its payment obligations under the TRAs or if its contractual obligations limit its ability to make such payments. Any such deferred payments under the TRAs generally will accrue interest. In certain cases, payments under the TRAs may be accelerated and/or significantly exceed the actual benefits, if any, the Company realizes in respect of the tax attributes subject to the TRAs. The Company accounts for amounts payable under the TRAs in accordance with Accounting Standard Codification ("ASC") Topic 450, *Contingencies*.

If the Company experiences a change of control (as defined under the TRAs) or the TRAs otherwise terminate early, the Company's obligations under the TRAs could have a substantial negative impact on its liquidity and could have the effect of delaying, deferring or preventing certain mergers, asset sales, or other forms of business combinations or changes of control. There can be no assurance that we will be able to finance our obligations under the TRAs.

Income Taxes

Following the IPO, the Company is a corporation and is subject to U.S. federal, state and local income tax on its share of Liberty LLC's taxable income. As a result of the IPO and Corporate Reorganization, the Company recorded deferred tax assets and liabilities for the difference between the book value of assets and liabilities for financial reporting purposes and those amounts applicable for income tax purposes. Deferred tax assets have been recorded for tax attributes contributed to the Company as part of the reorganization. Deferred tax liabilities of $29.3 million were recorded relating to the Liberty LLC Units acquired through the Corporate Reorganization.

The effective combined U.S. federal and state income tax rate applicable to the Company for the year ended December 31, 2019 and 2018 was 15.8% and 14.0%, respectively. The Company's effective tax rate is significantly less than the federal statutory income tax rate of 21.0% primarily because no taxes are payable by the Company for the non-controlling interest's share of Liberty LLC's pass-through income for federal, state and local income tax reporting. The Company recognized income tax expense of $14.1 million and $40.4 million for the year ended December 31, 2019 and 2018, respectively.

Critical Accounting Policies and Estimates

The preparation of financial statements requires the use of judgments and estimates. Our critical accounting policies are described below to provide a better understanding of how we develop our assumptions and judgments about future events and related estimates and how they can impact our financial statements. A critical accounting estimate is one that requires our most difficult, subjective or complex estimates and assessments and is fundamental to our results of operations.

We base our estimates on historical experience and on various other assumptions we believe to be reasonable according to the current facts and circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. We believe the following are the critical accounting policies used in the preparation of our combined financial statements, as well as the significant estimates and judgments affecting the application of these policies. This discussion and analysis should be read in conjunction with our combined financial statements and related notes included in "Item 8. Financial Statements and Supplementary Data."

Revenue Recognition: Revenue from hydraulic fracturing services is recognized as specific services are provided in accordance with contractual arrangements. If our assessment of performance under a particular contract changes, our revenue and / or costs under that contract may change. In connection with ASC Topic 842, the Company determined that certain of its service revenue contracts contain a lease component. The Company elected to adopt a practical expedient available to lessors, which allows the Company to combine the lease and service component for certain of the Company's service contracts when the service component is the predominant component and continues to account for the combined component under ASC Topic 606, *Revenue from Contracts with Customers*.

Accounts Receivable: We analyze the need for an allowance for doubtful accounts for estimated losses related to potentially uncollectible accounts receivable on a case-by-case basis throughout the year. We reserve amounts based on specific identification after considering each customer's situation, including payment patterns, current financial condition as well as general economic conditions. It is reasonably possible that our estimates of the allowance for doubtful accounts will change and that losses ultimately incurred could differ materially from the amounts estimated in determining the allowance.

Inventory: Inventory consists of raw materials used in the hydraulic fracturing process, such as proppants, chemicals and field service equipment maintenance parts, and is stated at the lower of cost or net realizable value, determined using the weighted average cost method. Net realizable value is determined based on our estimates of selling prices in the ordinary course of business, less reasonably predictable cost of completion, disposal, and transportation, each of which require us to apply judgment.

Property and Equipment: We calculate depreciation and amortization on our assets based on the estimated useful lives and estimated salvage values that we believe are reasonable. The estimated useful lives and salvage values are subject to key assumptions such as maintenance, utilization and job variation. These estimates may change due to a number of factors such as changes in operating conditions or advances in technology.

We incur maintenance costs on our major equipment. The determination of whether an expenditure should be capitalized or expensed requires management judgment in the application of how the costs benefit future periods, relative to our capitalization policy. Costs that either establish or increase the efficiency, productivity, functionality or life of a fixed asset are capitalized and depreciated over the remaining useful life of the asset.

Impairment of long-lived and other intangible assets: Long-lived assets, such as property and equipment and finite-lived intangible assets, are evaluated for impairment whenever events or changes in circumstances indicate that their carrying value may not be recoverable. Recoverability is assessed using undiscounted future net cash flows of assets grouped at the lowest level for which there are identifiable cash flows independent of the cash flows of other groups of assets. When alternative

courses of action to recover the carrying amount of the asset group are under consideration, estimates of future undiscounted cash flows take into account possible outcomes and probabilities of their occurrence, which require us to apply judgment. If the carrying amount of the asset is not recoverable based on its estimated undiscounted cash flows expected to result from the use and eventual disposition, an impairment loss is recognized in an amount by which its carrying amount exceeds its estimated fair value. The inputs used to determine such fair value are primarily based upon internally developed cash flow models. Our cash flow models are based on a number of estimates regarding future operations that may be subject to significant variability, are sensitive to changes in market conditions, and are reasonably likely to change in the future. No events or changes in circumstances occurred that would indicate a potential impairment of property and equipment as of December 31, 2019 and 2018. No impairment was recognized during the years ended December 31, 2019, 2018 and 2017.

Leases: The Company adopted Accounting Standards Update ("ASU") No. 2016-02, Leases ASC Topic 842 effective January 1, 2019. We elected the modified retrospective transition method under ASC Topic 842 and as such information prior to January 1, 2019 has not been restated and continues to be reported under the accounting standards in effect for the period (ASC Topic 840). We carried forward the historical lease classifications and assessment of initial direct costs, account for lease and non-lease components as a single component, and exclude leases with an initial term of less than 12 months in the lease assets and liabilities. For leases entered into after January 1, 2019, the Company determines if an arrangement is a lease at inception and evaluates identified leases for operating or finance lease treatment. Operating or finance lease right-of-use assets and liabilities are recognized at the commencement date based on the present value of lease payments over the lease term. We use our incremental borrowing rate based on the information available at the commencement date in determining the present value of lease payments. Lease terms may include options to renew; however, we typically cannot determine our intent to renew a lease with reasonable certainty at inception.

Tax Receivable Agreements: In connection with the IPO, on January 17, 2018, the Company entered into two TRAs with the TRA Holders. The TRAs generally provide for the payment by the Company of 85% of the net cash savings, if any, in U.S. federal, state, and local income tax and franchise tax that the Company actually realizes in periods after the IPO as a result of certain tax attributes applicable to each TRA Holder. The Company accounts for amounts payable under the TRAs in accordance with ASC Topic 450, *Contingencies*.

Share Repurchases: The Company accounts for the purchase price of repurchased Class A Common Stock in excess of par value ($0.01 per share of Class A Common Stock) as a reduction of additional paid-in capital, and will continue to do so until additional paid-in capital is reduced to zero. Thereafter, any excess purchase price will be recorded as a reduction to retained earnings.

Recent Accounting Pronouncements

See Note 2—Significant Accounting Policies—*Recently Issued Accounting Standards* to the consolidated and combined financial statements included in "Item 8. Financial Statements and Supplementary Data" for a discussion of recent accounting pronouncements.

Off Balance Sheet Arrangements

We have no material off balance sheet arrangements as of December 31, 2019, except for purchase commitments under supply agreements as disclosed above under "—Contractual Obligations." As such, we are not materially exposed to any other financing, liquidity, market or credit risk that could arise if we had engaged in such financing arrangements.

Item 7A. Quantitative and Qualitative Disclosure about Market Risk

Industry Risk

The demand, pricing and terms for hydraulic fracturing services and related goods provided by us are largely dependent upon the level of drilling activity in the U.S. oil and natural gas industry, as well as the available supply of hydraulic fracturing equipment. These activity levels 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; the level of prices, and expectations about future prices of oil and natural gas; 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; supply of actively marketed and staffed fracturing fleets; available rail and other transportation 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 E&P companies to raise equity capital and debt financing; and merger and divestiture activity among E&P companies.

The level of U.S. oil and natural gas drilling is volatile. Expected trends in oil and natural gas production activities may not materialize and demand for our services may not reflect the level of activity in the industry. Any prolonged and substantial reduction in oil and natural gas prices would likely affect oil and natural gas production levels and therefore affect demand for our services. A material decline in oil and natural gas prices 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

At December 31, 2019, we had $110.0 million of debt outstanding, with a weighted average interest rate of 9.4%. Interest is calculated under the terms of our Credit Facilities based on our selection, from time to time, of one of the index rates available to us plus an applicable margin that varies based on certain factors. See “Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations—Debt Agreements.” Assuming no change in the amount outstanding, the impact on interest expense of a 1% increase or decrease in the weighted average interest rate would be approximately $1.1 million per year. We do not currently have or intend to enter into any derivative arrangements to protect against fluctuations in interest rates applicable to our outstanding indebtedness.

Commodity Price Risk

Our material and fuel purchases expose us to commodity price risk. Material costs primarily include inventory consumed while performing hydraulic fracturing services. Fuel costs consist of diesel fuel used by trucks and other motorized equipment used for hydraulic fracturing services. At times, we have been able to pass along price increases for material costs and fuel costs to customers and conversely have been required to pass along price decreases for material costs to our customers, depending on market conditions. Further, we have purchase commitments with certain vendors to supply proppant inventory used in our operations at a fixed purchase price, including certain commitments which include minimum purchase obligations. Refer to Note 13, “Commitments and Contingencies” included in “Item 8. Financial Statements and Supplementary Data” for further discussion regarding purchase commitments.

Item 8. Financial Statements and Supplementary Data

Our financial statements and supplementary data are included in this Annual Report on Form 10-K beginning on page F-1 and incorporated by reference herein.

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

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

In accordance with the Securities Exchange Act of 1934 Rules 13a-15 and 15d-15, we carried out an evaluation, under the supervision and with the participation of management, including our principal executive officer and principal financial officer, of the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this report. Based on that evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were effective as of December 31, 2019 to provide reasonable assurance that information required to be disclosed in our reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Our disclosure controls and procedures include controls and procedures designed to ensure that information required to be disclosed in reports filed or submitted under the Exchange Act is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosures.

There has been no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the three months ended December 31, 2019 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

See page F-1 for Management's Report on Internal Control Over Financial Reporting and page F-4 for Report of Independent Registered Public Accounting Firm on its assessment of our internal control over financial reporting.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this item concerning our executive officers, directors and corporate governance is incorporated herein by reference to our definitive proxy statement for our 2020 annual meeting of shareholders, which will be filed with the SEC no later than 120 days after December 31, 2019, under the captions "Proposal 1 — Election of Directors," "The Board and its Committees," "Executive Officers" and "Delinquent Section 16(a) Reports."

Item 11. Executive Compensation

The information required by this item concerning executive compensation is incorporated herein by reference to our definitive proxy statement for our 2020 annual meeting of shareholders, which will be filed with the SEC no later than 120 days after December 31, 2019, under the captions "The Board and its Committees," "Compensation Discussion & Analysis," "Compensation Committee Report," "Executive Compensation Tables," "Director Compensation" and "CEO Pay Ratio."

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

The information required by this item concerning the security ownership of certain beneficial owners and management and related stockholder matters are incorporated herein by reference to our definitive proxy statement for our 2020 annual meeting of shareholders, which will be filed with the SEC no later than 120 days after December 31, 2019, under the captions "Security Ownership of Certain Beneficial Owners and Management" and "Equity Compensation Plan Information."

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

The information required by this item concerning certain relationships and related person transactions and director independence is incorporated herein by reference to our definitive proxy statement for our 2020 annual meeting of shareholders, which will be filed with the SEC no later than 120 days after December 31, 2019, under the captions "Certain Relationships and Related Party Transactions" and "the Board and its Committees."

Item 14. Principal Accountant Fees and Services

The information required by this item concerning principal accounting fees and services is incorporated herein by reference to our definitive proxy statement for our 2020 annual meeting of shareholders, which will be filed with the SEC no later than 120 days after December 31, 2019, under the caption "Proposal 2 — Ratification of Appointment of the Company's Independent Registered Public Accounting Firm."

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) Financial Statements and Financial Statement Schedules

Refer to Index to Financial Statements on page 63.

All schedules are omitted as information required is inapplicable or the information is presented in the consolidated and combined financial statements and the related notes.

(b) Exhibits

The documents listed in the Index to Exhibits are filed, furnished or incorporated by reference as part of this Annual Report on Form 10-K, and such Index to Exhibits are incorporated herein by reference.

Item 16. Form 10-K Summary

None.

INDEX TO EXHIBITS

Exhibit Number	Description
2.1	Master Reorganization Agreement, dated as of January 11, 2018, by and among Liberty Oilfield Services Inc., Liberty Oilfield Services Holdings LLC, Liberty Oilfield Services New HoldCo LLC, and the other parties named therein (2)
3.1	Amended and Restated Certificate of Incorporation of Liberty Oilfield Services Inc. (2)
3.2	Amended and Restated Bylaws of Liberty Oilfield Services Inc. (3)
4.1	Stockholder Agreement, dated as of January 17, 2018, by and among Liberty Oilfield Services Inc., R/C IV Liberty Oilfield Services Holdings, L.P., R/C Energy IV Direct Partnership, L.P., and other parties names therein (2)
4.2	Stockholders Agreement, dated as of July 23, 2019, by and among Liberty Oilfield Services Inc., R/C IV Liberty Holdings, L.P. and R/C Energy IV Direct Partnership, L.P. (9)
4.3	Description of the Registrant's Securities Registered pursuant to Section 12 of the Securities Exchange Act of 1934. *
10.1	Second Amended and Restated Limited Liability Company Operating Agreement of Liberty Oilfield Services New HoldCo LLC (2)
10.2	Tax Receivable Agreement, dated January 17, 2018, by and among Liberty Oilfield Services Inc., R/C Energy IV Direct Partnership, L.P., and R/C Energy IV Direct Partnership, L.P., as agent (2)
10.3	Tax Receivable Agreement, dated January 17, 2018, by and among Liberty Oilfield Services Inc., and the other parties named therein (2)
10.4	Registration Rights Agreement, dated January 17, 2018, by and among Liberty Oilfield Services Inc. and the other parties named therein (2)
10.5	Liberty Oilfield Services Inc. Long Term Incentive Plan (2)†
10.6	Liberty Oilfield Services Inc. Legacy Restricted Stock Plan (2)†
10.7	Form of Restricted Stock Grant Notice and Restricted Stock Agreement under the Legacy Restricted Stock Plan (1)†
10.8	Credit Agreement, dated September 19, 2017, by and among Wells Fargo Bank, National Association, as Administrative Agent, Wells Fargo Bank, National Association, JPMorgan Chase Bank, N.A. and Citibank, N.A., as Joint Lead Arrangers, Wells Fargo Bank, National Association, as Book Runner, JPMorgan Chase Bank, N.A. and Citibank, N.A., as Syndication Agents, the lender parties thereto, Liberty Oilfield Services Holdings LLC, as Parent and Liberty Oilfield Services LLC and LOS Acquisition Co I LLC, each as a Borrower (1)
10.9	Amendment and Parent Joinder to Credit Agreement, dated January 17, 2018, by and among Liberty Oilfield Services Holdings LLC, Liberty Oilfield Services LLC, LOS Acquisition Co I LLC, Liberty Oilfield Services Inc., Liberty Oilfield Services New Holdco LLC, Wells Fargo Bank, National Association, as Administrative Agent, and the lenders signatory thereto (4)
10.10	Second Amendment and Parent Joinder to Credit Agreement, dated March 21, 2018, by and among Liberty Oilfield Services LLC, LOS Acquisition Co I LLC, Liberty Oilfield Services Inc., Liberty Oilfield Services New Holdco LLC, R/C IV Non-U.S. LOS Corp, Wells Fargo Bank, National Association, as Administrative Agent, and the lenders signatory thereto (4)
10.11	Credit Agreement, dated September 19, 2017, by and among Liberty Oilfield Services LLC and LOS Acquisition CO I LLC, each as a Borrower, Liberty Oilfield Services Holdings LLC, as Parent Guarantor and U.S. Bank National Association as Agent (1)
10.12	Amendment and Joinder to Credit Agreement, dated January 17, 2018, by and among Liberty Oilfield Services Holdings LLC, Liberty Oilfield Services LLC, LOS Acquisition Co I LLC, Liberty Oilfield Services Inc., Liberty Oilfield Services New Holdco LLC, U.S. Bank National Association, as Administrative Agent, and the lenders signatory thereto (4)
10.13	Second Amendment and Joinder to Credit Agreement, dated March 21, 2018, by and among Liberty Oilfield Services LLC, LOS Acquisition Co I LLC, Liberty Oilfield Services Inc., Liberty Oilfield Services New Holdco LLC, R/C IV Non-U.S. LOS Corp, U.S. Bank National Association, as Administrative Agent, and the lenders signatory thereto (4)

10.14	Liberty Oilfield Services 401(k) Savings Plan (5)†
10.15	Stock Purchase and Sale Agreement, dated as of September 14, 2018, by and among Liberty Oilfield Services Inc., R/C Energy IV Direct Partnership, L.P., R/C IV Liberty Holdings, L.P. and Riverstone/Carlyle Energy Partners IV, L.P. (6)
10.16	Form of Restricted Stock Unit Grant Notice and Restricted Stock Unit Award Agreement under the Long Term Incentive Plan (7)†
10.17	Form of Performance Restricted Stock Unit Grant Notice and Performance Restricted Stock Unit Agreement under the Liberty Oilfield Services Inc. Long Term Incentive Plan (8)†
10.18	Form of Change in Control Agreement (10)†
10.19	Form of Indemnification Agreement between the Company and each of its Directors and Executive Officers*
21.1	List of subsidiaries of Liberty Oilfield Services Inc. *
23.1	Consent of Deloitte & Touche LLP *
31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 *
31.2	Certification of Chief Financial Officer pursuant to 13a-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 *
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 **
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 **
101.INS	XBRL Instance Document *
101.SCH	XBRL Taxonomy Extension Schema Document *
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document *
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document *
101.LAB	XBRL Taxonomy Extension Label Linkbase Document *
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document *
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)*

(1)	Incorporated by reference to the exhibits to the registrant’s Registration Statement on Form S-1, as amended (SEC File 333-216050).
(2)	Incorporated by reference to the exhibits to the registrant’s Current Report on Form 8-K, filed on January 18, 2018.
(3)	Incorporated by reference to the exhibits to the registrant’s Amendment No. 1 to the Current Report on Form 8-K/A, filed on January 22, 2018.
(4)	Incorporated by reference to the exhibits to the registrant’s Annual Report on Form 10-K, filed on March 23, 2018.
(5)	Incorporated by reference to the exhibits to the registrant’s Registration Statement on Form S-8, filed on June 28, 2018 (SEC File 333-225948).
(6)	Incorporated by reference to the exhibits to the registrant’s Current Report on Form 8-K, filed on September 17, 2018.
(7)	Incorporated by reference to the exhibits to the registrant’s Quarterly Report on Form 10-Q, filed on May 10, 2018.
(8)	Incorporated by reference to the exhibits to the registrant’s Quarterly Report on Form 10-Q, filed on May 3, 2019.
(9)	Incorporated by reference to the registrant’s Current Report on Form 8-K, filed on July 29, 2019.
(10)	Incorporated by reference to the registrant’s Current Report on Form 8-K, filed on August 30, 2019.
*	Filed herewith.

** Furnished herewith.

† Denotes a management contract or compensatory plan or arrangement.

SIGNATURES

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

LIBERTY OILFIELD SERVICES INC.

Date:	February 26, 2020	By:	/s/ Christopher A. Wright Christopher A. Wright *Chief Executive Officer*

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

Signature	Title	Date
/s/ Christopher A. Wright Christopher A. Wright	Chief Executive Officer and Director (Principal Executive Officer)	February 26, 2020
/s/ Michael Stock Michael Stock	Chief Financial Officer (Principal Financial Officer)	February 26, 2020
/s/ Ryan T. Gosney Ryan T. Gosney	Chief Accounting Officer (Principal Accounting Officer)	February 26, 2020
/s/ Cary D. Steinbeck Cary D. Steinbeck	Director	February 26, 2020
/s/ N. John Lancaster, Jr. N. John Lancaster, Jr.	Director	February 26, 2020
/s/ Brett Staffieri Brett Staffieri	Director	February 26, 2020
/s/ William F. Kimble William F. Kimble	Director	February 26, 2020
/s/ Peter A. Dea Peter A. Dea	Director	February 26, 2020
/s/ Ken Babcock Ken Babcock	Director	February 26, 2020
/s/ Jesal Shah Jesal Shah	Director	February 26, 2020
/s/ Gale A. Norton Gale Norton	Director	February 26, 2020

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Liberty Oilfield Services Inc.

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MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The management of Liberty Oilfield Services Inc. is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) of the Securities Exchange Act.

Internal control over financial reporting, no matter how well designed, has inherent limitations. Therefore, a system of internal control over financial reporting can provide only reasonable assurance and may not prevent or detect misstatements. Further, because of changes in conditions, effectiveness of internal controls over financial reporting may vary over time.

Under the supervision of, and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2019 based on the framework and criteria established in *Internal Control-Integrated Framework (2013)*, issued by the Committee of Sponsoring Organizations of the Treadway Commission.

Based on this evaluation, management concluded that, as of December 31, 2019, our internal control over financial reporting was effective. The effectiveness of Liberty Oilfield Services Inc.'s internal control over financial reporting as of December 31, 2019 has been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report that is included herein.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholders and the Board of Directors of Liberty Oilfield Services Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Liberty Oilfield Services Inc. and subsidiaries (the "Company") as of December 31, 2019 and 2018, the related consolidated and combined statements of operations, changes in equity, and cash flows, for each of the three years in the period ended December 31, 2019, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 26, 2020, expressed an unqualified opinion on the Company's internal control over financial reporting.

Change in Accounting Principle

As discussed in Note 2 to the financial statements, the Company changed its method of accounting for leases effective January 1, 2019 due to adoption of Accounting Standards Codification Topic 842 - *Leases*.

Basis for Opinion

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

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

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Income Taxes — Tax Receivable Agreements — Refer to Note 10 to the financial statements

Critical Audit Matter Description

The amounts payable, as well as the timing of such payments, under the tax receivable agreements ("TRA") are dependent upon significant future events and assumptions, including among others: (i) the amount of the redeeming unit holder's tax basis in its Liberty Oilfield Services New HoldCo LLC class B units at the time of the relevant redemption, (ii) the characterization of the tax basis step-up, (iii) the depreciation and amortization periods that apply to the increase in tax

basis (iv), the amount and timing of taxable income the Company generates in future periods until the TRA payable is settled, and (v) the portion of the Company's payments under the TRA that constitute imputed interest or give rise to depreciable or amortizable tax basis.

During the year ended December 31, 2019, exchanges of Liberty Oilfield Services New HoldCo LLC class B units and shares of Class B Common Stock resulted in an increase of $34.0 million in amounts payable pursuant to tax receivable agreements ("TRA payable"), and a net increase of $40.0 million in deferred tax assets, all of which were recorded as equity transactions, with no impact to the statement of operations. At December 31, 2019, the Company's TRA payable was $50.3 million, a portion of which is presented as a component of current liabilities of $1.8 million and a portion of which is presented as a component of long-term liabilities of $48.5 million.

We identified the computation of adjustments to the TRA payable as a critical audit matter because of the multiple owners and complex calculations required to arrive at the correct tax basis upon which to calculate the corresponding TRA payable adjustment. This involved complexity in applying relevant tax law and an increased extent of effort, including the need to involve income tax specialists, when performing audit procedures to evaluate the reasonableness of management's calculation of tax basis, iterative impact of the computation of adjustments to the TRA payable, and TRA payable as of year end.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the computation of adjustments to the TRA payable included the following, among others:

- We tested the effectiveness of controls over the computation of adjustments to the TRA payable, including management's calculation of the step-up in tax basis that serves as the basis for the computation of adjustments to the TRA payable.

- With the assistance of our income tax specialists, we read the individual TRAs and compared the terms in the agreements for consistency with the mathematical model used by management to calculate the adjustments to the TRA payable.

- With the assistance of our income tax specialists, we evaluated management's computation of adjustments to the TRA payable, and the TRA payable as of year end that is payable over the contractual period by comparing to our independently recalculated value, taking into account the various class B unit exchanges for Class B Common Stock occurring during the year as well as the adjustments in the TRA payable for each exchange.

/s/ DELOITTE & TOUCHE LLP

Denver, Colorado
February 26, 2020

We have served as the Company's auditor since 2016.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the shareholders and the Board of Directors of Liberty Oilfield Services Inc.

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Liberty Oilfield Services Inc. and subsidiaries (the "Company") as of December 31, 2019, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control — Integrated Framework (2013) issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated and combined financial statements as of and for the year ended December 31, 2019, of the Company and our report dated February 26, 2020, expressed an unqualified opinion on those financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

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

Definition and Limitations of Internal Control over Financial Reporting

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

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

/s/ DELOITTE & TOUCHE LLP

Denver, Colorado
February 26, 2020

LIBERTY OILFIELD SERVICES INC.
Consolidated Balance Sheets
As of December 31, 2019 and 2018
(Dollars in thousands, except share data)

	2019	2018
Assets		
Current assets:		
Cash and cash equivalents	$ 112,690	$ 103,312
Accounts receivable—trade, net allowances for bad debt of $1,053 and $0, respectively	204,413	153,589
Accounts and notes receivable—related party	9,629	15,139
Unbilled revenue	38,868	79,233
Inventories	88,547	60,024
Prepaid and other current assets	34,827	49,924
Total current assets	488,974	461,221
Property and equipment, net	651,703	627,053
Other assets	34,339	28,227
Finance lease right-of-use assets	55,337	—
Operating lease right-of-use assets	53,076	—
Total assets	$ 1,283,429	$ 1,116,501
Liabilities and Equity		
Current liabilities:		
Accounts payable	$ 117,613	$ 80,490
Accrued liabilities:		
Accrued vendor invoices	42,753	67,771
Operational accruals	26,753	36,414
Accrued salaries and benefits	28,805	22,791
Accrued interest and other (including payables to related parties of $1,329 and $0, respectively)	10,643	9,585
Accrued liabilities—related party	—	2,300
Current portion of long-term debt, net of discount of $1,341 and $1,365, respectively	409	385
Current portion of finance lease liabilities	23,646	—
Current portion of operating lease liabilities	15,873	—
Total current liabilities	266,495	219,736
Long-term debt, net of discount of $2,485 and $3,826, respectively, less current portion	105,731	106,139
Deferred tax liability	19,659	32,994
Payable pursuant to tax receivable agreements, including payables to related parties of $23,797 and $2,857, respectively	48,481	16,818
Noncurrent portion of finance lease liabilities	24,884	—
Noncurrent portion of operating lease liabilities	36,687	—
Total liabilities	501,937	375,687
Commitments & contingencies (Note 13)		
Stockholders' equity:		
Preferred Stock, $0.01 par value, 10,000 shares authorized and none issued and outstanding	—	—
Common Stock:		
Class A, $0.01 par value, 400,000,000 shares authorized and 81,885,384 issued and outstanding as of December 31, 2019 and 68,359,871 issued and outstanding as of December 31, 2018	819	684
Class B, $0.01 par value, 400,000,000 shares authorized and 30,638,960 issued and outstanding as of December 31, 2019 and 45,207,372 issued and outstanding as of December 31, 2018	307	452
Additional paid in capital	410,596	312,659
Retained earnings	143,105	119,274
Total stockholders' equity	554,827	433,069
Non-controlling interest	226,665	307,745
Total equity	781,492	740,814
Total liabilities and equity	$ 1,283,429	$ 1,116,501

See Notes to Consolidated and Combined Financial Statements.

LIBERTY OILFIELD SERVICES INC.
Consolidated and Combined Statements of Operations
For the Years Ended December 31, 2019, 2018, and 2017
(In thousands, except per share data)

	2019	2018	2017
Revenue:			
Revenue	$ 1,972,073	$ 2,132,032	$ 1,465,133
Revenue—related parties	18,273	23,104	24,722
Total revenue	1,990,346	2,155,136	1,489,855
Operating costs and expenses:			
Cost of services (exclusive of depreciation and amortization shown separately below)	1,621,180	1,628,753	1,147,008
General and administrative	97,589	99,052	80,089
Depreciation and amortization	165,379	125,110	81,473
Loss (gain) on disposal of assets	2,601	(4,342)	148
Total operating costs and expenses	1,886,749	1,848,573	1,308,718
Operating income	103,597	306,563	181,137
Other (income) and expense:			
Interest income	(983)	(382)	(53)
Interest expense	17,485	17,527	11,928
Interest (income) expense—related party	(1,821)	—	761
Total interest expense	14,681	17,145	12,636
Net income before income taxes	88,916	289,418	168,501
Income tax expense	14,052	40,385	—
Net income	74,864	249,033	168,501
Less: Net income attributable to Predecessor, prior to Corporate Reorganization	—	8,705	168,501
Less: Net income attributable to non-controlling interests	35,861	113,979	—
Net income attributable to Liberty Oilfield Services Inc. stockholders	$ 39,003	$ 126,349	$ —
Net income attributable to Liberty Oilfield Services Inc. stockholders per common share:			
Basic	$ 0.54	$ 1.84	
Diluted	$ 0.53	$ 1.81	
Weighted average common shares outstanding:			
Basic	72,334	68,838	
Diluted	105,256	117,838	

See Notes to Consolidated and Combined Financial Statements.

LIBERTY OILFIELD SERVICES INC.
Consolidated and Combined Statements of Changes in Equity
For the Years Ended December 31, 2019 and 2018
(In thousands, except share and per unit data)

	Shares of Class A Common Stock	Shares of Class B Common Stock	Class A Common Stock, Par Value	Class B Common Stock, Par Value	Additional Paid in Capital	Retained Earnings	Total Stockholders' equity	Non-controlling Interest	Total Equity
Balance - December 31, 2018	68,360	45,207	$ 684	$ 452	$ 312,659	$ 119,274	$ 433,069	$ 307,745	$ 740,814
Exchange of Class B Common Stock for Class A Common Stock	14,568	(14,568)	145	(145)	110,852	—	110,852	(110,852)	—
Offering Costs	—	—	—	—	(1,012)	—	(1,012)	(504)	(1,516)
Effect of exchange on deferred tax asset, net of liability under tax receivable agreements	—	—	—	—	5,930	—	5,930	—	5,930
Deferred tax impact of ownership changes from exchanges and repurchases	—	—	—	—	(11,130)	—	(11,130)	—	(11,130)
$0.20/share of Class A Common Stock dividend	—	—	—	—	—	(15,177)	(15,177)	—	(15,177)
$0.20/unit distributions to non-controlling unitholders	—	—	—	—	—	—	—	(7,747)	(7,747)
Other distributions and advance payments to non-controlling interest unitholders	—	—	—	—	—	—	—	(6)	(6)
Share repurchases	(1,303)	—	(13)	—	(13,017)	—	(13,030)	(4,068)	(17,098)
Stock based compensation expense	—	—		—	6,638	—	6,638	6,954	13,592
Vesting of restricted stock units	268	—	3	—	(302)	—	(299)	(740)	(1,039)
Restricted Stock and RSU Forfeitures	(8)	—	—	—	(22)	5	(17)	22	5
Net income	—	—	—	—	—	39,003	39,003	35,861	74,864
Balance - December 31, 2019	81,885	30,639	$ 819	$ 307	$ 410,596	$ 143,105	$ 554,827	$ 226,665	$ 781,492

	Members' Equity	Shares of Class A Common Stock	Shares of Class B Common Stock	Class A Common Stock, Par Value	Class B Common Stock, Par Value	Additional Paid in Capital	Retained Earnings	Total Stockholders' equity	Non-controlling Interest	Total Equity
Balance—December 31, 2017	$392,766	—	—	$ —	$ —	$ —	$ —	$ —	$ —	$392,766
Return on redeemable common units	(149)	—	—	—	—	—	—	—	—	(149)
Net income prior to Corporate Reorganization	8,705	—	—	—	—	—	—	—	—	8,705
Balance prior to Corporate Reorganization	$401,322	—	—	$ —	$ —	$ —	$ —	$ —	$ —	$401,322
Corporate Reorganization										
Exchange of Liberty LLC Units for Class A Common Stock and Class B Common Stock and extinguishment of redeemable common units	(401,322)	55,986	48,207	560	482	444,824	—	445,866	—	44,544
Net deferred tax liability due to Corporate Reorganization	—	—	—	—	—	(29,287)	—	(29,287)	—	(29,287)
Initial Public Offering										
Issuance of Class A Common Stock, net of underwriter discount and offering costs	—	14,340	—	143	—	219,847	—	219,990	—	219,990
Redemption of Legacy Ownership, net of underwriter discount	—	(1,609)	—	(16)	—	(25,881)	—	(25,897)	—	(25,897)
Issuance of restricted stock	—	1,259	—	13	—	(13)	—	—	—	—
Liability due to tax receivable agreements	—	—	—	—	—	(2,291)	—	(2,291)	—	(2,291)
Initial allocation of non-controlling interest of Liberty LLC effective on the date of the IPO	—	—	—	—	—	(261,048)	—	(261,048)	261,048	—
Results Subsequent to Initial Public Offering										
Distributions and advances paid to non-controlling interest unitholders	—	—	—	—	—	—	—	—	(21,288)	(21,288)
Exchange of Class B Common Stock for Class A Common Stock	—	3,000	(3,000)	30	(30)	20,534	—	20,534	(20,534)	—
Effect of exchange on deferred tax asset, net of liability under tax receivable agreements	—	—	—	—	—	2,592	—	2,592	—	2,592
Restricted stock forfeited	—	(22)	—	—	—	—	—	—	—	—
Stock based compensation expense	—	—	—	—	—	5,450	—	5,450	—	5,450
Regular cash dividends declared and distributions paid	—	—	—	—	—	—	(7,075)	(7,075)	(4,671)	(11,746)
Share repurchases	—	(4,594)	—	(46)	—	(62,068)	—	(62,114)	(20,789)	(82,903)
Net income subsequent to Corporate Reorganization and IPO	—	—	—	—	—	—	126,349	126,349	113,979	240,328
Balance—December 31, 2018	$ —	68,360	45,207	$ 684	$ 452	$312,659	$119,274	$ 433,069	$ 307,745	$740,814

See Notes to Consolidated and Combined Financial Statements.

LIBERTY OILFIELD SERVICES INC.
Consolidated and Combined Statements of Cash Flows
For the Years Ended December 31, 2019, 2018, and 2017
(Dollars in thousands)

	2019	2018	2017
Cash flows from operating activities:			
Net income	$ 74,864	$ 249,033	$ 168,501
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	165,379	125,110	81,473
Loss (gain) on disposal of assets	2,601	(4,342)	148
Gain on tax receivable agreements	(122)	—	—
Amortization of debt issuance costs	2,205	4,031	2,311
Inventory write down	1,953	3,389	259
Non-cash lease expense	3,192	—	—
Stock based compensation expense	13,592	5,450	—
Deferred income tax expense	23,408	20,488	—
Bad debt provision	1,053	—	—
Changes in operating assets and liabilities:			
Accounts receivable and unbilled revenue	(11,512)	23,074	(133,689)
Accounts receivable and unbilled revenue—related party	5,510	(11,096)	3,460
Inventories	(30,476)	(4,610)	(27,639)
Other assets	(6,464)	(32,771)	(12,611)
Accounts payable and accrued liabilities	22,386	(26,798)	111,352
Accounts payable and accrued liabilities—related party	(1,000)	300	1,544
Payment of operating lease liability	(5,469)	—	—
Net cash provided by operating activities	261,100	351,258	195,109
Cash flows from investing activities:			
Capital expenditures	(195,173)	(258,835)	(311,794)
Proceeds from disposal of assets	826	3,343	1,751
Net cash used in investing activities	(194,347)	(255,492)	(310,043)
Cash flows from financing activities:			
Proceeds from issuance of Class A Common Stock, net of underwriter discount	—	230,174	—
Redemption of LLC Units from Legacy Owners	—	(25,897)	—
Proceeds from borrowings on term loan	—	—	171,500
Repayments of borrowings on term loan	(1,750)	(62,847)	(57,438)
Proceeds from borrowings on line-of-credit	—	—	140,559
Repayments of borrowings on line-of-credit	—	(30,000)	(158,559)
Proceeds from Liberty Oilfield Services Holdings LLC	—	2,115	—
Payments on finance lease and capital lease obligations	(12,143)	—	(119)
Class A Common Stock dividends	(14,776)	(6,907)	—
Per unit distributions to non-controlling interest unitholders	(7,747)	(4,671)	—
Other distributions and advance payments to non-controlling interest unitholders	(6)	(21,288)	—
Tax withholding on restricted stock unit vesting	(1,039)	—	—
Share repurchases	(18,398)	(82,903)	—
Proceeds from related party bridge loans	—	—	60,000
Payments of debt issuance costs	—	(315)	(9,036)
Proceeds from issuance of redeemable common units	—	—	39,794
Payments for redemption of redeemable common units	—	—	(62,739)
Payment of equity offering costs	(1,516)	(6,236)	(4,191)
Net cash (used in) provided by financing activities	(57,375)	(8,775)	119,771
Net increase in cash and cash equivalents	9,378	86,991	4,837
Cash and cash equivalents—beginning of period	103,312	16,321	11,484
Cash and cash equivalents—end of period	$ 112,690	$ 103,312	$ 16,321

Supplemental disclosure of cash flow information:			
Cash paid for income taxes	$ 1,042	$ 27,263	$ —
Cash paid for interest	$ 12,642	$ 13,957	$ 9,766
Non-cash investing and financing activities:			
Capital expenditures included in accounts payable and accrued liabilities	$ 32,143	$ 45,703	$ 18,687
Related party bridge loans exchanged for Redeemable Class 2 Common Units	$ —	$ —	$ 60,679

See Notes to Consolidated and Combined Financial Statements.

Note 1—Organization and Basis of Presentation

Organization

Liberty Oilfield Services Inc. (the "Company") was incorporated as a Delaware corporation on December 21, 2016, to become a holding corporation for Liberty Oilfield Services New HoldCo LLC ("Liberty LLC") and its subsidiaries upon completion of a corporate reorganization (as detailed below, the "Corporate Reorganization") and planned initial public offering of the Company ("IPO"). The Company has no material assets other than its ownership in Liberty LLC.

Prior to the Corporate Reorganization, Liberty Oilfield Services Holdings LLC ("Liberty Holdings") wholly owned Liberty Oilfield Services LLC ("LOS") and LOS Acquisition CO I LLC ("ACQI" and, together with LOS, the "Predecessor"), which includes the assets and liabilities of LOS Odessa RE Investments, LLC ("Odessa") and LOS Cibolo RE Investments, LLC ("Cibolo"). Following the Corporate Reorganization, Liberty LLC wholly owns the Predecessor. Effective March 22, 2018, the assets of ACQI were contributed into LOS and ACQI was dissolved.

The Company, together with its subsidiaries, is a multi-basin provider of hydraulic fracturing services and goods, with a focus on deploying the latest technologies in the technically demanding oil and gas reservoirs in which it operates, principally in North Dakota, Colorado, Wyoming and Texas.

Corporate Reorganization

In connection with the IPO, the Company completed the Corporate Reorganization, including the following series of transactions:

- Liberty Holdings contributed all of its assets to Liberty LLC in exchange for Liberty LLC Units (as defined below);
- Liberty Holdings liquidated and distributed to its then-existing owners (the "Legacy Owners") Liberty LLC Units pursuant to the terms of the limited liability company agreement of Liberty Holdings and the Master Reorganization Agreement dated as of January 11, 2018, by and among the Company, Liberty Holdings, Liberty LLC, and the other parties named therein (the "Master Reorganization Agreement");
- Certain of the Legacy Owners directly or indirectly contributed all or a portion of their Liberty LLC Units to the Company in exchange for 55,685,027 shares of our Class A common stock, par value $0.01 per share (the "Class A Common Stock"), and 1,258,514 restricted shares of Class A Common Stock. Subsequent to the initial exchange, 1,609,122 shares of Class A Common Stock were redeemed for an aggregate price of $25.9 million, upon the exercise of the underwriters' overallotment option;
- the Company issued, at par, the Legacy Owners that continued to own Liberty LLC Units (the "Liberty Unit Holders") an aggregate amount of 48,207,372 shares of our Class B common stock, par value $0.01 per share (the "Class B Common Stock"); and
- the Company contributed the net proceeds it received from the IPO to Liberty LLC in exchange for additional Liberty LLC Units such that the Company held a total number of Liberty LLC Units equal to the number of shares of Class A Common Stock outstanding immediately following the IPO.

Initial Public Offering

On January 17, 2018, the Company completed its IPO of 14,640,755 shares of Class A Common Stock at a public offering price of $17.00 per share, of which 14,340,214 shares were offered by the Company and 300,541 were offered by the selling shareholder. The Company received $220.0 million net proceeds from the IPO, after deducting approximately $13.4 million in underwriting discounts and commissions and $10.4 million in other offering costs. The Company did not receive any proceeds from the sale of the shares of Class A Common Stock by the selling shareholder. The Company used $25.9 million of net proceeds to redeem ownership interests in Liberty LLC from the Legacy Owners. The Company contributed the remaining net proceeds to Liberty LLC in exchange for units in Liberty LLC (the "Liberty LLC Units"). Liberty LLC used a portion of these net proceeds (i) to repay outstanding borrowings and accrued interest under the Predecessor's ABL Facility (as defined herein), totaling approximately $30.1 million, (ii) to repay 35% of the Predecessor's outstanding borrowings, accrued interest and prepayment premium under the Term Loan Facility (as defined herein), totaling approximately $62.5 million and (iii) for general corporate purposes, including repayment of additional indebtedness and funding capital expenditures. As of December 31, 2019 and 2018, the Company owned 72.8%, and 60.2% of Liberty LLC, respectively.

Basis of Presentation

The accompanying consolidated and combined financial statements were prepared using generally accepted accounting principles in the United States of America ("GAAP") and the instructions to Form 10-K, Regulation S-X and the rules and regulations of the Securities and Exchange Commission.

The accompanying consolidated and combined financial statements and related notes present the consolidated financial position, results of operations, cash flows, and equity of the Company as of and for the years ended December 31, 2019 and 2018, and the combined results of operations and cash flows of the Predecessor for the year ended December 31, 2017.

All intercompany amounts have been eliminated in the presentation of the consolidated financial statements of the Company and the combined financial statements of the Predecessor. Comprehensive income is not reported due to the absence of items of other comprehensive income or loss during the periods presented. The consolidated and combined financial statements include financial data at historical cost as the contribution of assets is considered to be a reorganization of entities under common control. The consolidated and combined financial statements may not be indicative of the actual level of assets, liabilities and costs that would have been incurred by the Predecessor if it had operated as an independent, publicly-traded company during the periods prior to the IPO or of the costs expected to be incurred in the future.

The consolidated and combined financial statements for periods prior to January 17, 2018, reflect the historical results of the Predecessor. The consolidated financial statements include the amounts of the Company and all majority owned subsidiaries where the Company has the ability to exercise control.

The Company's operations are organized into a single reportable segment, which consists of hydraulic fracturing services and goods.

Note 2—Significant Accounting Policies

Use of Estimates

The preparation of consolidated and combined financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the consolidated and combined financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

The consolidated and combined financial statements include certain amounts that are based on management's best estimates and judgments. The most significant estimates relate to the collectibility of accounts receivable and estimates of allowance for doubtful accounts, the useful lives and salvage values of long-lived assets, future cash flows associated with long-lived assets, net realizable value of inventory, and equity unit valuation. These estimates may be adjusted as more current information becomes available.

Cash and Cash Equivalents

The Company considers all highly liquid instruments purchased with an original maturity of three months or less to be cash equivalents. The Company continually monitors its positions with, and the credit quality of, the financial institutions with which it has banking relationships. As of the balance sheet date, and periodically throughout the year, the Company has maintained balances in various operating accounts in excess of federally insured limits.

Accounts Receivable

The Company analyzes the need for an allowance for doubtful accounts for estimated losses related to potentially uncollectible accounts receivable on a case-by-case basis throughout the year. In establishing the required allowance, management considers historical losses adjusted to take into account current market conditions and the customers' financial condition, the amount of receivables, the current receivables aging and current payment patterns. The Company reserves amounts based on specific identification. Account balances are charged to the allowance after all means of collection have been exhausted and the potential for recovery is considered remote. It is reasonably possible that the Company's estimate of the allowance for doubtful accounts will change and that losses ultimately incurred could differ materially from the amounts estimated in determining the allowance.

Inventories

Inventories consist of raw materials used in the hydraulic fracturing process, such as proppants, chemicals, and field service equipment maintenance parts and are stated at the lower of cost, determined using the weighted average cost method, or net realizable value. Inventories are charged to cost of services as used when providing hydraulic fracturing services. Net

realizable value is the estimated selling prices in the ordinary course of business, less reasonably predictable cost of completion, disposal, and transportation.

Property and Equipment

Property and equipment are stated at cost. Depreciation and amortization expense is recognized on property and equipment, excluding land, utilizing the straight-line method over the estimated useful lives, ranging from two to 30 years. The Company estimates salvage values that it does not depreciate.

Construction in-progress, a component of property and equipment, represents long-lived assets being developed by the Company. These assets are not subject to depreciation until they are completed and ready for their intended use, at which point the Company reclassifies them to field services equipment or vehicles, as appropriate.

The Company assesses its long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability is assessed using undiscounted future net cash flows of assets grouped at the lowest level for which there are identifiable cash flows independent of the cash flows of other groups of assets. The Company determined the lowest level of identifiable cash flows to be at the asset group, which is the aggregate of the Company's hydraulic fracturing fleets that are in service. A long-lived asset is not recoverable if its carrying amount exceeds the sum of estimated undiscounted cash flows expected to result from the use and eventual disposition. When alternative courses of action to recover the carrying amount of the asset group are under consideration, estimates of future undiscounted cash flows take into account possible outcomes and probabilities of their occurrence. If the carrying amount of the asset is not recoverable, an impairment loss is recognized in an amount by which its carrying amount exceeds its estimated fair value, such that its carrying amount is adjusted to its estimated fair value, with an offsetting charge to impairment expense.

The Company measures the fair value of its property and equipment using the discounted cash flow method. The expected future cash flows used for impairment reviews and related fair value calculations are based on judgmental assessments of projected revenue growth, fleet count, utilization, gross margin rates, selling, general and administrative rates, working capital fluctuations, capital expenditures, discount rates and terminal growth rates.

During 2019, 2018 and 2017, the Company did not test its long-lived assets for recoverability as there were no triggering events. No impairment was recognized during the years ended December 31, 2019, 2018 and 2017.

Major Maintenance Activities

The Company incurs maintenance costs on its major equipment. The determination of whether an expenditure should be capitalized or expensed requires management judgment in the application of how the costs incurred benefit future periods, relative to the Company's capitalization policy. Costs that either establish or increase the efficiency, productivity, functionality or life of a fixed asset are capitalized and depreciated over the remaining useful life of the asset.

Leases

On January 1, 2019, the Company adopted Accounting Standards Update ("ASU") No. 2016-02, *Leases* (Accounting Standard Codification ("ASC") Topic 842), as amended by other ASUs issued since February 2016 ("ASU 2016-02" or "ASC Topic 842"), using the modified retrospective transition method applied at the effective date of the standard. By electing this optional transition method, information prior to January 1, 2019 has not been restated and continues to be reported under the accounting standards in effect for the period (ASC Topic 840).

The Company elected the package of practical expedients permitted under the transition guidance within the new standard, including the option to carry forward the historical lease classifications and assessment of initial direct costs. The Company also elected to account for lease and non-lease components as a single component, and to not include leases with an initial term of less than 12 months in the lease assets and liabilities.

The adoption of ASC Topic 842 resulted in the recognition of finance lease right-of-use assets, operating lease right-of-use assets, and lease liabilities for finance and operating leases. As of January 1, 2019, the adoption of the new standard resulted in the recognition of finance lease assets of $57.2 million, including $2.1 million and $2.0 million reclassified from prepaid and other current assets and other assets, respectively, and finance lease liabilities of $53.2 million. Additionally, the Company recorded operating lease assets of $64.0 million, including $1.9 million reclassified from prepaid and other current assets, and operating lease liabilities of $63.6 million, including $1.5 million reclassified from accrued interest and other liabilities as of January 1, 2019. There was no significant impact to the consolidated statements of income, equity or cash flows.

For leases entered into after January 1, 2019, the Company determines if an arrangement is a lease at inception and evaluates identified leases for operating or finance lease treatment. Operating or finance lease right-of-use assets and liabilities are recognized at the commencement date based on the present value of lease payments over the lease term. The Company uses the rate implicit in the lease, when available, or an estimated fully collateralized incremental borrowing rate corresponding with

the lease term and the information available at the commencement date in determining the present value of lease payments. Lease terms may include options to renew, however, the Company typically cannot determine its intent to renew a lease with reasonable certainty at inception.

Deferred Financing Costs

Costs associated with obtaining debt financing are deferred and amortized to interest expense using the effective interest method. In accordance with ASU No. 2015-03 and 2015-15, for all periods the Company has reflected deferred financing costs related to term loan debt as a direct deduction from the carrying amount, and costs associated with line-of-credit arrangements as other assets.

Income Taxes

Following the IPO, the Company is a corporation and is subject to U.S. federal, state and local income tax on its share of Liberty LLC's taxable income. As a result of the IPO and Corporate Reorganization, the Company recorded deferred tax assets and liabilities for the difference between the book value of assets and liabilities for financial reporting purposes and those amounts applicable for income tax purposes.

Deferred income taxes are computed using the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the consolidated financial statements. Deferred tax assets and liabilities are calculated using the enacted tax rates in effect for the year in which the deferred tax asset or liability is expected to reverse. The Company classifies all deferred tax assets and liabilities as non-current.

The Company recognizes the financial statement effects of a tax position when it is more-likely-than-not, based on the technical merits, that the position will be sustained upon examination. A tax position that meets the more-likely-than-not recognition threshold is measured as the largest amount of tax benefit that is greater than 50% likely of being realized upon ultimate settlement with a taxing authority. Previously recognized tax positions are reversed in the first period in which it is no longer more-likely-than-not that the tax position would be sustained upon examination. Income tax related interest and penalties, if applicable, are recorded as a component of the provision for income tax expense.

Tax Receivable Agreements

In connection with the IPO, on January 17, 2018, the Company entered into two Tax Receivable Agreements (the "TRAs") with the R/C Energy IV Direct Partnership, L.P. and the Legacy Owners that continued to own Liberty LLC Units (each such person and any permitted transferee, a "Tax Receivable Agreement Holder" and together, the "Tax Receivable Agreement Holders"). The TRAs generally provide for the payment by the Company of 85% of the net cash savings, if any, in U.S. federal, state, and local income tax and franchise tax (computed using simplifying assumptions to address the impact of state and local taxes) that the Company actually realizes (or is deemed to realize in certain circumstances) in periods after the IPO as a result, as applicable to each Tax Receivable Agreement Holder, of (i) certain increases in tax basis that occur as a result of the Company's acquisition (or deemed acquisition for U.S. federal income tax purposes) of all or a portion of such Tax Receivable Agreement Holder's Liberty LLC Units in connection with the IPO or pursuant to the exercise of the right (the "Redemption Right") or the Company's right (the "Call Right"), (ii) any net operating losses available to the Company as a result of the Corporate Reorganization, and (iii) imputed interest deemed to be paid by the Company as a result of, and additional tax basis arising from, any payments the Company makes under the TRAs.

With respect to obligations the Company expects to incur under the TRAs (except in cases where the Company elects to terminate the TRAs early, the TRAs are terminated early due to certain mergers, asset sales, or other changes of control or the Company has available cash but fails to make payments when due), generally the Company may elect to defer payments due under the TRAs if the Company does not have available cash to satisfy its payment obligations under the TRAs or if its contractual obligations limit its ability to make such payments. Any such deferred payments under the TRAs generally will accrue interest. In certain cases, payments under the TRAs may be accelerated and/or significantly exceed the actual benefits, if any, the Company realizes in respect of the tax attributes subject to the TRAs. The Company accounts for amounts payable under the TRAs in accordance with ASC Topic 450, *Contingencies*.

If the Company experiences a change of control (as defined under the TRAs) or the TRAs otherwise terminate early, the Company's obligations under the TRAs could have a substantial negative impact on its liquidity and could have the effect of delaying, deferring or preventing certain mergers, asset sales, or other forms of business combinations or changes of control.

Share Repurchases

The Company accounts for the purchase price of repurchased Class A Common Stock in excess of par value ($0.01 per share of Class A Common Stock) as a reduction of additional paid-in capital, and will continue to do so until additional paid-in capital is reduced to zero. Thereafter, any excess purchase price will be recorded as a reduction to retained earnings.

Revenue Recognition

Effective January 1, 2018, the Company adopted a comprehensive new revenue recognition standard, ASC Topic 606-*Revenue from Contracts with Customers*. The details of the significant changes to accounting policies resulting from the adoption of the new standard are set out below. The Company adopted the standard using a modified retrospective method; accordingly, the comparative information for the year ended December 31, 2017 has not been adjusted and continues to be reported under the previous revenue standard. The adoption of this standard did not have a material impact to the consolidated financial position, reported revenue, results of operations or cash flows as of and for the year ended December 31, 2018.

Under the new standard, revenue recognition is based on the transfer of control, or the customer's ability to benefit from the services and products in an amount that reflects the consideration expected to be received in exchange for those services and products. In recognizing revenue for services and products, the transaction price is determined from sales orders or contracts with customers. Revenue is recognized at the completion of each fracturing stage, and in most cases the price at the end of each stage is fixed, however, in limited circumstances contracts may contain variable consideration.

Variable consideration typically may relate to discounts, price concessions and incentives. We estimate variable consideration based on the amount of consideration we expect to receive. The Company accrues revenue on an ongoing basis to reflect updated information for variable consideration as performance obligations are met.

The Company also assesses customers' ability and intention to pay, which is based on a variety of factors including historical payment experience and financial condition. Payment terms and conditions vary by contract type, although terms generally include a requirement of payment within 30 to 45 days.

In connection with the adoption of ASC Topic 842, the Company determined that certain of its service revenue contracts contain a lease component. The Company elected to adopt a practical expedient available to lessors, which allows the Company to combine the lease and non-lease components and account for the combined component in accordance with the accounting treatment for the predominant component. Therefore, the Company combines the lease and service component for certain of the Company's service contracts and continues to account for the combined component under ASC Topic 606, *Revenue from Contracts with Customers.*

Deferred Revenue

From time to time, the Company may require partial payment in advance from new customers to secure credit or from existing customers in order to secure additional hydraulic fracturing services. Initially, such payments are recorded in the accompanying consolidated and combined financial statements as deferred revenue, and upon performance of the agreed services, the Company recognizes revenue consistent with its revenue recognition policy described above. As of December 31, 2019 and December 31, 2018, the Company had no amounts recorded as deferred revenue. During the year ended December 31, 2018, the Company recognized to revenue $9.2 million of customer prepayments initially recorded as deferred revenue.

Fleet Start-up Costs

The Company incurs start-up costs to commission a new fleet or district. These costs include hiring and training of personnel, and acquisition of consumable parts and tools. Start-up costs are expensed as incurred, and are reflected in general and administrative expense in the consolidated and combined statement of operations. Start-up costs for the years ended December 31, 2019, 2018 and 2017, were $4.5 million, $10.1 million and $14.0 million, respectively. Start-up costs incurred during the years ended December 31, 2019, 2018 and 2017 related to the establishment of one, three, and nine new fleets, respectively.

The terms and conditions of the Credit Facilities between the Company and its lenders provides for the add-back of costs or expenses incurred in connection with the acquisition, deployment and opening of any new hydraulic fracturing fleet or district in the computation of certain financial covenants. (See Note 6—Debt).

Reclassifications

Certain amounts in the prior period financial statements have been reclassified to conform to the presentation of the current period financial statements. These reclassifications had no effect on the previously reported net income.

Recently Adopted Accounting Standards

On January 1, 2019, the Company adopted ASC Topic 842 using the modified retrospective transition method applied at the effective date of the standard. By electing the modified retrospective transition method, information prior to January 1, 2019 has not been restated and continues to be reported under the accounting standards in effect for the period (Topic 840). The adoption of this standard impacted the consolidated statements of financial position by requiring the recognition of a right-of-use asset and a lease liability; however, the adoption of this standard did not have a significant impact on the consolidated statements of operations or cash flows. See Significant Accounting Policies - Leases for additional information regarding this accounting policy.

Recently Issued Accounting Standards

In June 2016, the Financial Accounting Standards Board ("FASB") issued ASU 2016-13, "*Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*," which is effective for fiscal years and interim periods within fiscal years beginning after December 15, 2019, with a modified-retrospective approach to be used for implementation. ASU 2016-13 changes the impairment model for most financial assets and certain other instruments. Specifically, this new guidance requires using a forward looking, expected loss model for trade and other receivables, held-to-maturity debt securities, loans, and other instruments. This will replace the currently used model and may result in an earlier recognition of allowance for losses. The Company plans to adopt the standard effective January 1, 2020. Although the Company is continuing to evaluate the impact the adoption will have, the Company currently does not expect the adoption to have a material impact on its consolidated financial statements.

Note 3—Inventories

Inventories consist of the following:

	December 31,	
($ in thousands)	**2019**	**2018**
Proppants	$ 14,013	$ 22,038
Chemicals	10,076	10,781
Maintenance parts	64,458	27,205
	$ 88,547	$ 60,024

During the year ended December 31, 2019 and December 31, 2018, the lower of cost or net realizable value analysis resulted in the Company recording a write-down to inventory carrying values of $2.0 million and $3.4 million, respectively, included as a component in cost of services in the consolidated statements of income for the years ended December 31, 2019 and December 31, 2018.

Note 4—Property and Equipment

Property and equipment consist of the following:

($ in thousands)	Estimated useful lives (in years)	December 31, 2019	December 31, 2018
Land	N/A	$ 5,400	$ 5,400
Field services equipment	2-7	978,418	778,423
Vehicles	4-7	60,290	59,807
Buildings and facilities	5-30	29,930	27,795
Office equipment and furniture	2-7	6,623	6,200
		1,080,661	877,625
Less accumulated depreciation and amortization		(455,687)	(307,277)
		624,974	570,348
Construction in-progress	N/A	26,729	56,705
		$ 651,703	$ 627,053

During the years ended December 31, 2019, 2018 and 2017, the Company recognized depreciation expense of $153.6 million, $124.9 million and $81.5 million respectively.

In November 2018, one of the Company's hydraulic frac fleets was involved in an accidental fire, which resulted in damage to a portion of the equipment in that fleet. The Company accrued $15.7 million of insurance proceeds for replacement cost of the damaged equipment, which is presented in prepaid and other current assets on the accompanying consolidated balance sheets as of December 31, 2018. The accrued insurance proceeds offset the $4.3 million loss recognized on the damaged equipment. The resulting net gain of $11.5 million was recognized in (gain) loss on disposal of assets for the year ended December 31, 2018.

Note 5—Leases

The Company has operating and finance leases primarily for vehicles, equipment, railcars, office space, and facilities. The terms and conditions for these leases vary by the type of underlying asset.

Certain leases include variable lease payments for items such as property taxes, insurance, maintenance, and other operating expenses associated with leased assets. Payments that vary based on an index or rate are included in the measurement of lease assets and liabilities at the rate as of the commencement date. All other variable lease payments are excluded from the measurement of lease assets and liabilities, and are recognized in the period in which the obligation for those payments is incurred.

The components of lease expense as of December 31, 2019 were as follows:

($ in thousands)	December 31, 2019
Finance lease cost:	
Amortization of right-of-use assets	$ 10,256
Interest on lease liabilities	2,652
Operating lease cost	20,731
Variable lease cost	3,118
Total lease cost	$ 36,757

In accordance with prior guidance, ASC 840, *Leases*, total rent expense was $40.9 million and $20.8 million for the years ended December, 31, 2018 and 2017, respectively.

Supplemental cash flow and other information related to leases as of December 31, 2019 were as follows:

($ in thousands)		December 31, 2019
Cash paid for amounts included in measurement of liabilities:		
Operating leases	$	20,849
Finance leases		14,795
Right-of-use assets upon adoption of ASC 842 and obtained in exchange for new lease liabilities:		
Operating leases		70,611
Finance leases		65,333

Lease terms and discount rates as of December 31, 2019 were as follows:

	December 31, 2019
Weighted-average remaining lease term:	
Operating leases	6.4 years
Finance leases	1.3 years
Weighted-average discount rate:	
Operating leases	5.4 %
Finance leases	5.2 %

Future minimum lease commitments as of December 31, 2019 are as follows:

($ in thousands)		Finance		Operating
2020	$	26,407	$	18,262
2021		20,626		13,696
2022		4,135		7,249
2023		—		4,365
2024		—		3,646
Thereafter		—		16,017
Total lease payments		51,168		63,235
Less imputed interest		(2,638)		(10,675)
Total	$	48,530	$	52,560

The Company's vehicle leases typically include a residual value guarantee. For the Company's vehicle leases classified as operating leases, the total residual value guaranteed as of December 31, 2019 is $2.9 million; the payment is not probable and therefore has not been included in the measurement of the lease liability and right-of-use asset. For vehicle leases that are classified as finance leases, the Company includes the residual value guarantee, estimated in the lease agreement, in the financing lease liability.

In accordance with the prior guidance, ASC 840, *Leases*, the future minimum lease payments as determined prior to the adoption of ASC 842, *Leases*, for the fiscal year ended December 31, 2018, were as follows:

($ in thousands)		
2019	$	42,717
2020		48,685
2021		32,390
2022		6,093
2023		4,303
Thereafter		19,742
	$	153,930

Note 6—Debt

Debt consists of the following:

	December 31,	
	2019	2018
Term Loan Outstanding	$ 109,966	$ 111,715
Revolving Line of Credit	—	—
Deferred financing costs and original issue discount	(3,826)	(5,191)
Total debt, net of deferred financing costs and original issue discount	$ 106,140	$ 106,524
Current portion of long-term debt, net of discount	$ 409	$ 385
Long-term debt, net of discount and current portion	105,731	106,139
	$ 106,140	$ 106,524

On September 19, 2017, the Company entered into two new credit agreements for a revolving line of credit up to $250.0 million (the "ABL Facility") and a $175.0 million term loan (the "Term Loan Facility", and together with the ABL Facility the "Credit Facilities").

ABL Facility

Under the terms of the ABL Facility, up to $250.0 million may be borrowed, subject to certain borrowing base limitations based on a percentage of eligible accounts receivable and inventory. As of December 31, 2019, the borrowing base was calculated to be $171.1 million, and the Company had no borrowings outstanding, except for a letter of credit in the amount of $0.3 million, with $170.8 million of remaining availability. Borrowings under the ABL Facility bear interest at LIBOR or a base rate, plus an applicable LIBOR margin of 1.5% to 2.0% or base rate margin of 0.5% to 1.0%, as defined in the ABL Facility credit agreement. The unused commitment is subject to an unused commitment fee of 0.375% to 0.5%. Interest and fees are payable in arrears at the end of each month, or, in the case of LIBOR loans, at the end of each interest period. The ABL Facility matures on the earlier of (i) September 19, 2022, and (ii) to the extent the debt under the Term Loan Facility remains outstanding, 90 days prior to the final maturity of the Term Loan Facility, which matures on September 19, 2022. Borrowings under the ABL Facility are collateralized by accounts receivable and inventory, and further secured by the Company, Liberty LLC and R/C IV Non-U.S. LOS Corp., a Delaware corporation and a subsidiary of the Company, as parent guarantors.

Term Loan Facility

The Term Loan Facility provides for a $175.0 million term loan, of which $110.0 million remained outstanding as of December 31, 2019. Amounts outstanding bear interest at LIBOR or a base rate, plus an applicable margin of 7.625% or 6.625%, respectively, and the weighted average rate on borrowings was 9.4% as of December 31, 2019. The Company is required to make quarterly principal payments of 1% per annum of the outstanding principal balance, commencing on December 31, 2017, with final payment due at maturity on September 19, 2022. The Term Loan Facility is collateralized by the fixed assets of LOS and its subsidiaries, and is further secured by the Company, Liberty LLC and R/C IV Non-U.S. LOS Corp., a Delaware corporation and a subsidiary of the Company, as parent guarantors.

The Credit Facilities include certain non-financial covenants, including but not limited to restrictions on incurring additional debt and certain distributions. Moreover, the ability of the Company to incur additional debt and to make distributions is dependent on maintaining a maximum leverage ratio. The Term Loan Facility requires mandatory prepayments upon certain dispositions of property or issuance of other indebtedness, as defined, and annually a percentage of excess cash flow (25% to 50%, depending on leverage ratio, of consolidated net income less capital expenditures and other permitted payments, commencing with the year ending December 31, 2018). Certain mandatory prepayments and optional prepayments are subject to a prepayment premium of 3% of the prepaid principal declining annually to 1% during the first three years of the term of the Term Loan Facility.

The Credit Facilities are not subject to financial covenants unless liquidity, as defined in the respective credit agreements, drops below a specified level. Under the ABL Facility, the Company is required to maintain a minimum fixed charge coverage ratio, as defined in the credit agreement governing the ABL Facility, of 1.0 to 1.0 for each period if excess availability is less than 10% of the borrowing base or $12.5 million, whichever is greater. Under the Term Loan Facility, the Company is required to maintain a minimum fixed charge coverage ratio, as defined, of 1.2 to 1.0 for each trailing twelve-month report if the Company's liquidity, as defined, is less than $25.0 million for at least five consecutive business days.

The Company was in compliance with these covenants as of December 31, 2019.

Maturities of debt are as follows:

($ in thousands)		
Years Ending December 31,		
2020	$	1,750
2021		1,750
2022		106,466
2023		—
2024		—
	$	109,966

Note 7—Fair Value Measurements and Financial Instruments

The fair values of the Company’s assets and liabilities represent the amounts that would be received to sell those assets or that would be paid to transfer those liabilities in an orderly transaction at the reporting date. These fair value measurements maximize the use of observable inputs. However, in situations where there is little, if any, market activity for the asset or liability at the measurement date, the fair value measurement reflects the Company’s own judgments about the assumptions that market participants would use in pricing the asset or liability. The Company discloses the fair values of its assets and liabilities according to the quality of valuation inputs under the following hierarchy:

- Level 1 Inputs: Quoted prices (unadjusted) in an active market for identical assets or liabilities.
- Level 2 Inputs: Inputs other than quoted prices that are directly or indirectly observable.
- Level 3 Inputs: Unobservable inputs that are significant to the fair value of assets or liabilities.

The classification of an asset or liability is based on the lowest level of input significant to its fair value. Those that are initially classified as Level 3 are subsequently reported as Level 2 when the fair value derived from unobservable inputs is inconsequential to the overall fair value, or if corroborated market data becomes available. Assets and liabilities that are initially reported as Level 2 are subsequently reported as Level 3 if corroborated market data is no longer available. Transfers occur at the end of the reporting period. There were no transfers into or out of Levels 1, 2 and 3 during the years ended December 31, 2019 and 2018.

The Company’s financial instruments consist of cash and cash equivalents, accounts receivable, notes receivable, accounts payable, accrued liabilities, long-term debt, and finance and operating lease obligations. These financial instruments do not require disclosure by level. The carrying values of all the Company’s financial instruments included in the accompanying balance sheets approximated or equaled their fair values at December 31, 2019 and 2018.

- The carrying values of cash and cash equivalents, accounts receivable and accounts payable (including accrued liabilities) approximated fair value at December 31, 2019 and 2018, due to their short-term nature.
- The carrying value of amounts outstanding under long-term debt agreements with variable rates approximated fair value at December 31, 2019 and 2018, as the effective interest rates approximated market rates.

Nonrecurring Measurements

Certain assets are measured at fair value on a nonrecurring basis. These assets are not measured at fair value on an ongoing basis but are subject to fair value adjustments in certain circumstances. These assets consist of notes receivable—related party from the Affiliate, as defined and described in Note 12—Related Party Transactions. The note was initially recorded for the trade receivables, created in the normal course of business, due from the Affiliate as of the Agreement Date, as defined in Note 12—Related Party Transactions. There were no identified events or changes in circumstances that had a significant adverse effect on the fair value of the notes receivable. These notes are classified as Level 3 in the fair value hierarchy as the inputs to the determination of fair value are based upon unobservable inputs. As of December 31, 2019 and December 31, 2018, notes receivable—related party from the Affiliate totaled $2.5 million and $0, respectively.

Recurring Measurements

The fair values of the Company’s cash equivalents measured on a recurring basis pursuant to ASC 820-10 *Fair Value Measurements and Disclosures* are carried at estimated fair value. Cash equivalents consist of money market accounts which

the Company has classified as Level 1 given the active market for these accounts. As of December 31, 2019 and 2018, the Company had cash equivalents, measured at fair value, of $86.9 million and $0, respectively.

Nonfinancial assets

The Company estimates fair value to perform impairment tests as required on long-lived assets. The inputs used to determine such fair value are primarily based upon internally developed cash flow models and would generally be classified within Level 3 in the event that such assets were required to be measured and recorded at fair value within the consolidated and combined financial statements. There were no such measurements required as of December 31, 2019 and 2018.

Credit Risk

The Company's financial instruments exposed to concentrations of credit risk consist primarily of cash and cash equivalents, and trade receivables.

The Company's cash and cash equivalents balance on deposit with financial institutions total $112.7 million and $103.3 million as of December 31, 2019 and 2018, respectively, which, as of certain dates, exceeded FDIC insured limits. The Company regularly monitors these institutions' financial condition.

The majority of the Company's customers have payment terms of 45 days or less. As of December 31, 2019 and 2018, customer A accounted for 12% and customers A and B accounted for 28% of total accounts receivable and unbilled revenue, respectively. The Company mitigates the associated credit risk by performing credit evaluations and monitoring the payment patterns of its customers. For the year ended December 31, 2019, no customers accounted for more than 10% of total revenue. For the years ended December 31, 2018 and 2017, customer B accounted for 11% and customers C and D accounted for 36% of total revenue, respectively.

As of December 31, 2019, the Company recorded a provision for doubtful accounts related to one specific entity engaged in the business of oil and gas exploration and production that has filed for bankruptcy. As of December 31, 2018, the Company had no provision for doubtful accounts, and the balance as of December 31, 2017 represented the bankruptcy of one specific entity.

($ in thousands)	2019	2018	2017
Allowance for doubtful accounts, beginning of year	$ —	$ —	$ 497
Bad debt expense:			
Provision for doubtful accounts	1,053	—	—
Write off of uncollectible accounts against reserve	—	—	(497)
Allowance for doubtful accounts, end of year	$ 1,053	$ —	$ —

Note 8—Equity

Preferred Stock

As of December 31, 2019 and 2018 the Company had 10,000 shares of preferred stock authorized, par value $0.01, with none issued and outstanding. If issued, each class or series of preferred stock will cover the number of shares and will have the powers, preferences, rights, qualifications, limitations and restrictions determined by the Company's board of directors, which may include, among others, dividend rights, liquidation preferences, voting rights, conversion rights, preemptive rights and redemption rights. Except as provided by law or in a preferred stock designation, the holders of preferred stock will not be entitled to vote at or receive notice of any meeting of shareholders.

Class A Common Stock

The Company had a total of 81,885,384 shares of Class A Common Stock outstanding as of December 31, 2019, which includes 268,205 shares of restricted stock. As of December 31, 2018, the Company had a total of 68,359,871 shares of Class A Common Stock outstanding, which included 634,653 shares of restricted stock. Holders of Class A Common Stock are entitled to one vote per share on all matters to be voted upon by the stockholders and are entitled to ratably receive dividends when and if declared by the Company's board of directors.

Class B Common Stock

The Company had a total of 30,638,960 and 45,207,372 shares of Class B Common Stock outstanding as of December 31, 2019 and 2018, respectively. Holders of the Class B Common Stock are entitled to one vote per share on all matters to be voted upon by stockholders. Holders of Class A Common Stock and Class B Common Stock vote together as a single class on all matters presented to the Company's stockholders for their vote or approval, except with respect to amendment of certain provisions of the Company's certificate of incorporation that would alter or change the powers, preferences or special rights of the Class B Common Stock so as to affect them adversely, which amendments must be by a majority of the votes entitled to be cast by the holders of the shares affected by the amendment, voting as a separate class, or as otherwise required by applicable law.

Holders of Class B Common Stock do not have any right to receive dividends, unless the dividend consists of shares of Class B Common Stock or of rights, options, warrants or other securities convertible or exercisable into or exchangeable for shares of Class B Common Stock paid proportionally with respect to each outstanding share of Class B Common Stock and a dividend consisting of shares of Class A Common Stock or of rights, options, warrants or other securities convertible or exercisable into or exchangeable for shares of Class A Common Stock on the same terms is simultaneously paid to the holders of Class A Common Stock. Holders of Class B Common Stock do not have any right to receive a distribution upon liquidation or winding up of the Company.

Under the Second Amended and Restated Limited Liability Company Agreement of Liberty LLC (the "Liberty LLC Agreement"), each Liberty Unit Holder has, subject to certain limitations, the Redemption Right, which allows it to cause Liberty LLC to acquire all or a portion of its Liberty LLC Units, for, at Liberty LLC's election, (i) shares of Class A Common Stock at a redemption ratio of one share of Class A Common Stock for each Liberty LLC Unit redeemed, subject to conversion rate adjustments for stock splits, stock dividends and reclassification and other similar transactions or (ii) an equivalent amount of cash. Alternatively, upon the exercise of the Redemption Right, the Company (instead of Liberty LLC) will have the Call Right, which allows it to, for administrative convenience, acquire each tendered Liberty LLC Unit directly from the redeeming Liberty Unit Holder for, at its election, (x) one share of Class A Common Stock or (y) an equivalent amount of cash. In addition, upon a change of control of the Company, the Company has the right to require each holder of Liberty LLC Units (other than the Company) to exercise its Redemption Right with respect to some or all of such unitholder's Liberty LLC Units. In connection with any redemption of Liberty LLC Units pursuant to the Redemption Right or the Call Right, the corresponding number of shares of Class B Common Stock will be canceled.

LLC Interest Issuance

Prior to the IPO and Corporate Reorganization, as described in Note 1, Liberty Holdings issued membership interests to investors in exchange for cash consideration. Total member contributions as of December 31, 2017 were $275.7 million, net of commitment and issuance fees. On January 17, 2018, in connection with the Corporate Reorganization, these membership interests were exchanged for Liberty LLC Units. See Note 1 for additional information regarding the Corporate Reorganization.

Unit-Based Compensation

Prior to the IPO and Corporate Reorganization, Liberty Holdings issued Class B units of Liberty Holdings ("Legacy Units") to certain eligible employees of the Company. The Legacy Units were non-voting, except with respect to such matters that units are entitled to vote as a matter of law. In such cases, each Legacy Unit entitled the holder to $1/1000^{th}$ of one vote. Certain Legacy Units granted to eligible participants had an assigned benchmark value and were subject to vesting in accordance with the terms of each award letter. Upon termination of the holder's employment for any reason, Liberty Holdings had the right, but not the obligation, to repurchase from the recipient those vested Legacy Units at fair value.

The Company recognizes compensation expense for equity-based Legacy Units issued to employees based on the grant-date fair value of the awards and each award's requisite service period. With the assistance from a third-party valuation expert, the Predecessor determined that the Legacy Units issued to employees were deemed to have a de minimis grant-date fair value based on their assigned benchmark values. In connection with the Corporate Reorganization, the unvested Legacy Units were exchanged for 1,258,514 shares of restricted stock with the same terms and requisite vesting conditions as the Legacy Units.

Restricted Stock Awards

Restricted stock awards are awards of Class A Common Stock that are subject to restrictions on transfer and to a risk of forfeitures if the award recipient is no longer an employee or director of the Company for any reason prior to the lapse of the restrictions.

The following table summarizes the Company’s unvested restricted stock activity for the year ended December 31, 2019:

	Number of Shares	Grant Date Fair Value per Share[(1)]
Restricted Shares as of December 31, 2018	634,653	—
Vested	(366,448)	—
Forfeited	—	—
Outstanding at December 31, 2019	268,205	$ —

(1) As discussed above, the shares of restricted stock retain the grant date fair value of the Legacy Units.

Long Term Incentive Plan

On January 11, 2018, the Company adopted the Long Term Incentive Plan (“LTIP”) to incentivize employees, officers, directors and other service providers of the Company and its affiliates. The LTIP provides for the grant, from time to time, at the discretion of the Company's board of directors or a committee thereof, of stock options, stock appreciation rights, restricted stock, restricted stock units, stock awards, dividend equivalents, other stock-based awards, cash awards, substitute awards and performance awards. Subject to adjustment in the event of certain transaction or changes of capitalization in accordance with the LTIP, 12,908,734 shares of Class A Common Stock have been reserved for issuance pursuant to awards under the LTIP. Class A Common stock subject to an award that expires or is canceled, forfeited, exchanged, settled in cash or otherwise terminated without delivery of shares and shares withheld to pay the exercise price of, or to satisfy the withholding obligations with respect to, an award will again be available for delivery pursuant to other awards under the LTIP.

Restricted Stock Units

Restricted stock units (“RSUs”) granted pursuant to the LTIP, if they vest, will be settled in shares of the Company’s Class A Common Stock. RSUs were granted with vesting terms up to five years. Changes in non-vested RSUs outstanding under the LTIP during the year ended December 31, 2019 were as follows:

	Number of Units	Weighted Average Grant Date Fair Value per Unit
Non-vested as of December 31, 2018	1,193,683	$ 19.24
Granted	899,696	15.08
Vested	(327,799)	19.97
Forfeited	(31,045)	17.78
Outstanding at December 31, 2019	1,734,535	$ 16.97

Performance Restricted Stock Units

Performance restricted stock units (“PSUs”) granted pursuant to the LTIP, if they vest, will be settled in shares of the Company’s Class A Common Stock. PSUs were granted with a three year cliff vesting schedule, subject to a performance target compared to an index of competitors’ results over the three year period from January 1, 2019 through December 31, 2021. The Company records compensation expense based on the Company’s best estimate of the number of PSUs that will vest at the end of the performance period. If such performance targets are not met, or are not expected to be met, no compensation expense is recognized and any recognized compensation expense is reversed. Changes in non-vested PSUs outstanding under the LTIP during the year ended December 31, 2019 were as follows:

	Number of Units	Weighted Average Grant Date Fair Value per Unit
Non-vested as of December 31, 2018	—	$ —
Granted	356,908	14.93
Vested	—	—
Forfeited	(27,631)	14.93
Outstanding at December 31, 2019	329,277	$ 14.93

Stock-based compensation is included in cost of services and general and administrative expenses in the Company’s consolidated and combined statements of operations. The Company recognized stock based compensation expense of

$13.6 million for the year ended December 31, 2019 and $5.4 million for the year ended December, 31, 2018. There was approximately $21.9 million of unrecognized compensation expense relating to outstanding RSUs and PSUs as of December 31, 2019. The unrecognized compensation expense will be recognized on a straight-line basis over the weighted average remaining vesting period of 1.8 years.

Dividends

Liberty LLC paid quarterly distributions for a total of $22.5 million, or $0.05 per Liberty LLC Unit, to all Liberty LLC unitholders during the year ended December 31, 2019, of which $14.7 million was paid to the Company. For the year ended December 31, 2018, Liberty LLC paid quarterly distributions for a total of $11.6 million, or $0.05 per Liberty LLC Unit, to all Liberty LLC unitholders, of which $7.0 million was paid to the Company. The Company used the proceeds of the distributions to pay quarterly dividends to all holders of Class A Common Stock, which totaled $14.7 million and $7.0 million as of December 31, 2019 and December 31, 2018, respectively. Additionally, as of December 31, 2019 and December 31, 2018, the Company accrued $0.5 million and $0.2 million of dividends payable related to restricted stock and RSUs to be paid upon vesting, respectively. Dividends related to forfeited restricted stock and RSUs will be forfeited.

Share Repurchase Program

On September 10, 2018 the Company's board of directors authorized a share repurchase plan to repurchase up to $100.0 million of the Company's Class A Common Stock through September 30, 2019. On January 22, 2019, the Company's board of directors authorized an additional $100.0 million under the share repurchase plan through January 31, 2021.

During the year ended December 31, 2019, Liberty LLC redeemed and retired 1,303,003 Liberty LLC Units from the Company for $18.4 million, and the Company repurchased and retired 1,303,003 shares of Class A Common Stock for $18.4 million, or $14.66 average price per share. During the year ended December 31, 2018, Liberty LLC redeemed and retired 4,593,855 Liberty LLC Units from the Company for $82.9 million, and the Company repurchased and retired 4,593,855 shares of Class A Common Stock for $82.9 million, or $18.05 price per share including commissions.

The repurchase in January 2019 completed the share repurchase amount authorized on September 10, 2018. During the year ended December 31, 2019, of the total amount of Class A Common Stock repurchased, 117,647 shares were repurchased from R/C Energy IV Direct Partnership, L.P., R/C IV Liberty Holdings, L.P., and Riverstone/Carlyle Energy Partners IV, L.P. ("R/C" and collectively, the "Riverstone Sellers"). During the year ended December 31, 2018, of the total amount of Class A Common Stock repurchased, 2,491,160 shares were repurchased pursuant to a Stock Purchase and Sale Agreement, dated as of September 14, 2018, by the Riverstone Sellers. For further details of this related party transaction, see Note 12—Related Party Transactions.

As of December 31, 2019 and 2018, $98.7 million and $17.1 million remained authorized for future repurchases of Class A Common Stock under the share repurchase program, respectively.

The Company accounts for the purchase price of repurchased common shares in excess of par value ($0.01 per share of Class A Common Stock) as a reduction of additional paid-in capital, and will continue to do so until additional paid-in capital is reduced to zero. Thereafter, any excess purchase price will be recorded as a reduction to retained earnings.

Note 9—Net Income per Share

Basic net income per share measures the performance of an entity over the reporting period. Diluted net income per share measures the performance of an entity over the reporting period while giving effect to all potentially dilutive common shares that were outstanding during the period. The Company uses the "if-converted" method to determine the potential dilutive effect of its Class B Common Stock and the treasury stock method to determine the potential dilutive effect of outstanding restricted stock and RSUs.

The following table reflects the allocation of net income to common stockholders and net income per share computations for the periods indicated based on a weighted average number of common stock outstanding for the period subsequent to the Corporate Reorganization on January 17, 2018:

(In thousands, except per share data)	Year Ended December 31, 2019	Year Ended December 31, 2018
Basic Net Income Per Share		
Numerator:		
Net income attributable to Liberty Oilfield Services Inc. Stockholders	$ 39,003	$ 126,349
Denominator:		
Basic weighted average shares outstanding	72,334	68,838
Basic net income per share attributable to Liberty Oilfield Services Inc.	$ 0.54	$ 1.84
Diluted Net Income Per Share		
Numerator:		
Net income attributable to Liberty Oilfield Services Inc. Stockholders	$ 39,003	$ 126,349
Effect of exchange of the shares of Class B Common stock for shares of Class A Common Stock	16,521	86,577
Diluted net income attributable to Liberty Oilfield Services Inc. Stockholders	$ 55,524	$ 212,926
Denominator:		
Basic weighted average shares outstanding	72,334	68,838
Effect of dilutive securities:		
Restricted stock	512	906
Restricted stock units	1,771	602
Class B Common Stock	30,639	47,492
Diluted weighted average shares outstanding	105,256	117,838
Diluted net income per share attributable to Liberty Oilfield Services Inc. Stockholders	$ 0.53	$ 1.81

Note 10—Income Taxes

Prior to the IPO, the Predecessor was treated as a partnership for U.S. federal, state and local income tax purposes. As such, any liability for federal income tax was the responsibility of the members of the Predecessor. Accordingly, no provision for U.S. federal, state and local income tax has been provided in the combined financial statements of the Company for periods ending prior to the IPO.

Following the IPO, the Company is a corporation and is subject to U.S. federal, state and local income tax on its share of Liberty LLC's taxable income. Liberty LLC is treated as a partnership, and its income is passed through to its owners, for income tax purposes. Liberty LLC's members, including the Company, are liable for federal, state and local income taxes based on their share of Liberty LLC's pass-through taxable income. As of December 31, 2019, tax reporting by the Company's Predecessor for the years ended December 31, 2016 and 2017 is subject to examination by the tax authorities. With few exceptions, as of December 31, 2019, the Company is no longer subject to U.S. federal, state or local examinations by tax authorities for tax years ended before December 31, 2016.

Income tax (benefit) expense reflected in the consolidated statement of operations consisted of:

($ in thousands)	Year Ended December 31, 2019	Year Ended December 31, 2018
Current:		
Federal	(9,907)	16,684
State	551	3,213
Total Current	$ (9,356)	$ 19,897
Deferred:		
Federal	23,419	19,063
State	(11)	1,425
Total Deferred	$ 23,408	$ 20,488
Income tax expense	$ 14,052	$ 40,385

A reconciliation of the statutory U.S. federal income tax rate of 21.0% to the Company's effective income tax rate is as follows:

($ in thousands)	Year Ended December 31, 2019	Year Ended December 31, 2018
Federal income tax expense at statutory rate	$ 18,672	$ 60,778
State and local income tax expense, net	1,525	4,456
Pre-IPO income before income taxes attributable to the Predecessor	—	(1,958)
Non-controlling interest	(7,531)	(24,606)
Other	1,386	1,715
Total income tax expense	$ 14,052	$ 40,385

The effective combined U.S. federal and state income tax rate applicable to the Company for the period commencing on January 17, 2018, the date of the Corporate Reorganization, through December 31, 2019 was 15.8%.

The Company recognized income tax expense of $14.1 million during the year ended December 31, 2019. The Company's effective tax rate is less than the statutory federal income tax rate of 21.0% because no taxes are payable by the Company for the non-controlling interest's share of Liberty LLC's pass-through income for federal, state and local income tax reporting. During 2019, the non-controlling interest effect resulted in a $7.5 million reduction in income tax expenses.

The tax effects of temporary differences that give rise to the deferred tax assets and deferred tax liabilities are presented below:

($ in thousands)	Year-Ended December 31, 2019	Year Ended December 31, 2018
Deferred tax assets:		
Federal net operating losses	$ 10,486	$ 1,638
State net operating losses	925	160
Realized tax benefit - TRAs	48,575	15,845
Total deferred tax assets	59,986	17,643
Deferred tax liabilities:		
Investment in Liberty LLC	$ 79,099	$ 50,325
Other	546	312
Total deferred tax liabilities	79,645	50,637
Net deferred tax liability	$ 19,659	$ 32,994

As of December 31, 2019, the Company had significant deferred tax assets and liabilities. The deferred tax assets include U.S. federal and state net operating losses and the step-up in basis of depreciable assets under Section 754 of the Internal Revenue Code of 1986, as amended. As a result of the IPO and Corporate Reorganization, the Company recorded a deferred tax asset and liability for the difference between the book value and the tax value of the Company's investment in Liberty LLC. The deferred tax assets have been recorded for tax attributes contributed to the Company as part of the Corporate Reorganization. Deferred tax liabilities of $29.3 million were recorded relating to Liberty LLC Units acquired through the reorganization. The initial deferred tax liability is recorded as a long term liability and additional paid in capital on the consolidated balance sheet as of December 31, 2019.

As of December 31, 2019, the Company has available U.S. federal net operating loss carryforwards to reduce future taxable income of $3.7 million expiring in 2027, and $44.3 million with no expiration date.

Uncertain Tax Positions

The Company records uncertain tax positions on the basis of a two-step process in which (1) the Company determines whether it is more likely than not the tax positions will be sustained on the basis of the technical merits of the position and (2) for those tax positions meeting the more likely than not recognition threshold, the Company recognizes the largest amount of tax benefit that is more than 50% likely to be realized upon ultimate settlement with the related tax authority.

The Company determined that no liability for unrecognized tax benefits for uncertain tax positions was required at December 31, 2019. In addition, the Company does not believe that it has any tax positions for which it is reasonably possible that it will be required to record a significant liability for unrecognized tax benefits within the next twelve months. If the Company were to record an unrecognized tax benefit, the Company will recognize interest and penalties related to income tax matters in income tax expense.

Tax Distributions

Liberty LLC is treated as a partnership for income tax purposes. Federal, state and local taxes resulting from the pass-through taxable income of Liberty LLC are obligations of its members. Net profits and losses are generally allocated to the members of Liberty LLC (including the Company) in accordance with the number of Liberty LLC Units held by each member for tax purposes. The Liberty LLC Agreement provides for pro rata cash distributions, and in certain cases non-pro rata cash advances, to assist members (including the Company) in paying their income tax liabilities. The Liberty LLC Agreement requires any tax advances to be proportionally repaid in connection with any redemption of Liberty LLC Units pursuant to the Redemption Right or the Call Right. Net distributions and advances paid by Liberty LLC to non-controlling interest holders were de minimis and $21.3 million, respectively, for the years ended December 31, 2019 and 2018.

Tax Receivable Agreements

The term of each TRA commenced on January 17, 2018, and will continue until all such tax benefits that are subject to such TRA have been utilized or expired, unless the Company experiences a change of control (as defined in the TRAs, which includes certain mergers, asset sales and other forms of business combinations) or the TRAs are terminated early (at the Company’s election or as a result of its breach), and the Company makes the termination payments specified in such TRA.

The amounts payable, as well as the timing of any payments, under the TRAs are dependent upon significant future events and assumptions, including the timing of the redemptions of Liberty LLC Units, the price of our Class A Common Stock at the time of each redemption, the extent to which such redemptions are taxable transactions, the amount of the redeeming unit holder’s tax basis in its Liberty LLC Units at the time of the relevant redemption, the characterization of the tax basis step-up, the depreciation and amortization periods that apply to the increase in tax basis, the amount of net operating losses available to the Company as a result of the Corporate Reorganization, the amount and timing of taxable income the Company generates in the future, the U.S. federal income tax rate then applicable, and the portion of the Company’s payments under the TRAs that constitute imputed interest or give rise to depreciable or amortizable tax basis.

Prior to the Corporate Reorganization, one of the Legacy Owners distributed a portion of its member interest in Liberty Holdings to R/C IV Non-U.S. LOS Corp. (“R/C IV”). Subsequently, in conjunction with the Corporate Reorganization, R/C IV was contributed to the Company. At the time of the contribution, R/C IV had net operating loss carryforwards totaling $10.9 million for federal income tax purposes and $10.9 million for certain state income tax purposes, which became available for the Company's use as a result of the contribution. As a result of the Company being in a net income position and the expected utilization of deferred tax assets, the Company recognized a deferred tax asset of $2.6 million and a corresponding $2.3 million liability pursuant to the TRAs.

During the year ended December 31, 2018, exchanges of Liberty LLC Units and shares of Class B Common Stock resulted in an increase of $14.5 million in amounts payable under the TRAs, and a net increase of $17.1 million in deferred tax assets, all of which were recorded through equity. At December 31, 2018, the Company's liability under the TRAs was $16.8 million, all of which is presented as a component of long term liabilities, and the related deferred tax assets totaled $19.7 million.

During the year ended December 31, 2019, exchanges of Liberty LLC Units and shares of Class B Common Stock resulted in an increase of $34.0 million in amounts payable under the TRAs, and a net increase of $40.0 million in deferred tax assets, all of which were recorded through equity.

At December 31, 2019, the Company's liability under the TRAs was $50.3 million, a portion of which is presented as a component of current liabilities of $1.8 million, and a portion of which is presented as a component of long term liabilities of $48.5 million, and the related deferred tax assets totaled $49.9 million.

Note 11—Defined Contribution Plan

The Company sponsors a 401(k) defined contribution retirement plan covering eligible employees. The Company makes matching contributions, which were temporarily suspended in May 2015, but were resumed in April 2017 at a rate of $1.00 for each $1.00 of employee contribution, subject to a cap of 3% of the employee's salary. In October 2017, the cap on these contributions was increased to 6% of the employee's base salary. Contributions made by the Company were $15.7 million, $13.8 million, and $5.1 million for the years ended December 31, 2019, 2018 and 2017, respectively.

Note 12—Related Party Transactions

Prior to the Corporate Reorganization, one of the members of Liberty Holdings contributed a portion of its member interest in Liberty Holdings to R/C IV Non-U.S. LOS Corp ("R/C IV"). Subsequently, in conjunction with the Corporate Reorganization, R/C IV was contributed to Liberty LLC. R/C IV had net operating loss carryforwards for federal and state income tax purposes which resulted in the recognition of a $2.9 million payable pursuant to the TRAs. During the year ended December 31, 2019, R/C IV Liberty Holdings, L.P. exercised its redemption right and redeemed 9,605,786 shares of Class B Common Stock resulting in an increase in tax basis, as described in Note—10 Income Taxes—*Tax Receivable Agreements*, and recognition of $22.3 million in amounts payable under the TRAs. As of December 31, 2019 and 2018, the Company's current liabilities under the TRAs payable to R/C IV Liberty Holdings, L.P. and R/C IV Non-US were $1.3 million and $0, respectively, included in accrued interest and other and non-current liabilities were $23.8 million and $2.9 million, respectively, in payable pursuant to tax receivable agreements in the accompanying condensed consolidated balance sheets.

The Company repurchased 117,647 shares and 2,491,160 shares of Class A Common Stock from the Riverstone Sellers, at a weighted average purchase price of $17.00 per share and $18.96 per share pursuant to the share repurchase program (see Note 8—Equity—*Share Repurchase Program*) for the years ended December 31, 2019 and 2018, respectively.

In connection with the Corporate Reorganization, the Company engaged in transactions with affiliates (see Note 1—Organization and Basis of Presentation) including entering into the TRAs with affiliates (see Note 10—Income Taxes—*Tax Receivable Agreements*). Also in conjunction with the Corporate Reorganization, Liberty Holdings contributed $2.1 million of additional assets to Liberty LLC and Redeemable Common Units in the amount of $42.6 million were settled.

In September 2011, Liberty Resources LLC, an oil and gas exploration and production company, and its successor entity (collectively, the "Affiliate") and LOS, companies with common ownership and management, entered into a services agreement (the "Services Agreement") whereby the Affiliate is to provide certain administrative support functions to LOS and a master service agreement whereby LOS provides hydraulic fracturing services to the Affiliate at market service rates. The amounts incurred under the Services Agreement by LOS during the years ended December 31, 2019, 2018 and 2017, were $0, $0.2 million, and $0, respectively. The Services Agreement was terminated during June 2018.

The amounts of the Company's revenue related to hydraulic fracturing services provided to the Affiliate for the years ended December 31, 2019, 2018 and 2017, were $18.3 million, $23.1 million and $24.7 million, respectively. As of December 31, 2019 and 2018, $7.1 million and $15.1 million, respectively, of the Company's accounts receivable—related party was with the Affiliate. On June 24, 2019 (the "Agreement Date"), the Company entered into an agreement with the Affiliate to amend payment terms for outstanding invoices due as of the Agreement Date to be due on July 31, 2020. On September 30, 2019, the agreement was amended to extend the due date of the remaining amounts outstanding to October 31, 2020. Amounts outstanding from the Affiliate as of the Agreement Date were $15.6 million. As of December 31, 2019, amounts outstanding under the amended payment terms from the Affiliate are $2.5 million, all of which is presented in accounts and notes receivable

—related party in the accompanying consolidated balance sheet. The balance outstanding is subject to interest at 13% annual percent yield, retroactively applied to the respective invoice date. During the year ended December 31, 2019, interest income from the Affiliate was $1.8 million, and accrued interest as of December 31, 2019 was $0. Receivables earned for services performed after the Agreement Date continue to be subject to normal 30-day payment terms, provided that any amount unpaid after 60 days is subject to 13% interest.

Liberty Holdings entered into an advisory agreement, dated December 30, 2011, with Riverstone/Carlyle Energy Partners IV, L.P. ("R/C"), in which R/C agreed to provide certain administrative advisory services to Liberty Holdings. The service fees incurred to R/C for the years ended December 31, 2019, 2018 and 2017 were approximately $0, $0 and $1.5 million, respectively. The advisory services agreement was terminated pursuant to an agreement effective as of January 11, 2018. On January 11, 2018, Liberty Holdings, R/C and other parties entered into a Master Reorganization Agreement that, among other things, crystallized the "waterfall" provisions of Article VI of the Third Amended and Restated Limited Liability Agreement of Liberty Holdings, dated October 11, 2016 (the "Holdings LLC Agreement"), in connection with the initial public offering of shares of Class A Common Stock. As part of this crystallization, R/C and affiliated entities (collectively, the "R/C Affiliates") received shares of Class A Common Stock, including 117,647 shares of Class A Common Stock (such 117,647 referred to as the "Issued Shares") to compensate R/C Affiliates for certain accrued preferred returns but which would not have been issued had the $2.0 million in fees owing under the advisory agreement been paid in cash. Had this fee been paid in cash on or prior to January 11, 2018, R/C and Liberty Holdings acknowledge that R/C Affiliates would not have received the Issued Shares in the crystallization pursuant to the provisions of the Holdings LLC Agreement. Subsequently, during the fourth quarter of 2018, R/C asserted that certain provisions of the termination of services agreement provided for R/C to receive $2.0 million in cash as payment of those accrued fees. To resolve this matter, the Company agreed to pay R/C Affiliates $2.0 million in cash in exchange for the return, at the IPO price, of the Issued Shares and $0.3 million for interest and the settlement of the matter. Accordingly, $2.3 million was recorded as accrued liabilities—related party in the accompanying consolidated balance sheet as of December 31, 2018 and subsequently paid in January 2019. The returned shares of Class A Common Stock were canceled and retired, and the Company does not expect to incur future expense related to the advisory agreement or termination thereof.

During 2016, Liberty Holdings entered into a future commitment to invest and become a non-controlling minority member in Proppant Express Investments, LLC ("PropX Investments"), the owner of Proppant Express Solutions, LLC ("PropX"), a provider of proppant logistics equipment. LOS is party to a services agreement (the "PropX Services Agreement") whereby LOS is to provide certain administrative support functions to PropX, and LOS is to purchase and lease proppant logistics equipment from PropX. The PropX Services Agreement was terminated on May 29, 2018; however, the Company continues to purchase and lease equipment from PropX. For the years ended December 31, 2019 and 2018 the Company purchased proppant logistics equipment of $0 and $3.1 million and leased proppant logistics equipment during the years ended December 31, 2019, 2018 and 2017 for $9.8 million, $4.4 million and $3.7 million, respectively.

Receivables from PropX as of December 31, 2019 and 2018 were $0. Payables to PropX as of December 31, 2019 and 2018 were $0.8 million and $0.2 million, respectively.

Note 13—Commitments & Contingencies

Purchase Commitments (tons, per ton, gallons, per gallon and per rail car prices are not in thousands)

The Company enters into purchase and supply agreements to secure supply and pricing of proppants, and related proppant transportation, as well as chemicals. As of December 31, 2019 and 2018, the agreements commit the Company to purchase 7,978,300 and 11,266,000 tons, respectively, of proppant through February 1, 2022. Amounts above also include commitments to pay for transport fees on minimum amounts of proppants or railcars. Certain proppant supply agreements contain a clause whereby in the event that the Company fails to purchase minimum volumes, as defined in the agreement, during a specific time period, a shortfall fee may apply. Additionally, related proppant transload service commitments extend through 2024.

As of December 31, 2019 and 2018, the Company has commitments to purchase 3,339,534 and 18,852,000 gallons of chemicals through December 31, 2020.

Future proppant, transload, chemical and rail car commitments are as follows:

Year ending December 31,	
2020	$ 349,096
2021	139,937
2022	17,471
2023	12,598
2024	6,405
Thereafter	—
	$ 525,507

Litigation

From time to time, the Company is subject to legal and administrative proceedings, settlements, investigations, claims and actions. The Company's assessment of the likely outcome of litigation matters is based on its judgment of a number of factors including experience with similar matters, past history, precedents, relevant financial and other evidence and facts specific to the matter. Notwithstanding the uncertainty as to the final outcome, based upon the information currently available, management does not believe any matters in aggregate will have a material adverse effect on its financial position or results of operations.

Note 14—Selected Quarterly Financial Data (unaudited)

The following table sets forth certain unaudited financial and operating information for each quarter of the years ended December 31, 2019 and 2018. The unaudited quarterly information includes all adjustments that, in the opinion of management, are necessary for the fair presentation of information presented. Operating results for interim periods are not necessarily indicative of the results that may be expected for the full fiscal year.

($ in thousands)	Year Ended December 31, 2019			
Selected Financial Data:	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Revenue	$ 535,148	$ 542,147	$ 515,079	$ 397,971
Operating costs and expenses:				
Cost of services (exclusive of depreciation and amortization shown separately below)	429,299	426,444	421,007	344,430
General and administrative	22,088	23,989	25,302	26,210
Depreciation and amortization	38,387	40,368	42,324	44,299
Loss (gain) on disposal of assets	1,223	143	(124)	1,359
Total operating costs and expenses	490,997	490,944	488,509	416,298
Operating income (loss)	44,151	51,203	26,570	(18,327)
Other expense:				
Interest expense, net	4,182	3,597	3,726	3,176
Net income (loss) before income taxes	39,969	47,606	22,844	(21,503)
Income tax expense (benefit)	6,060	7,083	4,004	(3,095)
Net income (loss)	33,909	40,523	18,840	(18,408)
Less: Net income (loss) attributable to non-controlling interests	15,788	18,491	7,842	(6,260)
Net income (loss) attributable to Liberty Oilfield Services Inc. stockholders	$ 18,121	$ 22,032	$ 10,998	$ (12,148)
Net income (loss) attributable to Liberty Oilfield Services Inc. stockholders per common share:				
Basic	$ 0.27	$ 0.32	$ 0.15	$ (0.15)
Diluted	$ 0.26	$ 0.32	$ 0.15	$ (0.15)

($ in thousands)	Year ended December 31, 2018			
Selected Financial Data:	**First Quarter**	**Second Quarter**	**Third Quarter**	**Fourth Quarter**
Revenue	$ 495,160	$ 628,084	$ 558,777	$ 473,115
Operating costs and expenses:				
Cost of services (exclusive of depreciation and amortization shown separately below)	376,827	455,469	418,867	377,590
General and administrative	21,677	27,313	24,659	25,403
Depreciation and amortization	28,016	30,606	32,305	34,183
Loss (gain) on disposal of assets	80	485	701	(5,608)
Total operating costs and expenses	426,600	513,873	476,532	431,568
Operating income	68,560	114,211	82,245	41,547
Other expense:				
Interest expense, net	6,494	3,540	3,648	3,463
Net income before income taxes	62,066	110,671	78,597	38,084
Income tax expense	8,079	15,930	12,229	4,147
Net income	53,987	94,741	66,368	33,937
Less: Net income attributable to Predecessor, prior to Corporate Reorganization	8,705	—	—	—
Less: Net income attributable to non-controlling interests	21,607	45,146	32,275	14,951
Net income attributable to Liberty Oilfield Services Inc. stockholders	$ 23,675	$ 49,595	$ 34,093	$ 18,986
Net income attributable to Liberty Oilfield Services Inc. stockholders per common share:				
Basic	$ 0.34	$ 0.72	$ 0.50	$ 0.28
Diluted	$ 0.34	$ 0.71	$ 0.49	$ 0.27

Note 15—Subsequent Events

On January 22, 2020, the Company announced a cash dividend of $0.05 per share of Class A common stock, to be paid on March 20, 2020 to holders of record as of March 6, 2020. A distribution of $0.05 per unit has also been approved for holders of units in Liberty LLC, which will use the same record and payment date.

There were no other significant subsequent events requiring disclosure or recognition other than those disclosed in these notes to the consolidated and combined financial statements.

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