Celebrating 40 YEARS

2021 Annual Report

The following tables set forth our selected consolidated financial data for the years ended December 31, 2021, 2020, and 2019. The selected consolidated financial data does not purport to be complete and should be read in conjunction with, and is qualified by, the more detailed information, including the Consolidated Financial Statements and related Notes and "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operation" appearing elsewhere in this Annual Report. Please read "Item 1A. Risk Factors" for a discussion of the material uncertainties that might cause the selected consolidated financial data not to be indicative of our future financial condition or results of operations.

Brady M. Murphy
President & Chief Executive Officer

During January 2021, we sold the general partner of CSI Compressco LP ("CCLP"), including the incentive distribution rights in CCLP and approximately 23% of the outstanding limited partner interests in CCLP. Our interest in CCLP and the general partner represented substantially all of our former Compression Division. Following the closing of the transaction, we retained an interest in CCLP representing approximately 3.8% of the outstanding common units, which had a fair value of $6.2 million, as of December 31, 2021. In March 2018, we closed a series of related transactions that resulted in the disposition of what we previously defined as our Offshore Division. Accordingly, we have reflected the operations of our former Compression Division and Offshore Division as discontinued operations for all periods presented. We are also party to agreements in which Standard Lithium Ltd. has the right to explore, produce and extract lithium in our Arkansas leases as well as additional potential resources in the Mojave region of California. The Company receives cash and stock of Standard Lithium under the terms of the arrangements. During the fourth quarter of 2021, we sold the 1.6 million Standard Lithium shares we owned for approximately $17.6 million, before broker and transaction fees. During 2019, we recorded significant impairments of long-lived assets and goodwill. The realized and unrealized gains and losses on investments, dispositions, and impairments significantly impact the comparison of our financial statements.

FINANCIAL HIGHLIGHTS

Year Ended December 31,	2021	2020	2019
	(In Thousands, Except Per Share Amounts)		
Consolidated Income Statement Data			
Revenues	$ 388,272	$ 377,715	$ 561,241
Gross profit	59,237	67,543	11,807
General and administrative expense	75,049	76,697	96,466
Goodwill impairment	—	—	25,784
Interest expense	16,557	19,326	21,808
Interest income	(180)	(400)	(552)
Other income, net	(17,468)	(2,994)	(3,590)
Loss before taxes and discontinued operations	(14,721)	(25,086)	(128,109)
Income (loss) from discontinued operations, net of taxes	120,407	(72,089)	(29,580)
Net income (loss)	103,602	(98,933)	(160,500)
Net income (loss) attributable to TETRA stockholders	$ 103,333	$ (51,143)	$ (147,413)
Basic and diluted net income (loss) per common share attributable to TETRA stockholders [(1)]:			
Loss from continuing operations	(0.13)	$ (0.22)	$ (1.04)
Income (loss) from discontinued operations	0.95	$ (0.19)	$ (0.13)
Net income (loss)	0.82	$ (0.41)	$ (1.17)
Weighted average basic and diluted shares [(1)]	126,602	125,838	125,600

[(1)] For the years ended December 31, 2021, 2020 and 2019, the calculation of average diluted shares outstanding excludes the impact of all outstanding stock awards and warrants, as the inclusion of these shares would have been anti-dilutive due to the net loss from continuing operations recorded during the year.

December 31,	2021	2020	2019
		(In Thousands)	
Balance Sheet Data			
Working capital	$ 113,248	$ 133,468	$ 162,631
Total assets	398,266	1,132,839	1,271,922
Long-term debt, net [(2)]	120,385	132,642 [(2)]	189,299 [(2)]
Total equity	98,563	71,062	162,826

[(2)] Long-term debt, net excludes debt and cash attributed to CSI Compressco.

Dear Shareholders:

TETRA Technologies, Inc., endured another challenging year in 2021 as we confronted a second year of the persistent COVID-19 pandemic, global supply chain disruptions, a record-breaking freeze in the first quarter, a devastating hurricane in the third quarter, and levels of inflation not seen since the 1970s.

Despite these challenges, we concluded another year with many positives and strong momentum heading into 2022. Total year revenue increased 3% to $388 million and Adjusted EBITDA[a] improved 2% to $50 million. The fourth quarter was especially strong, with $113 million in revenue—the highest of the past seven quarters—marking a 19% increase over the third quarter and 50% over the fourth quarter of 2020, while Adjusted EBITDA, excluding realized and unrealized gains and losses from investments, rose 32% sequentially as the North American land market improved and international offshore completion fluid sales delayed in the third quarter were delivered. For the full year, we had $4.7 million in cash flow from operations and $9.3 million in adjusted free cash flow[a]. These cash flows were achieved despite a $27 million rise in accounts receivables reflecting a sharp year-end ramp up in business—setting the tone for 2022. We continued to improve our balance sheet, reducing net debt[a] to $120 million—a 36% improvement over the past two years despite a very challenging economic environment.

Early in the year we also completed the divestiture of our interests and related assets in CSI Compressco for $30.7 million, significantly simplifying our business model and allowing us to focus on an asset-light cash generating service model.

These results attest to the strength of our workforce, strategic partnerships, and refocused business model, making the Company more resilient with a leaner structure and a more diverse portfolio of products and services. Our business model also differentiates us from industry peers and better positions TETRA for the resurgence in oil and gas activity and the opportunities to participate in a meaningful way in the coming years in the exciting energy-transition market.

Health, Safety, Environment, and Quality

2021 entailed continuation of precautions to ensure the wellbeing of our workforce amid the pandemic. Our crisis management team met regularly to review the data, including positive cases of employees, review the CDC and local guidelines, and enact safety precautions to keep our employees safe while minimizing the business impact. We made the necessary preparations for a potential vaccine mandate but fortunately the pandemic itself began to wane in both scale and severity as the year came to a close. Our HR and HSEQ leadership and their teams merit high praise for helping to ensure the wellbeing of our employees.

Our Total Recordable Incident Rate (TRIR) improved 11%, while our driver performance remained in the 90-point range at 91.9%, an exceptional rating that has made a huge difference in our overall driving safety performance.

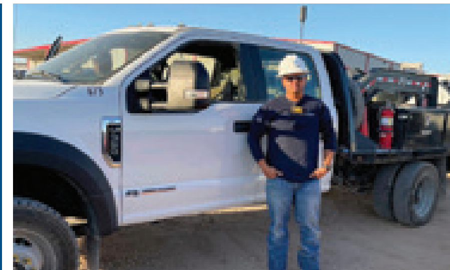
Completion Fluids & Products

Total 2021 revenue for Completion Fluids & Products was $220 million with Adjusted EBITDA[a] of $63 million or 28.6% of revenue.

As in most downturns, the offshore and international oil and gas markets lag the sharp industry activity declines seen in North America and this was the case in 2021 as our revenues dropped 9% from 2020. However, we finished the year with strong revenue growth and growing demand supported by key deepwater contract awards in Brazil and the Gulf of Mexico.

Our Eastern Hemisphere energy services revenue more than doubled from the third quarter to the fourth quarter, which we believe indicates improved international market

Our TRIR improved 11% while our driver performance remained in the 90-point range; an exceptional rating that has made a huge difference in our overall driving safety performance.



In 2021, we continued to strengthen our intellectual property position for TETRA CS Neptune® fluids with over 13 patents granted and 10 patents allowed. We also experienced strong revenue growth in North America and International markets.

We secured record high number of integrated water management projects during the year and our TETRA SandStorm™ advanced cyclone technology continues to capture an ever-greater percentage of market share for sand management.

We reaffirmed our commitment to low-carbon energy with the appointment of a senior vice president and entered two strategic partnerships that show tremendous promise for growth and returns.

activity going forward. TETRA also secured the first Gen-1 TETRA CS Neptune fluids job for the North Sea, signaling continued acceptance of our technologies beyond the Gulf of Mexico. And we continue to strengthen our intellectual property position for TETRA CS Neptune fluids with over 13 patents granted and 10 patents allowed.

With U.S. onshore shale activity expected to trend below that of 2014–2019, deepwater activity will likely be crucial in meeting oil and gas demand for years to come and this plays well into our opportunities for our high value completion fluids including TETRA CS Neptune.

Water & Flowback Services

Total 2021 revenue for Water & Flowback was $169 million with Adjusted EBITDA[a] of $14.9 million or 8.8% of revenue.

TETRA secured another record high of 62 integrated water management projects for 31 different customers during the year, further strengthening a leading oilfield services market position in produced water treatment, recycling more than one billion gallons of produced water in 2021.

Our innovative TETRA SandStorm advanced cyclone technology continues to capture an ever-greater percentage of market share for sand management. TETRA gained 24 new customers for SandStorm technology, 11 of which were in the fourth quarter. Argentina continues to be a bright spot as the most active unconventional shale market outside the United States, currently with two early production facility awards, including SandStorm cyclones, that will yield positive results for us in the second quarter of 2022.

Lastly, increased seismic activity in Permian Basin prompted both New Mexico and Texas to revise their regulations for saltwater disposal (SWD) wells in 2021. Constraints on disposal will likely raise interest in not only recycling produced water but also extracting key minerals from it. TETRA's core competency in aqueous chemistry and expertise in extracting minerals and manufacturing products from them is a good fit with considerable potential for growth.

Roadmap for the Energy Transition

Since reaffirming our commitment to low-carbon energy in January 2021, with the appointment of a senior vice president to lead such initiatives, this segment has progressed rapidly. In November, Standard Lithium, with which we have an agreement, reported a very favorable assessment of lithium underlying our brine leases in Arkansas, increasing the total inferred lithium carbonate equivalent (LCE) to 1.3 million tons with a pre-tax IRR of 40.5%. Our 31,100 net acres of leases, which were estimated to contain between 2.54 million and 8.58 million tons of bromine based on a brine exploration target assessment, will prove strategically beneficial in the advancement of carbon capture, energy storage, and battery production.

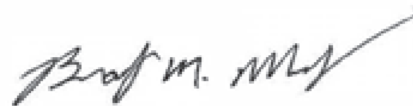
In December, TETRA entered two strategic partnerships that show tremendous promise for growth and returns. With Eos Energy Enterprises, we forged a long-term agreement to provide our TETRA PureFlow® ultra-high purity zinc bromide. Eos is a leading U.S. supplier of scalable and sustainable zinc-based, long-duration energy storage systems. With CarbonFree, we invested $5 million and signed a joint intellectual property agreement for CO_2-free calcium chloride production in support of its SkyCycle™ CO_2 capture technology. CarbonFree is a global company with patented technologies that capture CO_2 and mineralize emissions to make commercial, carbon-negative chemicals.

These agreements align with and enable enhanced application of TETRA's technical expertise, core competency in aqueous chemistry, global leadership in calcium chloride production, and U.S. manufacturing capabilities.

Onward and Upward

TETRA marked its 40TH anniversary in 2021 and did so with extraordinary vigor, bucking powerful headwinds while the terrain of the energy market undergoes seismic shifts. As we emerge from the historic downturn of the past two years, a number of challenges remain, and others will undoubtedly arise—a war in Eastern Europe, the ripple effects of economic sanctions, a lingering pandemic, surging inflation, and logistical barriers that could persist for some time. But I'm confident the path TETRA is now on is the right footing: we have clear-sighted objectives, a sound strategy, and the people to achieve continued success and growth.

The success of our strategy is also reflected in the shareholder confidence and upward trend of our share price. I thank our TETRA leadership and employees for doing their part to help the Company realize strong financial results and continued growth in market share across all sectors of our business.



Brady M. Murphy
President and Chief Executive Officer

[a] Adjusted EBITDA, adjusted free cash flow, and net debt are non-GAAP financial measures. Please see our 2022 Proxy Statement filed with the Securities and Exchange Commission on or about April 11, 2022 for a reconciliation of non-GAAP financial measures to the Company's results as reported under GAAP.

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, 2021**

OR

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

COMMISSION FILE NUMBER 1-13455

TETRA Technologies, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**74-2148293**
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)

24955 Interstate 45 North	**The Woodlands,**	**Texas**	**77380**
(Address of Principal Executive Offices)			(Zip Code)

(281) 367-1983
(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
Common Stock	TTI	New York Stock Exchange

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

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

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark 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 has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. Yes ☒ No ☐

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

The aggregate market value of common stock held by non-affiliates of the Registrant was $533,182,111 as of June 30, 2021.
As of February 25, 2022, TETRA Technologies, Inc. had 127,645,166 shares outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Part III information is incorporated by reference to the registrant's proxy statement for its annual meeting of stockholders to be held May 24, 2022, to be filed with the Securities and Exchange Commission within 120 days of the end of the registrant's fiscal year.

TABLE OF CONTENTS

Part I

Item 1.	Business	1
Item 1A.	Risk Factors	9
Item 1B.	Unresolved Staff Comments	23
Item 2.	Properties	23
Item 3.	Legal Proceedings	25
Item 4.	Mine Safety Disclosures	25

Part II

Item 5.	Market for Registrant's Common Equity, Related Stockholder Matters, and Issuer Purchases of Equity Securities	26
Item 6.	[Reserved]	26
Item 7.	Management's Discussion and Analysis of Financial Condition and Results of Operations	27
Item 7A.	Quantitative and Qualitative Disclosures about Market Risk	37
Item 8.	Financial Statements and Supplementary Data	37
Item 9.	Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	37
Item 9A.	Controls and Procedures	38
Item 9B.	Other Information	38
Item 9C.	Disclosure Regarding Foreign Jurisdictions that Prevent Inspections	38

Part III

Item 10.	Directors, Executive Officers, and Corporate Governance	39
Item 11.	Executive Compensation	39
Item 12.	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	39
Item 13.	Certain Relationships and Related Transactions, and Director Independence	39
Item 14.	Principal Accounting Fees and Services	39

Part IV

Item 15.	Exhibits, Financial Statement Schedules	39
Item 16.	Form 10-K Summary	44

Forward-Looking Statements

This Annual Report on Form 10-K (this “Annual Report”) contains “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 Act of 1934, as amended, (the “Exchange Act”). Forward-looking statements in this Annual Report are identifiable by the use of the following words, the negative of such words, and other similar words: “anticipates”, “assumes”, “believes”, “budgets”, “could”, “estimates”, “expects”, “forecasts”, “goal”, “intends”, “may”, “might”, “plans”, “predicts”, “projects”, “schedules”, “seeks”, “should”, “targets”, “will”, and “would”.

Such forward-looking statements reflect our current views with respect to future events and financial performance and are based on assumptions that we believe to be reasonable, but such forward-looking statements are subject to numerous risks, and uncertainties, including, but not limited to:

- economic and operating conditions that are outside of our control, including the trading price of our common stock, and the supply, demand, and prices of oil and natural gas;
- the availability of adequate sources of capital to us;
- the levels of competition we encounter;
- the activity levels of our customers;
- our operational performance;
- actions taken by our customers, suppliers, competitors and third-party operators;
- the availability of raw materials and labor at reasonable prices;
- risks related to the exploration for, development and extraction of bromine, lithium and other minerals;
- risks related to acquisitions and our growth strategy;
- restrictions under our debt agreements and the consequences of any failure to comply with debt covenants;
- the effect and results of litigation, commercial disputes, regulatory matters, settlements, audits, assessments, and contingencies;
- potential regulatory initiatives to restrict hydraulic fracturing activities on federal lands as well as other actions to more stringently regulate certain aspects of oil and gas development such as air emissions and water discharges;
- risks related to our foreign operations;
- risks related to our non-controlling equity investments;
- information technology risks including the risk of cyberattack;
- our health, safety and environmental performance;
- global or national health concerns, including the outbreak of pandemics or epidemics such as the coronavirus (COVID-19);
- operational challenges relating to COVID-19, distribution and administration of COVID-19 vaccines and efforts to mitigate the spread of the virus, including logistical challenges, protecting the health and well-being of our employees, remote work arrangements, performance of contracts and supply chain distributions;
- acts of terrorism, war or political or civil unrest in the United States or elsewhere, including the current events involving Russia and Ukraine, changes in laws and regulations, or the imposition of economic or trade sanctions affecting international commercial transactions; and
- other risks and uncertainties under “Item 1A. Risk Factors” in this Annual Report and as included in our other filings with the U.S. Securities and Exchange Commission (“SEC”), which are available free of charge on the SEC website at www.sec.gov.

The risks and uncertainties referred to above are generally beyond our ability to control, and we cannot predict all the risks and uncertainties that could cause our actual results to differ from those indicated by the forward-looking statements. If any of these risks or uncertainties materialize, or if any of the underlying

assumptions prove incorrect, actual results may vary from those indicated by the forward-looking statements, and such variances may be material.

You should not place undue reliance on forward-looking statements. Each forward-looking statement speaks only as of the date of the particular statement, and we undertake no obligation to update or revise any forward-looking statements we may make, except as may be required by law.

PART I

Item 1. Business.

The financial statements presented in this Annual Report are the consolidated financial statements of TETRA Technologies, Inc., a Delaware corporation and its subsidiaries. When the terms "TETRA," "the Company," "we," "us," or "our" are used in this document, those terms refer to TETRA Technologies, Inc. and its consolidated subsidiaries.

TETRA is a Delaware corporation incorporated in 1981. Our corporate headquarters are located at 24955 Interstate 45 North, The Woodlands, Texas, 77380. Our phone number is 281-367-1983 and our website is www.tetratec.com. Our common stock is traded on the New York Stock Exchange (the "NYSE") under the symbol "TTI."

Our Corporate Governance Guidelines, Code of Business Conduct, Code of Ethics for Senior Financial Officers, Audit Committee Charter, Human Capital Management and Compensation Committee Charter, and Nominating, Governance and Sustainability Committee Charter, as well as our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K, and all amendments to those reports are all available, free of charge, on our website at www.tetratec.com as soon as practicable after we file the reports with the SEC. Information contained on or connected to our website is not, and shall not be deemed to be, a part of this Annual Report on Form 10-K or incorporated into any other filings with the SEC. The documents referenced above are available in print at no cost to any stockholder who requests them from our Corporate Secretary.

About TETRA

TETRA Technologies, Inc., together with its consolidated subsidiaries, is a leading, industrial oil and gas products and services company operating on six continents, focused on bromine-based completion fluids, calcium chloride, water management solutions, frac flowback and production well testing services. We have two reportable segments - Completion Fluids & Products Division and Water & Flowback Services Division.

Our *Completion Fluids & Products Division* manufactures and markets clear brine fluids, additives, and associated products and services to the oil and gas industry for use in well drilling, completion, and workover operations in the United States and in certain countries in Latin America, Europe, Asia, the Middle East and Africa. The Division also markets liquid and dry calcium chloride products manufactured at its production facilities or purchased from third-party suppliers to a variety of markets outside the energy industry.

Our *Water & Flowback Services Division* provides onshore oil and gas operators with comprehensive water management services. The Division also provides frac flowback, production well testing, and other associated services in many of the major oil and gas producing regions in the United States and Mexico, as well as in oil and gas basins in certain countries in Latin America, Europe, and the Middle East.

We continue to pursue a long-term growth strategy that includes expanding our core businesses, domestically and internationally, through the introduction of new technology, organic growth and accretive acquisitions.

Products and Services

Completion Fluids & Products Division

Liquid calcium chloride, calcium bromide, zinc bromide, zinc calcium bromide, sodium bromide, and blends of such products manufactured by our Completion Fluids & Products Division are referred to as clear brine fluids ("CBFs") in the oil and gas industry. CBFs are salt solutions that have variable densities and are used to control bottom-hole pressures during oil and gas completion and workover operations. The Division sells CBFs and various CBF additives to U.S. and foreign oil and gas exploration and production companies and to other companies that service customers in the oil and gas industry.

The Completion Fluids & Products Division provides both stock and custom-blended CBFs based on each customer's specific needs and the proposed application. It provides a broad range of associated CBF services, including: on-site fluids filtration, handling and recycling; wellbore cleanup; custom fluids blending; and fluid

management services. The Division’s flagship CBF technology, TETRA CS Neptune® completion fluids, are high-density monovalent and divalent fluids that are free of undissolved solids, zinc, priority pollutants, and formate ions. They were developed by TETRA to be environmentally friendly alternatives to traditional zinc bromide high-density completion fluids and environmentally friendly and cost-effective alternatives to cesium formate high-density completion fluids, all of which are used in well completion and workover operations, as well as low-solids reservoir drilling fluids.

The Completion Fluids & Products Division offers to repurchase, or “buy-back”, certain used CBFs from customers, which can be reconditioned and recycled. Selling used CBFs back to us reduces the net cost of the CBFs to customers and minimizes our customers’ need to dispose of used fluids. We recondition used CBFs through filtration, blending and the use of proprietary chemical processes, and then market the reconditioned CBFs.

By blending different CBFs and using various additives, we are able to modify the specific density, crystallization temperature, and chemical composition of the CBFs as required to meet our customers’ specific needs. The Division’s fluid engineering personnel determine the optimal CBF blend for a customer’s particular application to maximize its effectiveness and lifespan. Our filtration services use a variety of techniques and equipment to remove particulates from CBFs at the customer’s site so the CBFs can be reused. Filtration also enables recovery of a greater percentage of used CBFs for reconditioning.

The Completion Fluids & Products Division manufactures liquid and dry calcium chloride and liquid calcium bromide, zinc bromide, zinc calcium bromide, and sodium bromide for distribution, primarily into energy markets. Liquid and dry calcium chloride are also sold into water treatment, industrial, cement, food processing, road maintenance, ice melt, agricultural, and consumer products markets. Sodium bromide is also sold into industrial water treatment markets, where it is used as a biocide in recirculated cooling tower waters and in other applications.

Our calcium chloride manufacturing facilities are located in the United States and Finland. In the United States, we manufacture liquid calcium chloride products at four manufacturing plant facilities. Liquid and flake calcium chloride are also produced at our Kokkola, Finland plant. We operate our European calcium chloride operations under the name TETRA Chemicals Europe. We also manufacture liquid calcium chloride at our facilities in Parkersburg, West Virginia and Lake Charles, Louisiana, and we have two solar evaporation facility locations located in San Bernardino County, California, that produce liquid calcium chloride and sodium chloride from underground brine reserves, which are replenished naturally. Our calcium chloride production facilities have a combined production capacity of approximately 1.0 million equivalent liquid tons per year. We also acquire calcium chloride inventory from other producers.

Our Completion Fluids & Products Division manufactures liquid calcium bromide, zinc bromide, zinc calcium bromide, and sodium bromide at our West Memphis, Arkansas facility. A proprietary process applied at this facility uses bromine and zinc to manufacture zinc bromide. This facility also uses proprietary processes to manufacture calcium bromide and sodium bromide and to recondition and upgrade used CBFs that we have repurchased from our customers.

We are also pursuing low-carbon energy initiatives that leverage our fluids and aqueous chemistry core competencies, our significant bromine and lithium assets (including our approximately 31,100 net acres of brine leases in Arkansas) and technologies, and our leading calcium chloride production capabilities. In May 2021, we signed a memorandum of understanding (“MOU”) with CarbonFree Chemicals Holdings, LLC (“CarbonFree”), a carbon capture company with patented technologies that capture CO_2 and mineralize emissions to make commercial, carbon-negative chemicals. During the one-year MOU period, both Companies will work towards a definitive agreement that may include investments by TETRA into CarbonFree, a joint venture, or other commercial arrangements. In December 2021, we invested $5.0 million in a convertible note issued by CarbonFree. This was an investment alongside other investors that provided CarbonFree the necessary capital to construct the first SkyCycle™ facility. We have also reached agreement with CarbonFree on the potential use of a unique solution proposed by TETRA to produce low carbon calcium chloride to support SkyCycle™ technology.

In August 2021, we announced completion of a preliminary technical assessment by an independent geological consulting firm to assess lithium and bromine exploration targets in our Southwest Arkansas brine leases. Bromine has been identified as a key mineral resource in zinc-bromide energy storage systems and our TETRA PureFlow™ high purity zinc bromide has been qualified by several battery technology companies. The lithium battery market is a rapidly growing market, affording us the opportunity to participate in a meaningful way. In December, 2021, we announced a strategic agreement with Eos Energy Enterprises, Inc. ("Eos") (NASDAQ: EOSE) involving a long-term supply and collaboration agreement to supply our high purity zinc bromide solution, TETRA PureFlow™. TETRA and Eos expect to collaborate for improved battery performance, cost and system life including an end-of-life solution using TETRA's extensive experience with reclaiming and recycling zinc bromide. In addition, as of February 25, 2022, we are in the process of drilling an exploratory brine well on our dedicated acreage in the Smackover Formation in Arkansas. The results of the well, which is expected to be completed in the first quarter of 2022, are expected to advance our exploratory target lithium and bromine assets to more refined resources targets. We will assess the next steps towards determining whether we can develop these key minerals to augment our current global infrastructure and chemistry expertise, allowing us to further expand beyond the oil and gas market.

Water & Flowback Services Division

Our Water & Flowback Services Division provides a wide variety of water management services that support hydraulic fracturing in unconventional well completions for domestic onshore oil and gas operators. These services include fresh and produced water analysis, treatment and recycling, blending and distribution, storage and pit lining, transfer, engineering, and environmental risk mitigation. The Water & Flowback Services Division’s patented and patent-pending equipment and processes include advanced hydrocyclones for sand management, certain produced- and fresh-water blending technologies, and the TETRA Steel™ 1200 rapid deployment water transfer system. The Water & Flowback Services Division seeks to design sustainable solutions that meet the unique needs of each customer in order to maximize operational performance and efficiency and minimize the use of fresh water. These solutions include tailored “Last Mile” infrastructure to transfer water around well pads in a safe, efficient and environmentally responsible manner - which consists of water storage ponds, movable storage tanks, a network of water transfer lines including poly pipe and TETRA Steel™ lay-flat hose, automated transfer and blending of produced water, and water treatment and recycling systems. These systems include the TETRA SwiftWater Automated Treatment (SWAT™) system that chemically treats produced water through a clarification process and the TETRA Oil Recovery After Production Technology (Orapt™) mobile oil separation system that recovers oil from produced water. Automation has also been deployed throughout 2020 and 2021 across the TETRA water management portfolio, and across TETRA flowback services in 2021, to reduce health, safety and environmental risks and enhance reliability and cost-effectiveness.

Our Water & Flowback Services Division also provides frac flowback services, early production facilities and services, production well testing services, and other associated services, including well flow management and evaluation services that enable operators to quantify oil and gas reserves, optimize oil and gas production and minimize oil and gas reservoir damage. In certain basins, water, sand, and other abrasive materials commonly accompany the initial production of natural gas or oil, often under high-pressure and high-temperature conditions and, in some cases, from reservoirs containing high levels of hydrogen sulfide gas. The Water & Flowback Services Division provides the specialized equipment and qualified personnel to address these impediments to production. Early production services typically include sophisticated evaluation techniques for reservoir management, including unconventional shale reservoir exploitation and optimization of well workover programs. Frac flowback and production well testing services may include well control, well cleanup and laboratory analysis. These services are used in the completion process after hydraulic fracturing and in the production phase of oil and gas wells.

This Division maintains one of the largest fleets of high-pressure production testing equipment in the United States, including equipment designed to work in environments where high levels of hydrogen sulfide gas are present. The Division has domestic operating locations in Colorado, Louisiana, New Mexico, North Dakota, Ohio, Oklahoma, Pennsylvania, Texas, West Virginia, and Wyoming. The Division also has locations in certain countries in Latin America, Europe, and the Middle East.

Former Compression Division

Our former Compression Division provided compression services and equipment for natural gas and oil production, gathering, artificial lift, transmission, processing and storage. Our former Compression Division's operations were conducted through our partially-owned CSI Compressco LP ("CSI Compressco") subsidiary. Through one of our former wholly-owned subsidiaries, CSI Compressco GP LLC (f/k/a CSI Compressco GP Inc.) (the "general partner"), we managed and controlled CSI Compressco, and accordingly, we consolidated CSI Compressco's results of operations in our consolidated results of operations through January 31, 2021. On January 29, 2021, we entered into the Purchase and Sale Agreement with Spartan Energy Partners, LP and Energy Holdco, LLC (together, "Spartan") pursuant to which we sold the general partner of CSI Compressco, including the incentive distribution rights ("IDRs") in CSI Compressco and approximately 23.1% of the outstanding limited partner interests in CSI Compressco, in exchange for a combination of $13.9 million in cash and $3.1 million in contingent consideration in the form of cash and/or CSI Compressco common units if CSI Compressco achieves certain financial targets on or before December 31, 2022. As of December 31, 2021, we retained an interest in CSI Compressco consisting of approximately 3.8% of the outstanding common units. Throughout this Annual Report, we refer to the transaction with Spartan as the "GP Sale." We have reflected the operations of our former Compression Division as discontinued operations for all periods presented. See Note 3 - "Discontinued Operations" in the Notes to Consolidated Financial Statements for further information.

Sources of Raw Materials

Our Completion Fluids & Products Division manufactures calcium chloride, calcium bromide, zinc bromide, zinc calcium bromide, and sodium bromide for sale to its customers. The Division also recycles used calcium bromide and zinc bromide CBFs repurchased from its oil and gas customers.

The Completion Fluids & Products Division manufactures liquid calcium chloride, either from underground brine or by reacting hydrochloric acid with limestone. We produce calcium chloride and sodium chloride at our two facilities in San Bernardino County, California, by solar evaporation of pumped underground brine reserves that contain calcium chloride. The underground reserves of this brine are deemed adequate to supply our foreseeable need for calcium chloride at those plants. The Division also purchases liquid and dry calcium chloride from a number of U.S. and foreign chemical manufacturers.

The Completion Fluids & Products Division's primary sources of hydrochloric acid are co-product streams obtained from chemical manufacturers. Substantial quantities of limestone are also consumed when converting hydrochloric acid into calcium chloride. Currently, hydrochloric acid and limestone are generally available from multiple sources.

To produce calcium bromide, zinc bromide, zinc calcium bromide, and sodium bromide at our West Memphis, Arkansas facility, we use bromine, hydrobromic acid, zinc, ammonia water and lime as raw materials. There are multiple sources of zinc that we can use in the production of zinc bromide and zinc calcium bromide. We have a long-term supply agreement with Lanxess, AG ("Lanxess") under which the Completion Fluids & Products Division purchases its requirements of raw material bromine from Lanxess' Arkansas bromine production facilities.

The Completion Fluids & Products Division also owns a calcium bromide manufacturing plant near Magnolia, Arkansas, which was constructed in 1985. This plant was acquired in 1988 and is not operable. We currently lease over 31,100 net acres of brine leases in the vicinity of this plant, which contain bromine and lithium. See our disclosures titled "Bromine and Lithium Exploration Targets" set forth in Item 2 of this Annual Report. While this plant is designed to produce calcium bromide, it could be modified to produce elemental bromine or select bromine compounds. Development of the brine field, construction of necessary pipelines and reconfiguration of the plant would require a substantial capital investment. The long-term Lanxess bromine supply agreement discussed above provides a secure supply of bromine to support the Division's current operations. We do, however, continue to evaluate our strategy related to the Magnolia, Arkansas, assets and their future development. Lanxess has certain rights to participate in future development of the Magnolia, Arkansas assets. In addition, we are party to agreements with Standard Lithium Ltd. ("Standard Lithium") (NYSE: SLI), under which Standard Lithium has the right to explore, produce and extract lithium in our Arkansas leases as well as additional potential resources in the Mojave region (San Bernardino County) of California. See Note 2 - "Basis of Presentation and Significant Accounting Policies" and Note 14 - "Fair Value Measurements" in the Notes to Consolidated Financial Statements for further information.

The Water & Flowback Services Division purchases water management and production testing equipment and components from third-party manufacturers.

Market Overview and Competition

Our operations are highly dependent upon the demand for, and production of, natural gas and oil in the various domestic and international locations in which we operate, and were significantly affected by the unprecedented impact of the COVID-19 pandemic in 2020. Demand for products and services of our Completion Fluids & Products Division remained resilient despite pandemic impacts on commodity prices in 2020 and experienced significant recoveries during the second half of 2021. West Texas Intermediate oil prices improved from an average of $39.16 per barrel during 2020 to an average of $77.33 per barrel during the fourth quarter of 2021.

Completion Fluids & Products Division

Our Completion Fluids & Products Division provides its products and services to oil and gas exploration and production companies in the United States and certain foreign markets, and to other customers that service such companies. Current areas of market presence include the onshore U.S., the U.S. Gulf of Mexico, the North Sea, Mexico and certain countries in South America, Europe, Asia, the Middle East and Africa. Customers with deepwater operations frequently use high volumes of CBFs, which can be subject to harsh downhole conditions, such as high pressure and high temperatures. Demand for CBF products is generally driven by offshore completion and workover activity.

The Completion Fluids & Products Division's principal competitors in the sale of CBFs to the oil and gas industry are other major international drilling fluids and energy services companies, to many of which we provide products and services. This market is highly competitive and competition is based primarily on service, availability, and price. Customers of the Completion Fluids & Products Division include significant oilfield service companies, major and independent U.S. and international oil and gas producers, and U.S. and international chemical providers. The Division also sells its CBF products through various distributors.

The Completion Fluids & Products Division's liquid and dry calcium chloride products have a wide range of uses outside the energy industry. Non-energy market segments where these products are used include water treatment, industrial, food processing, road maintenance, ice melt, agricultural, and consumer products. We also sell sodium bromide into industrial water treatment markets as a biocide under the BioRid® tradename. Most of these markets are highly competitive. The Completion Fluids & Products Division's European calcium chloride operations market our calcium chloride products to certain European markets. Our principal competitors in the non-energy related calcium chloride markets include Occidental Chemical Corporation and Vitro in North America and NedMag in Europe.

Water & Flowback Services Division

The Water & Flowback Services Division provides comprehensive water management and frac flowback services to a wide-range of onshore oil and gas operators located in all active North America unconventional oil and gas basins.

The Division also provides frac flowback services, early production facilities and services, production well testing services, sand filtration, and other associated services in various domestic and international locations, including well flow management and evaluation services that enable operators to quantify oil and gas reserves, optimize oil and gas production, and minimize oil and gas reservoir production damage.

The water management, flowback, and production testing markets are highly competitive, and competition is based on availability of appropriate equipment and qualified personnel, as well as price, quality of service, and safety record. The Division's skilled personnel, operating procedures, integrated closed-loop water management solution, automation systems, and safety record give us a competitive advantage. Competition in the U.S. water management markets includes Select Energy and various regional companies, while competition in onshore U.S. production testing markets is primarily dominated by numerous small, privately owned operators. Halliburton and Schlumberger are competitors in the international production testing markets we serve although we provide these services to their customers on a subcontract basis from time to time. Customers for the Water & Flowback Services Division include major integrated and independent U.S. and international oil and gas producers that are active in the areas in which we operate.

No single customer provided 10% or more of our total consolidated revenues during the years ended December 31, 2021 or 2020. One customer provided more than 10% of our total consolidated revenues during the year ended December 31, 2019.

Other Business Matters

Human Capital Management

We collaborate as a team to execute for each other, our customers, and our shareholders. As of December 31, 2021, we had approximately 1,100 people worldwide. None of our U.S. employees are presently covered by a collective bargaining agreement. Our employees outside the U.S. are generally members of labor unions and associations in the countries in which they are employed. We believe that our relations with our employees are good.

Diversity and Inclusion

The diversity of our global workforce stimulates creativity and innovation as we use our collective talents to develop unique solutions to address the world's energy challenges. Our executive management sponsored Diversity & Inclusion Committee focuses on sharing information and promoting key initiatives across the company to educate and create awareness about the importance of a diverse and inclusive culture. The committee also assists the talent management group to attract, retain, develop, and reward a high-performing and diverse workforce, provide forums and sponsor training activities to share best practices concerning diversity and inclusion education, and develop communication platforms to share information about diversity and inclusion and promote the committee’s activities.

Career Development

The board of directors, the chief executive officer, and the vice president of Human Resources, evaluate, from time to time each year, executive development and succession planning to prepare us for future success. The succession planning process covers all senior management positions and certain other key positions. This review of executive talent determines readiness to take on additional leadership roles and identifies developmental opportunities needed to prepare our executives for greater responsibilities. Our short and long-term business strategy is considered when evaluating candidates and their skills.

Compensation and Benefits

The Company’s compensation programs are designed to incentivize performance, maximize returns, and build shareholder value. We work with consultants to benchmark our compensation and benefits programs to help us offer competitive compensation packages to attract and retain high-performing talent. We also offer competitive benefits to attract and retain exceptional talent.

Safety

Recognizing that safety, service quality, and environmental protection are conditions of employment, all employees and contractors are responsible for their safety, the safety of those around them, the quality of their work, and protection of the environment. As part of our safety-focused culture, it is customary that each meeting starts with an employee-led safety moment.

To ensure our work remains safe and of the highest quality, the Company has a comprehensive HSEQ Management System and program designed to improve the capacity of the organization by controlling worksite risks, developing proper work practices and procedures, and empowering employees with stop-work authority if they observe unsafe conditions, omissions, errors, or actions that could result in safety or environmental incidents, or product and service quality issues. If an incident takes place, we investigate all serious occurrences to root causes and implement corrective actions to ensure we expand our capacity to operate safely.

Driving is one of the highest exposure activities that we undertake in our day-to-day operations. We maintain a fleet of DOT and non-DOT vehicles and provide positive, real-time behavior feedback to our drivers via real-time monitors. Coupled with Journey Management, vehicle selection guidelines, and driver training, we have a comprehensive approach to reducing our driving exposure and incidents.

Proprietary Technology and Trademarks

As of December 31, 2021, we owned or licensed 42 issued U.S. patents and had 9 patent applications pending in the United States. We also had 19 owned or licensed patents and 39 patent applications pending in various other countries. The foreign patents and patent applications are primarily foreign counterparts to certain of our U.S. patents or patent applications. The issued patents expire at various times through 2037. We have elected to maintain certain other internally developed technologies, know-how, and inventions as trade secrets. While we believe that our patents and trade secrets are important to our competitive positions in our businesses, we do not believe any one patent or trade secret is essential to our success.

It is our practice to enter into confidentiality agreements with key employees, consultants and third parties to whom we disclose our confidential and proprietary information, and we have typical policies and procedures designed to maintain the confidentiality of such information. There can be no assurance, however, that these measures will prevent the unauthorized disclosure or use of our trade secrets and expertise, or that others may not independently develop similar trade secrets or expertise.

We sell various products and services under a variety of trademarks and service marks, some of which are registered in the United States or other countries.

Health, Safety, and Environmental Affairs Regulations

Our service and sales operations and manufacturing plants are subject to stringent and complex U.S. and foreign health, safety, and environmental laws and regulations. Although we are committed to conducting all of our operations under the highest standards of safety and respect for the environment, risks of substantial costs and liabilities pursuant to such laws and regulations are inherent in certain of our operations and in the development and handling of certain products and equipment produced or used at our plants, well locations, and worksites. Because of these risks, there can be no assurance that significant costs and liabilities will not be incurred now or in the future. Changes in environmental and health and safety laws and regulations could subject us to more rigorous standards and could affect demand for our customers' products which in turn would impact demand for our products. We cannot predict the extent to which our operations may be affected by any changes to existing laws, regulations and enforcement policies, new interpretations of existing laws, regulations and policies, or any new laws, regulations, or policies promulgated in the future.

We are subject to numerous federal, state, local, and foreign laws and regulations relating to health, safety, and the environment, including regulations regarding air emissions, wastewater and storm water discharges, and the disposal of certain hazardous and nonhazardous wastes. Compliance with such laws and regulations may expose us to significant costs and liabilities, and cause us to incur significant capital expenditures in our operations. Failure to comply with these laws and regulations or associated permits may result in the assessment of administration, civil or criminal fines and penalties, the imposition of other corrective action obligations or other injunctive relief, or both.

Our operations in the United States are subject to various evolving environmental laws and regulations that are enforced by the U.S. Environmental Protection Agency ("EPA"); the Bureau of Safety and Environmental Enforcement ("BSEE") of the U.S. Department of the Interior; the U.S. Coast Guard; and various other federal, state, and local environmental authorities. Similar laws and regulations, designed to protect the health and safety of our employees and visitors to our facilities, are enforced by the U.S. Occupational Safety and Health Administration, and other state and local agencies and authorities. Some of the primary environmental laws and regulations applicable to our operations include: (i) the Federal Water Pollution Control Act of 1972 (the "Clean Water Act"); (ii) the Resource Conservation and Recovery Act of 1976; (iii) the Clean Air Act of 1977 ("CAA"); (iv) the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("CERCLA"); (v) the Superfund Amendments and Reauthorization Act of 1986; (vi) the Toxic Substances Control Act of 1976; (vii) the Hazardous Materials Transportation Act of 1975; (viii) the Pollution Prevention Act of 1990; and (ix) the Endangered Species Act of 1973 ("ESA"). Our operations outside the United States are subject to various foreign governmental laws and regulations relating to the environment, health and safety, and other regulated activities in the countries in which we operate, which may in some cases impose more stringent requirements than applicable laws in the United States.

Our operations routinely involve the handling of hydrocarbons and produced water. Hydrocarbons or hazardous and nonhazardous wastes may have been released during our operations, by third parties on wellhead sites where we provide services or store our equipment, or on or under other locations where wastes have been

taken for disposal. Although most wastes associated with the exploration, development and production of oil and natural gas are currently exempt from the more stringent hazardous waste regulations under RCRA and its state analogs, it is possible that some of the material we handle now or may handle in the future may be subject to regulation under RCRA as a hazardous waste. Additionally, we cannot assure you that such materials will not be subject to more stringent requirements or characterized as hazardous wastes in the future. Separately, properties where such hydrocarbons and/or wastes are released or disposed of may be subject to investigatory, remediation, and monitoring requirements under foreign, federal, state, and local environmental laws and regulations. CERCLA and comparable state laws and regulations impose strict, joint, and several liabilities without regard to fault or the legality of the original conduct on certain classes of persons that contributed to the release of a hazardous substance into the environment. These persons include the owner or operator of a disposal site where a hazardous substance release occurred and any person that transported, disposed of, or arranged for the transport or disposal of such hazardous substances released at a site. Under CERCLA, such persons may be liable for the costs of remediating the hazardous substances that have been released into the environment, for damages to natural resources and for the costs of certain health studies.

The CAA and its implementing regulations, and comparable state laws and regulations, regulate the emissions of air pollutants from various industrial sources and impose monitoring and reporting requirements. These laws and regulations impose limits on the levels of various substances that may be emitted into the atmosphere. For example, in June 2016, the EPA adopted regulations under its New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants that establish air emission controls for natural gas and natural gas liquids production, processing and transportation activities. These rules establish specific requirements associated with volatile organic compounds and methane emissions from certain hydraulically fractured natural gas wells, production-related wet seal and reciprocating compressors, and pneumatic controllers and storage vessels, and further require that most hydraulically fractured natural gas wells use so-called “green” completions. While the EPA under the Trump Administration finalized rules to rescind or modify certain of these requirements in September 2020, subsequently, the United States Congress approved, and President Biden signed into law, a resolution under the Congressional Review Act to repeal the September 2020 revisions, effectively reinstating the prior standards. Additionally, in November 2021, EPA issued a proposed rule that, if finalized, would establish OOOO(b) new source and OOOO(c) first-time existing source standards of performance for methane and volatile organic compound emissions for oil and gas facilities. Operators of affected facilities will have to comply with specific standards of performance to include leak detection using optical gas imaging and subsequent repair requirement, and reduction of emissions by 95% through capture and control systems. EPA plans to issue a supplemental proposal in 2022 containing additional requirements not included in the November 2021 proposed rule and anticipates the issuance of a final rule by the end of the year. We cannot predict the scope of any final methane regulatory requirements or the cost to comply with such requirements. However, additional or more stringent regulations could impose new air permitting or pollution control requirements on our equipment that could require us to incur material costs.

In accordance with Section 402 of the Clean Water Act, the EPA is authorized to issue National Pollutant Discharge Elimination System (“NPDES”) General Permits to regulate offshore discharges in the Gulf of Mexico which includes Treatment, Completion and Workover (“TCW”) fluids. Our operations include providing services and materials to oil and gas operators for the use of TCW fluids in the Gulf of Mexico. The EPA’s current NPDES permit for oil and gas operations in the federal waters of the Gulf of Mexico expires on September 30, 2022. While the terms of any subsequent NPDES General Permit applicable to our customers’ operations are uncertain at this time, any additional restrictions on oil and gas operation in the Gulf of Mexico under the Clean Water Act, could have an indirect effect on us. In addition, the Clean Water Act, and comparable state laws and regulations thereunder, also prohibit the discharge of pollutants into regulated waters without a permit, including industrial wastewater discharges and storm water runoff, and establish limits on the levels of pollutants contained in such discharges.

The modification or reinterpretation of existing environmental laws or regulations, the more vigorous enforcement of existing environmental laws or regulations, or the adoption of new environmental laws or regulations could adversely affect oil and natural gas exploration and production operations, which in turn could have an adverse effect on us. For example, the federal government regularly evaluates new species for listing under the ESA. The ESA provides broad protection for species of fish, wildlife and plants that are listed as threatened or endangered, as well as certain “critical habitat” for such species. Similar protections are offered to migratory birds under the Migratory Bird Treaty Act. The listing of any new species, the relisting of a species from threatened to endangered, or the designation of critical habitat for any such species may cause us or our customers to incur additional costs or become subject to operating restrictions or bans at certain times or in certain areas. Separately, regulators at both the federal and state levels have spent increasing attention on matters related to oil and gas operations, particularly hydraulic fracturing and the emission of greenhouse gases (“GHGs”). For more information, see our risk factors titled “Our operations, and those of our suppliers and customers, are subject to a series of risks

arising from climate change" and "Regulatory initiatives related to hydraulic fracturing in the countries where we and our customers operate could result in operating restrictions or delays in the completion of oil and gas wells that may reduce demand for our services."

We maintain various types of insurance intended to reimburse us for certain costs in the event of an accident, including an explosion or similar event, involving our onshore and offshore operations. Our insurance program is reviewed not less than annually with our insurance brokers and underwriters. Such insurance policies may not cover, or may only partially cover, certain losses or claims, which could result in a material adverse effect on our business and operations.

Item 1A. Risk Factors.

Certain Business Risks

Although it is not possible to identify all of the risks we encounter, we have identified the following significant risk factors that could affect our actual results and cause actual results to differ materially from any such results that might be projected, forecasted, or estimated by us in this Annual Report.

Market Risks

The demand and prices for our products and services are affected by several factors, including the supply, demand, and prices for oil and natural gas.

Demand for our services and products is particularly sensitive to the level of exploration, development, and production activity of, and the corresponding capital spending by, oil and natural gas companies. The level of exploration, development, and production activity is directly affected by oil and natural gas prices, which historically have been volatile and are likely to continue to be volatile. Prices for oil and natural gas are subject to large fluctuations in response to relatively minor changes in the supply of and demand for oil and natural gas, market uncertainty, and a variety of other economic factors that are beyond our control.

Oil prices fell beginning in early 2020 and recovered during 2021 and into early 2022. West Texas Intermediate oil prices averaged $39.16 per barrel during 2020 and improved to an average of $77.33 per barrel during the fourth quarter of 2021. The West Texas Intermediate price averaged $68.14 per barrel during 2021. Over this same period, U.S. natural gas prices have also been volatile, with the Henry Hub price ranging from a high of $23.86 per million British thermal units ("MMBtu") in February 2021 to a low of $1.33 per MMBtu in September 2020 and averaged $2.03 and $3.89 per MMBtu during 2020 and 2021, respectively. As of February 25, 2022, the price of West Texas Intermediate oil was $91.90 per barrel and the Henry Hub price for natural gas was $4.48 per MMBtu. The prolonged volatility and low levels of oil and natural gas prices and supply and demand imbalances depressed levels of exploration, development, and production activity during 2020 and early 2021. If the drop in oil and natural gas prices experienced in 2020 and early 2021 returns or further declines and the supply and demand imbalances persist, there would be a material adverse effect on our business, consolidated results of operations, and consolidated financial condition. Should current market conditions worsen for an extended period of time, we may be required to record additional asset impairments. Such potential impairment charges could have a material adverse impact on our operating results.

Factors affecting the prices of oil and natural gas include: the level of supply and demand for oil and natural gas, worldwide; governmental regulations, including the policies of governments regarding the exploration for and production and development of their oil and natural gas reserves; weather conditions, natural disasters, and health or similar issues, such as pandemics or epidemics; worldwide political, military, and economic conditions; the ability or willingness of the Organization of Petroleum Exporting Countries ("OPEC") and non-OPEC countries, such as Russia, to set and maintain oil production levels; the levels of oil production in the U.S. and by other non-OPEC countries; oil refining capacity and shifts in end-customer preferences toward fuel efficiency and the use of natural gas; the cost of producing and delivering oil and natural gas; and acceleration of the development of, and demand for, alternative energy sources.

The COVID-19 pandemic has had, and may in the future have, certain negative impacts on our business, and such impacts have had, and may in the future have, an adverse effect on our business, our financial condition, results of operations, or liquidity.

The COVID-19 pandemic and the resulting economic impact have had a significant negative impact on the oil and gas industry. In addition to the deterioration in demand for oil in 2020 which had an adverse impact on the demand for our products and services, the public health crisis caused by the COVID-19 pandemic, and the measures that have been taken or that may be taken in the future by governments, various regulatory agencies, our customers and our suppliers, have had, and may in the future have, certain negative impacts on our financial condition, results of operations, and liquidity, including, without limitation, the following:

- actions undertaken by national, state and local governments and health officials to contain COVID-19 or treat its effects. In response to various governmental directives, at points we have required most office-based employees, including most employees based at our headquarters in The Woodlands, Texas, to work remotely. We may experience reductions in productivity and disruptions to our business routines to the extent work-from-home arrangements remain in place;
- We could encounter logistical complications and increased costs adapting our disclosure controls and procedures and our internal control over financial reporting in a changing environment that includes work-from-home arrangements and furloughs. In the future we may encounter operational challenges or disruptions stemming from the pandemic that require us to implement new or enhanced internal controls to mitigate the risks of operating in a remote environment or increased risks of material misstatements resulting from changes to the business and other uncertainties;
- restrictions on importing and exporting products;
- higher logistics costs and global shipping delays;
- impacts related to late customer payments and contractual defaults associated with customer and supplier bankruptcies;
- potentially higher borrowing costs in the future;
- cybersecurity issues, as our network may become more vulnerable to cyberattacks due to increased remote access associated with work-from-home arrangements;
- our ability to use our net operating loss carryforwards may be limited;
- increased costs associated with possible facility closures to meet expected customer activity levels; and
- we may be required to record significant impairment charges with respect to assets, whose fair values may be negatively affected by the effects of the COVID-19 pandemic on our operations. Also, we may be required to write off obsolete inventory, and such charges may be significant.

Any of the negative impacts of the COVID-19 pandemic, including those described above, alone or in combination with others, may have a significant adverse effect on our financial condition, results of operations, or liquidity. The full extent to which the COVID-19 pandemic will negatively affect our financial condition, results of operations, or liquidity will depend on future developments that are highly uncertain and cannot be predicted, including the scope and duration of the pandemic, the COVID-19 infection rate, the outbreak of new COVID-19 variants, the efficacy of distribution of COVID-19 vaccines, the actions taken by authorities to contain it or treat its impact and the resulting impact on the oil and gas industry. Given the dynamic nature of these events, we cannot reasonably estimate the period of time that the COVID-19 pandemic and related market conditions will persist, the full extent of the impact they will have on our financial condition, results of operations, or liquidity or the pace or extent of any subsequent recovery.

We encounter, and expect to continue to encounter, intense competition in the sale of our products and services.

We compete with numerous companies in each of our operating segments, many of which have substantially greater financial and other resources than we have. Certain of our competitors have lower standards of quality, and offer equipment and services at lower prices than we do. Other competitors have newer equipment that is better suited to our customers' needs. Particularly during a period of low oil and natural gas pricing, to the extent competitors offer products or services at lower prices or higher quality, or more cost-effective products or services, our business could be materially and adversely affected. In addition, certain of our customers may elect to perform services internally in lieu of using our services, which could also materially and adversely affect our operations.

The profitability of our operations is dependent on other numerous factors beyond our control.

Our operating results in general, and gross profit in particular, are determined by market conditions and the products and services we sell in any period. Other factors, such as heightened competition, changes in sales and distribution channels, availability of skilled labor and contract services, shortages in raw materials, or inability to obtain supplies at reasonable prices, may also affect the cost of sales and the fluctuation of gross margin in future periods.

Other factors affecting our operating results and activity levels include oil and natural gas industry spending levels for exploration, completion, production, development, and acquisition activities, and impairments of long-lived assets. Customer consolidation may also lead to reductions in capital spending that could have a material adverse effect on our business. Low oil prices and the supply and demand imbalance are expected to adversely affect such levels of spending in the oil and natural gas industry. In addition, Completion Fluids & Products Division profitability in future periods will continue to be affected by the mix of its products and services, including the timing of TETRA CS Neptune completion fluid projects, which are also dependent upon the success of customer offshore exploration and drilling efforts. If our customers reduce capital expenditures, such reductions may have a negative effect on the demand for many of our products and services and on our revenues and results of operations. A large concentration of our operating activities is located in the Permian Basin region of Texas and New Mexico. Our revenues and profitability are particularly dependent upon oil and natural gas industry activity and spending levels in this region. Our operations may also be affected by technological advances, cost of capital, and tax policies. Adverse changes in any of these other factors may have a material adverse effect on our revenues and profitability.

We hold minority investments in both publicly-traded and privately-held companies. Over time, the fair value of these investments may fluctuate significantly causing volatility in our financial results.

As of December 31, 2021, we hold approximately 3.8% of the outstanding CSI Compressco common units, which had a fair value of $6.2 million. The value of our investment in CSI Compressco may be adversely affected by negative changes in its results of operations, cash flows and financial position, which may occur as a result of the many risks attendant with operating in the compression services industry. We are party to agreements in which Standard Lithium has the right to explore, produce and extract Lithium in our Arkansas leases as well as additional potential resources in the Mojave region of California. The company receives cash and stock of Standard Lithium under the terms of the arrangements. If we elect to hold Standard Lithium stock received under these agreements, our operating results could be significantly affected by fluctuations in the market value of our stock holding. As of December 2021, we also hold a $5.0 million investment in a convertible note issued by CarbonFree. This note will be subject to fair value measurement adjustments which will affect our financial results and there can be no assurance that it will ultimately be repaid or converted into equity of CarbonFree.

Changes in the economic environment have resulted, and could further result, in significant impairments of certain of our long-lived assets.

Under U.S. generally accepted accounting principles ("U.S. GAAP"), we review the carrying value of our long-lived assets when events or changes in circumstances indicate that the carrying value of these assets may not be recoverable, based on their expected future cash flows. The impact of reduced expected future cash flow could require the write-down of all or a portion of the carrying value for these assets, which would result in additional impairments, resulting in decreased earnings. During the three-year period ending December 31, 2021, we recorded a total of $93.2 million of impairments and other charges for long-lived assets other than goodwill. Most significantly, during the fourth quarter of 2019, we recorded an impairment of $91.6 million in our Completion Fluids & Products Division related to our El Dorado, Arkansas calcium chloride production plant facility assets as a result of a reduction in the cost of raw materials for certain of our other chemical production plants and reduced demand for calcium chloride from the El Dorado plant due to general market conditions in the oil and gas industry. Depressed commodity prices and/or adverse changes in the economic environment could result in a greater decrease in the demand for many of our products and services, which could impact the expected utilization rates of certain of our long-lived assets, including plant facilities, operating locations, and operating equipment.

As part of our internal annual business outlook for each of our reporting units that we performed during the fourth quarter of 2019, we considered changes in the global economic environment that negatively impacted our stock price and market capitalization. As part of the first step of goodwill impairment testing for our Water Management reporting unit (part of our Water & Flowback Services Division) as of December 31, 2019, the only reporting unit with goodwill, we determined that the fair value of the Water Management reporting unit was less than

its carrying value, and the remaining balance of $25.9 million of goodwill was impaired. Additional internal annual business outlook analyses for each of our reporting units that we performed during the fourth quarters of 2020 and 2021 did not indicate additional impairments.

We are dependent on third-party suppliers for specific products and equipment necessary to provide certain of our products and services.

We sell a variety of CBFs to the oil and gas industry and non-energy markets, including calcium chloride, calcium bromide, zinc bromide, zinc calcium bromide, sodium bromide, formate-based brines, and our TETRA CS Neptune fluids, some of which we manufacture and some of which are purchased from third parties. Sales of these products contribute significantly to our revenues. In our manufacture of calcium chloride, we use brines, hydrochloric acid, and other raw materials purchased from third parties. In our manufacture of brominated CBF products, we use elemental bromine, hydrobromic acid, and other raw materials that are purchased from third parties. There are several raw materials for which there are only a limited number of suppliers or a single supplier. For example, we are currently required to purchase all of our requirements of elemental bromine, up to a certain specified maximum, from Lanxess under a long-term supply agreement. To mitigate potential supply constraints, we enter into supply agreements with particular suppliers, including Lanxess. We also evaluate alternative sources of supply to avoid reliance on limited or sole-source suppliers when possible. Although we have long-term supply agreements with Lanxess, there is no assurance that we will have an adequate supply of elemental bromine or the other raw materials required for all of our CBFs opportunities, or that such raw materials will be available at reasonable prices. Economic sanctions and other regulations imposed by the United States and other international countries as a result of the conflict involving Russia and Ukraine may disrupt supplies or affect the prices of certain raw materials. Should the conflict in Ukraine or other international locations further escalate, it is difficult to anticipate the extent to which current or future sanctions could increase our costs, disrupt our supplies, reduce our sales or otherwise affect our operations. If we are unable to acquire these raw materials at reasonable prices, or at all, for a prolonged period, our Completion Fluids & Products Division business could be materially and adversely affected.

Operating and Technological Risks

We have technological and age-obsolescence risk, both with our products and services as well as with our equipment assets.

New drilling, completion, and production technologies and equipment are constantly evolving. If we are unable to adapt to new advances in technology or replace older assets with new assets, we are at risk of losing customers and market share. Certain equipment, such as a portion of our production testing equipment fleet, may be inadequate to meet the needs of our customers in certain markets. The permanent replacement or upgrade of any of our equipment will require significant capital. Due to the unique nature of many of these assets, finding a suitable or acceptable replacement may be difficult and/or cost prohibitive. The replacement or enhancement of these assets over the next several years may be necessary in order for us to effectively compete in the current marketplace.

Our operations involve significant operating risks and insurance coverage may not be available or cost-effective.

We are subject to operating hazards normally associated with the oilfield service industry, including automobile accidents, fires, explosions, blowouts, formation collapse, mechanical problems, abnormally pressured formations, and environmental accidents. Environmental accidents could include, but are not limited to, oil and produced water spills, gas leaks or ruptures, uncontrollable flows of oil, gas, or well fluids, or discharges of CBFs or toxic gases or other pollutants. These operating hazards may also include injuries to employees and third parties during the performance of our operations.

We have maintained a policy of insuring our risks of operational hazards that we believe is customary in the industry. We believe that the limits of insurance coverage we have purchased are consistent with the exposures we face and the nature of our products and services. Due to economic conditions in the insurance industry, from time to time, we have increased our self-insured retentions for certain policies in order to minimize the increased costs of coverage, or we have reduced our limits of insurance coverage for, or not procured, certain coverage. In certain areas of our business, we, from time to time, have elected to assume the risk of loss for specific assets. To the extent we suffer losses or claims that are not covered, or are only partially covered by insurance, our results of operations could be adversely affected.

We are subject to a number of risks associated with the GP Sale, and these risks could adversely impact our operations, financial condition and business.

On January 29, 2021, we closed the sale of CSI Compressco's general partner and approximately 23.1% of the outstanding limited partner interests in CSI Compressco to Spartan. We are subject to a number of risks associated with this transaction, including risks associated with:

- any required payments of indemnification obligations under the Purchase Agreement for retained liabilities and breaches of representations, warranties or covenants; and
- our failure to realize the full purchase price anticipated under the Purchase Agreement, including the ability of CSI Compressco to generate adjusted EBITDA on or prior to December 31, 2022 sufficient to result in payment of the contingent consideration.

As a result of these risks, we may be unable to realize the anticipated benefits of the transaction, including the total amount of consideration we expect to realize. Our failure to realize the anticipated benefits of the transaction would adversely impact our operations, financial condition and business and could limit our ability to pursue additional strategic transactions.

We may not be able to economically extract lithium or bromine from the leased acreage in our Arkansas brine leases.

Our Arkansas brine leases currently only contain exploration targets of lithium and bromine, and we may never discover proven mineral reserves on these properties. While we continue to evaluate the next steps regarding the potential development of our brine leases, we have only very recently started to conduct exploration work on the leases, and we are not currently able to determine the economic viability of the extraction of the lithium and bromine from the leased acreage. In addition, the extraction of lithium and bromine from these brine leases will likely require a significant amount of time and capital, which we are not able to estimate at this time and which may not be available to us on acceptable terms or at all. There can be no assurance that any future exploration efforts on these properties will be successful. As a result of these uncertainties, no assurance can be given that any future exploration programs will result in the discovery of commercial mineral resources or reserves.

Failure to effectively and timely execute our any of our low carbon energy initiatives could have an adverse effect on business and financial condition.

Our future success may depend on our ability to effectively execute on our low carbon energy initiatives. This strategy depends on our ability to effectively develop new technologies, expand application of our global infrastructure and chemistry expertise and on the economic viability of the extraction of lithium and bromine from the leased acreage. The exploration, development and extraction of brine and lithium from our Arkansas brine leases will likely require significant time and capital, and there is no guarantee of a return from these operations. Our low carbon energy initiatives may also depend in part on successful development of partnerships with other companies, such as our partnership and investment in CarbonFree, and such partners' execution of their own respective projects and business strategies. If we, or the projects or partners we invest in, fail to execute our low carbon energy initiatives as planned, or if execution of such initiatives requires more time and capital than expected, demand for our technologies, services and mineral assets and consequently, our business, results of operations and financial condition could be adversely affected.

Weather-Related Risks

Certain of our operations are seasonal and depend, in part, on weather conditions.

In certain markets, the Water & Flowback Services Division's onshore water management services can be dependent on adequate water supplies being available to its customers. To the extent severe drought or other weather-related conditions prevent our customers from obtaining needed water, frac water operations may not be possible and our Water & Flowback Services Division business may be negatively affected.

Severe weather, including named windstorms, and severe winter weather, can cause damage and disruption to our businesses.

A portion of our operations is susceptible to adverse weather conditions in the Gulf of Mexico, including hurricanes and other extreme weather conditions. Our 2021 results reflect an estimated unfavorable impact of $3.1 million due to the severe weather conditions during February that shut down fracking activity in several of our key markets and negatively impacted the supply chain for our industrial chemicals operations. Even if we do not experience direct damage from storms, we may experience disruptions in our operations, because we are unable to operate or our customers or suppliers may curtail their activities due to damage to their wells, platforms, pipelines, and facilities. From time to time, our onshore operations are also negatively affected by adverse weather conditions, including sustained rain and flooding. Severe weather during the winter may also have a significant impact on natural gas storage levels and reduce drilling activity and other customer activity substantially.

Financial Risks

The market price of our common stock has been and may continue to be volatile.

The market price of our common stock has fluctuated in the past and is subject to significant fluctuations in response to many factors, some of which are beyond our control, including the following:

- our operational performance;
- supply, demand, and prices of oil and natural gas;
- the activity levels of our customers;
- deviations in our earnings from publicly disclosed forward-looking guidance or analysts’ projections;
- recommendations by research analysts that cover us and other companies in our industry;
- risks related to acquisitions, divestitures and our growth strategy;
- uncertainty about current global economic conditions; and
- other general economic conditions.

During 2021, the closing price for our common stock ranged from a high of $4.49 per share to a low of $0.86 per share. In recent years, the stock market in general has experienced extreme price and volume fluctuations that have affected the market price for companies in industries similar to ours. Some of these fluctuations have been unrelated to operating performance and are attributable, in part, to outside factors such as the COVID-19 pandemic and its impact on the world economy. The volatility of our common stock may make it difficult to resell shares of our common stock at attractive prices.

Our long-term debt agreements contain covenants and other provisions that restrict our ability to take certain actions and may limit our ability to operate or grow our business in the future.

As of December 31, 2021, our total long-term debt outstanding of $151.9 million consisted of the carrying amount outstanding under our credit agreement (the “Term Credit Agreement”) and our Asset-Based Credit Agreement (the “ABL Credit Agreement”), both of which we entered into in September 2018. Following the closing of the GP Sale on January 29, 2021, we were required to use all net cash proceeds from the sale to repay borrowings under our Term Credit Agreement.

The ABL Credit Agreement and Term Credit Agreement each contain certain affirmative and negative covenants, including covenants that restrict the ability of TETRA and certain of its subsidiaries to take certain actions including, among other things and subject to certain significant exceptions, (i) incurring debt, (ii) granting liens, (iii) engaging in mergers and other fundamental changes, (iv) making investments, (v) entering into, or amending, transactions with affiliates, (vi) paying dividends and making other restricted payments, (vii) prepaying other indebtedness, and (viii) selling assets. The ABL Credit Agreement also contains a provision that may require a fixed charge coverage ratio (as defined in the ABL Credit Agreement) of not less than 1.00 to 1.00 in the event that certain conditions associated with outstanding borrowings and cash availability occur. The Term Credit Agreement also contains a requirement that the borrowers comply at the end of each fiscal quarter with a minimum Interest Coverage Ratio (as defined in the Term Credit Agreement) of 1.00 to 1.00. Our Term Credit Agreement requires us to annually prepay up to 50% of Excess Cash Flow (as defined in the Term Credit Agreement) from the most recent full fiscal year. If our Leverage Ratio (as defined in the Term Credit Agreement) at year-end is less than 2.00 to 1.00,

the prepayment requirement is decreased to 25%. If our Leverage Ratio at year-end is less than 1.50 to 1.00, then no prepayment is required.

Our continuing ability to comply with covenants in our Long-Term Debt Agreements depends largely upon our ability to generate adequate earnings and operating cash flow.

We have continuing exposure to abandonment and decommissioning obligations associated with oil and gas properties previously owned by Maritech.

From 2001 to 2012, our former subsidiary, Maritech Resources, Inc. (“Maritech”), sold various oil and gas producing properties in numerous transactions to different buyers. In connection with those sales, the buyers generally assumed the decommissioning liabilities associated with the properties sold (the “Legacy Liabilities”) and generally became the successor operator. In some cases, Maritech retained certain liabilities and we provided guaranties of Maritech’s retained liabilities. Some buyers of these Maritech properties subsequently sold certain of these properties to other buyers, who also assumed the financial responsibilities associated with the properties’ operations, including decommissioning liabilities, and these buyers also typically became the successor operator of the properties. To the extent that a buyer of these properties fails to perform the decommissioning work required, a previous owner, including Maritech, may be required to perform operations to satisfy the decommissioning liabilities. As a result of the third-party indemnity agreements and corporate guaranties we have previously provided, we may be responsible for satisfying these obligations if they are not satisfied by the current owners and operators of the properties or by Maritech. Significant decommissioning liabilities that were assumed by the buyers of the Maritech properties in these previous sales remain unperformed. If these buyers, or any successor owners of the Maritech properties, are unable to satisfy and extinguish their decommissioning liabilities due to bankruptcy or other liquidity issues, the U.S. Department of the Interior may seek to impose those obligations on Maritech and on us. The amount of cash necessary to satisfy these obligations could be significant and could adversely affect our business, results of operations, financial condition, and cash flows.

In March 2018, pursuant to a series of transactions, Maritech sold the remaining offshore leases held by Maritech to Orinoco Natural Resources, LLC (“Orinoco”) and, immediately thereafter, we sold all equity interest in Maritech to Orinoco. The assignments for all of the offshore leases conveyed to Orinoco have now been approved by the U.S. Department of the Interior and Orinoco (or its successors in interest) own these leases. Maritech also remains a recognized owner of one additional lease and remains an operator of a portion of four other offshore leases, two of which have either been relinquished or expired. Maritech was also a lessee on six leases when they expired and which have unsatisfied decommissioning liabilities. Under the Maritech Asset Purchase Agreement, Orinoco assumed all of Maritech’s decommissioning liabilities related to the leases conveyed to Orinoco (the “Orinoco Lease Liabilities”) and, under the Maritech Membership Interest Purchase Agreement, Orinoco assumed all other liabilities of Maritech, including the Legacy Liabilities, subject to limited exceptions unrelated to the decommissioning liabilities. Our guarantees may still cover these liabilities. Pursuant to a Bonding Agreement executed in connection with such purchase agreements, Orinoco provided non-revocable bonds in the aggregate amount of approximately $46.8 million to secure the performance of certain of Maritech’s decommissioning obligations related to the Orinoco Lease Liabilities and certain of Maritech’s remaining current decommissioning obligations (not including the Legacy Liabilities, the “Initial Bonds”). Orinoco was required to replace the Initial Bonds delivered at closing with other non-revocable performance bonds but has not done so. See Note 11 - “Commitments and Contingencies” in the Notes to Consolidated Financial Statements for further discussion of status of bond replacement.

If in the future we become liable for decommissioning liabilities associated with any property covered by either an Initial Bond or Replacement Bonds, the Bonding Agreement provides that if we call any of the Initial Bonds or the Interim Replacement Bonds to satisfy such liability and the amount of the bond payment is not sufficient to pay for such liability, Orinoco will pay us for the additional amount required. To the extent Orinoco is unable to cover any such deficiency or we become liable for a significant portion of the Legacy Liabilities, our financial condition and results of operations may be negatively affected.

Possible changes in the U.S. Department of Interior’s supplemental bonding and financial assurance requirements may increase our risks associated with the decommissioning obligations pertaining to oil and gas properties previously owned by Maritech.

Recent and additional anticipated changes to the supplemental bonding and financial assurance program managed by the U.S. Department of the Interior could require all oil and gas owners and operators with infrastructure in the Gulf of Mexico to provide additional supplemental bonds or other acceptable financial

assurance for decommissioning liabilities. These changes have the potential to adversely impact the financial condition of lease owners and operators in the Gulf of Mexico and increase the number of such owners and operators seeking bankruptcy protection, given current oil and gas prices. In July 2016, the U.S. Department of the Interior issued a Notice to Lessees and Operators (“2016 NTL”) that strengthened requirements for the posting of additional financial assurance by offshore lease owners and operators to assure that sufficient security is available to satisfy and extinguish decommissioning obligations with respect to offshore wells, platforms, pipelines and other facilities. The 2016 NTL, which became effective in September 2016, eliminated the past practice of waiving supplemental bonding requirements where lease owners or operators, or their guarantors, could demonstrate a certain level of financial strength. Instead, under the 2016 NTL, the U.S. Department of the Interior indicated that it would allow lease owners and operators to “self-insure,” but only up to 10% of their “tangible net worth,” which is defined as the difference between a company’s total assets and the value of all liabilities and intangible assets. It is unclear how this self-insurance allowance relates to lease owners or operators with a guarantor presently in place.

Although the U.S. Department of the Interior under the Trump Administration ultimately rescinded the 2016 NTL in 2020, the Biden Administration could seek to reconsider the changes made by the U.S. Department of the Interior under the Trump Administration and, should the Biden Administration re-issue and fully implement guidance or rules analogous to, or more rigorous than, the 2016 NTL, such developments could increase operating costs for lease owners and operators in the Gulf of Mexico and reduce the availability of surety bonds due to the increased demands for such bonds. As a result, there is significant uncertainty surrounding financial assurance obligations for Gulf of Mexico lease owners and operators and for us through the third-party indemnity agreements we have provided for Maritech liabilities to the U.S. Department of the Interior and/or to third parties through our private guarantees.

The U.S. Department of the Interior also recently increased its estimates for decommissioning liabilities in the Gulf of Mexico, causing the potential need for additional supplemental bonding and/or other financial assurances to be dramatically increased. When coupled with the volatile prices of oil and gas, it is difficult to predict the impact of the rule and regulatory changes already promulgated and as may be forthcoming by the U.S. Department of the Interior relating to financial assurance for decommissioning liabilities. Any revisions to the U.S. Department of the Interior’s supplemental bonding process could result in demands for the posting of increased financial assurances by owners and operators in the Gulf of Mexico, including Maritech, Orinoco and the other entities to whom Maritech divested its Gulf of Mexico assets, but such demands cannot be directly placed on us due to the fact that we are only a former parent company of Maritech and are only a guarantor as opposed to an actual lease owner or operator. This may force lease owners and operators of leases and other infrastructure in the Gulf of Mexico to obtain surety bonds or other forms of financial assurance, the costs of which could be significant. Moreover, anticipated changes to the bonding and financial assurance program for the Gulf of Mexico could result in the loss of supplemental bonding waivers for a large number of lease owners and operators of infrastructure in the Gulf of Mexico, which could in turn force these owners and operators to seek additional surety bonds which could exceed the surety bond market’s ability to provide such additional financial assurance. Lease owners and operators who have already leveraged their assets could face difficulty obtaining surety bonds because of concerns the surety may have about the priority of their liens on their collateral as well as the creditworthiness of such lease owners and operators. Consequently, anticipated changes to the bonding and financial assurance program could result in additional lease owners and operators in the Gulf of Mexico initiating bankruptcy proceedings, which in turn could result in the U.S. Department of the Interior seeking to impose decommissioning costs on predecessors in interest and providers of third-party indemnity agreements in the event that the current lease owners and/or operators cannot meet their decommissioning obligations. As a result, this could increase the risk that we may be required to step in and satisfy remaining decommissioning liabilities of Maritech and any buyer of the Maritech properties, including Orinoco, through our third-party indemnity agreements and private guarantees, which obligations could be significant and could adversely affect our business, results of operations, financial condition and cash flows.

We are exposed to significant credit risks.

We face credit risk associated with the significant amounts of accounts receivable we have with our customers in the energy industry. Many of our customers, particularly those associated with our onshore operations, are small- to medium-sized oil and gas operators that may be more susceptible to declines in oil and gas commodity prices or generally increased operating expenses than larger companies. Our ability to collect from our customers could be impacted by volatility in the oil and natural gas price environment and we may face increased credit risks if the price of oil were to fall and remain low for an extended period of time.

As discussed in the preceding risk factors, we face the risk of having to satisfy decommissioning liabilities on properties presently or formerly owned by Maritech. Continued decreased oil and natural gas prices have resulted in reduced revenues and cash flows for oil and gas lease owners and operators, including companies that have purchased Maritech properties or are joint owners in properties presently and formerly owned by Maritech and from whom Maritech is entitled to receive payments upon satisfaction of certain decommissioning obligations. Consequently, we face credit risk associated with the ability of these companies to satisfy their decommissioning liabilities. If these companies are unable to satisfy their obligations, it will increase the possibility that we will become liable for such decommissioning obligations in the future.

Our operating results and cash flows for certain of our subsidiaries are subject to foreign currency risk.

The operations of certain of our subsidiaries are exposed to fluctuations between the U.S. dollar and certain foreign currencies, particularly the euro, the British pound, the Mexican peso, and the Argentinian peso. Our plans to grow our international operations could cause this exposure from fluctuating currencies to increase. Historically, exchange rates of foreign currencies have fluctuated significantly compared to the U.S. dollar, and this exchange rate volatility is expected to continue. Significant fluctuations in foreign currencies against the U.S. dollar could adversely affect our balance sheet and results of operations.

We are exposed to interest rate risks with regard to our credit facility debt and future refinancing thereof.

As of December 31, 2021, we had $1.6 million outstanding balance under our ABL Credit Agreement and $163.1 million outstanding under our Term Credit Agreement. These credit facilities consist of floating rate loans that bear interest at an agreed upon percentage rate spread above London Interbank Offered Rate (“LIBOR”) or an alternate base rate. Accordingly, whenever we have amounts outstanding under these facilities, our cash flows and results of operations will be subject to interest rate risk exposure associated with the debt balance outstanding. We currently are not a party to an interest rate swap contract or other derivative instrument designed to hedge our exposure to interest rate fluctuation risk.

Our ABL Credit Agreement is scheduled to mature on May 31, 2025. Our Term Loan Agreement is scheduled to mature on September 10, 2025. There can be no assurance that financial market conditions or borrowing terms at the times these existing debt agreements are renegotiated will be as favorable as the current terms and interest rates. We may be unable to obtain financing in the future for working capital, capital expenditures, acquisitions, debt service requirements, or other purposes.

Legal, Regulatory, and Political Risks

Our operations are subject to extensive and evolving U.S. and foreign federal, state and local laws and regulatory requirements that increase our operating costs and expose us to potential fines, penalties, and litigation.

Laws and regulations govern our operations, including those relating to corporate governance, employees, taxation, fees, importation and exportation restrictions, environmental affairs, health and safety, and the manufacture, storage, handling, transportation, use, and sale of chemical products. Certain foreign countries impose additional restrictions on our activities, such as currency restrictions and restrictions on various labor practices. These laws and regulations are becoming increasingly complex and stringent, and compliance is becoming increasingly expensive. Governmental authorities have the power to enforce compliance with these regulations, and violators are subject to civil and criminal penalties, including civil fines, and injunctions. Third parties may also have the right to pursue legal actions to enforce compliance with certain laws and regulations. It is possible that increasingly strict environmental, health and safety laws, regulations, and enforcement policies could result in substantial costs and liabilities to us.

For example, the EPA has asserted federal regulatory authority under the Safe Drinking Water Act Underground Injection Control program over certain hydraulic fracturing activities involving the use of diesel fuels and published permitting guidance for such activities and issued a final regulation under the Clean Water Act prohibiting discharges to publicly owned treatment works of wastewater from onshore unconventional oil and gas facilities. Additionally, in December 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 limited circumstances. Certain environmental and other groups have suggested that additional federal, state, and local laws and regulations may be needed to more closely regulate the hydraulic fracturing process. Several states have adopted regulations that require operators to disclose

the chemical constituents in hydraulic fracturing fluids. We cannot predict whether any federal, state or local laws or regulations will be enacted regarding hydraulic fracturing, and, if so, what actions any such laws or regulations would require or prohibit. Other jurisdictions where our products and services are used may impose similar or more stringent restrictions. If additional levels of regulation or permitting requirements were imposed on oil and gas operators through the adoption of new laws and regulations, the demand for certain of our products and services could be decreased or subject to delays.

We operate in the U.S. Gulf of Mexico. At this time, we cannot predict the full impact that other regulatory actions that may be mandated by the federal government may have on our operations or the operations of our customers. Other governmental or regulatory actions could further reduce our revenues and increase our operating costs, including the cost to insure offshore operations, resulting in reduced cash flows and profitability.

Our onshore and offshore operations, including operations related to energy storage and carbon capture, utilization and storage, expose us to risks such as the potential for harmful substances escaping into the environment and causing damages or injuries, which could be substantial. We maintain limited environmental liability insurance covering named locations and environmental risks associated with contract services for oil and gas operations. We could be materially and adversely affected by an enforcement proceeding or a claim that is not covered or is only partially covered by insurance.

Because our business depends on the level of activity in the oil and natural gas industry, existing or future laws, regulations, treaties, or international agreements that impose additional restrictions on the industry may adversely affect our financial results. Regulators are becoming more focused on-air emissions from oil and gas operations, including volatile organic compounds, hazardous air pollutants, and GHGs. In particular, the focus on GHGs and climate change, including incentives to conserve energy or use alternative energy sources, could have a negative impact on our financial results if such laws, regulations, treaties, or international agreements reduce the worldwide demand for oil and natural gas or otherwise result in reduced economic activity generally. In addition, such laws, regulations, treaties, or international agreements could result in increased compliance costs, capital spending requirements, or additional operating restrictions for us, which may have a negative impact on our financial results.

In addition to increasing our risk of environmental liability, the rigorous enforcement of environmental laws and regulations has accelerated demand for our products and services in some of the markets we serve. For more information on the environmental laws and regulations to which we are subject, see our disclosures titled “Health, Safety, and Environmental Affairs Regulation” set forth in Item 1 of this Annual Report.

Our operations, and those of our suppliers and customers, are subject to a series of risks arising from climate change.

The threat of climate change continues to attract considerable attention in the United States and in foreign countries. As a result, our operations as well as the operations of our oil and natural gas exploration and production customers and our suppliers 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.

In the United States, no comprehensive climate change legislation has been implemented at the federal level. However, President Biden has highlighted addressing climate change as a priority of his administration and has issued several executive orders addressing climate change. Moreover, following the U.S. Supreme Court finding that GHG emissions constitute a pollutant under the CAA, the EPA 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 in the United States, and together with the DOT, implementing GHG emissions limits on vehicles manufactured for operation in the United States. The regulation of methane from oil and gas facilities has been subject to uncertainty in recent years. In September 2020, the Trump Administration revised prior regulations to rescind certain methane standards and remove the transmission and storage segments from the source category for certain regulations. However, subsequently, the U.S. Congress approved, and President Biden signed into law, a resolution under the Congressional Review Act to repeal the September 2020 revisions, effectively reinstating the prior standards. Additionally, in November 2021, EPA issued a proposed rule that, if finalized, would establish OOOO(b) new source and OOOO(c) first-time existing source standards of performance for methane and volatile organic compound emissions for oil and gas facilities. Operators of affected facilities will have to comply with

specific standards of performance to include leak detection using optical gas imaging and subsequent repair requirement, and reduction of emissions by 95% through capture and control systems. EPA plans to issue a supplemental proposal in 2022 containing additional requirements not included in the November 2021 proposed rule and anticipates the issuance of a final rule by the end of the year. We cannot predict the scope of any final methane regulatory requirements or the cost to comply with such requirements. However, given the long-term trend toward increasing regulation, future federal GHG regulations of the oil and gas industry remain a significant possibility.

Separately, various states and groups of states have adopted or are considering adopting legislation, regulation 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, the United Nations-sponsored "Paris Agreement" requires member states to submit non-binding, individually determined reduction goals known as Nationally Determined Contributions (“NDCs”) every five years after 2020. Following President Biden’s executive order in January 2021, the United States rejoined the Paris Agreement and, in April 2021, established a goal of reducing economy wide net GHG emissions 50-52% below 2005 levels by 2030. Additionally, at the 26th Conference of the Parties (“COP26”) in Glasgow in November 2021, the United States and the European Union jointly announced the launch of a Global Methane Pledge; an initiative committing to a collective goal of reducing global methane emissions by at least 30 percent from 2020 levels by 2030, including “all feasible reductions” in the energy sector. The full impact of these actions is uncertain at this time, and it is unclear what additional initiatives may be adopted or implemented that may have adverse effects upon us and our customers’ operations.

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, including action taken by President Biden with respect to his climate change related pledges. On January 27, 2021, President Biden issued an executive order that called for substantial action on climate change, including, among other things, the increased use of zero-emission vehicles by the federal government, the elimination of subsidies provided to the fossil fuel industry, and increased emphasis on climate-related risks across government agencies and economic sectors. The Biden Administration has also called for restrictions on leasing on federal land. For more information, see our risk factor titled “Regulatory initiatives related to hydraulic fracturing in the countries where we and our customers operate could result in operating restrictions or delays in the completion of oil and gas wells that may reduce demand for our services.” Other actions that could be pursued by the Biden Administration may include the imposition of more restrictive requirements for the establishment of pipeline infrastructure or the permitting of LNG export facilities, as well as more restrictive GHG emission limitations for oil and gas facilities. Litigation risks are also increasing as a number of parties have sought to bring suit against oil and natural gas companies in state or federal court, alleging among other things, that such companies created public nuisances by producing fuels that contributed to climate change or alleging that the companies have been aware of the adverse effects of climate change for some time but defrauded their investors or customers by failing to adequately disclose those impacts.

There are also increasing financial risks for companies in the fossil fuel sector as shareholders currently invested in such companies may elect in the future to shift some or all of their investments into other sectors. Institutional lenders who provide financing to fossil fuel energy companies also have become more attentive to sustainable lending practices and some of them may elect not to provide funding for fossil fuel energy companies. For example, at COP26, the Glasgow Financial Alliance for Net Zero (“GFANZ”) announced that commitments from over 450 firms across 45 countries had resulted in over $130 trillion in capital committed to net zero goals. The various sub-alliances of GFANZ generally require participants to set short-term, sector-specific targets to transition their financing, investing, and/or underwriting activities to net zero emissions by 2050. There is also a risk that financial institutions will be required to adopt policies that have the effect of reducing the funding provided to the fossil fuel sector. In late 2020, the Federal Reserve announced that it had joined the Network for Greening the Financial System (“NGFS”), a consortium of financial regulators focused on addressing climate-related risks in the financial sector. Subsequently, in November 2021, the Federal Reserve issued a statement in support of the efforts of the NGFS to identify key issues and potential solutions for the climate-related challenges most relevant to central banks and supervisory authorities. Although we cannot predict the effects of these actions, such limitation of investments in and financing for fossil fuel energy companies could result in the restriction, delay or cancellation of drilling programs or development or production activities, which could reduce demand for our products and services. Additionally, the Securities and Exchange Commission announced its intention to promulgate rules requiring climate disclosures. Although the form and substance of these requirements is not yet known, this may result in additional costs to comply with any such disclosure requirements.

The adoption and implementation of new or more stringent 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 the 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 operators 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 the 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.

Climate change may also result in various physical risks, such as the increased frequency or intensity of extreme weather events or changes in meteorological and hydrological patterns, that could adversely impact us, our customers', and our suppliers' operations. Such physical risks may result in damage to our customers' facilities or otherwise adversely impact their operations, such as if they become subject to water use curtailments in response to drought, or demand for their products, such as to the extent warmer winters reduce the demand for energy for heating purposes, which may ultimately reduce demand for the products and services we provide. Such physical risks may also impact our suppliers, which may adversely affect our ability to provide our products and services.

Increased attention to ESG matters and conservation measures may adversely impact our or our customers' business.

Increasing attention to, and societal expectations on companies to address, climate change and other environmental and social impacts, investor and societal expectations regarding voluntary ESG disclosures, and consumer demand for alternative forms of energy may result in increased costs, reduced demand for our customers' products, reduced profits, increased investigations and litigation, and negative impacts on our stock price and access to capital markets. Increasing attention to climate change and environmental conservation, for example, may result in demand shifts for oil and natural gas products and additional governmental investigations and private litigation against us or our customers. To the extent that societal pressures or political or other factors are involved, it is possible that such liability could be imposed without regard to our causation of or contribution to the asserted damage, or to other mitigating factors. For more information, see our risk factor titled "Our operations, and those of our suppliers and customers, are subject to a series of risks arising from climate change."

Moreover, while we may create and publish voluntary disclosures regarding ESG matters from time to time, certain statements in those voluntary disclosures may be based on hypothetical expectations and assumptions that may or may not be representative of current or actual risks or events or forecasts of expected risks or events, including the costs associated therewith. Such expectations and assumptions are necessarily uncertain and may be prone to error or subject to misinterpretation given the long timelines involved and the lack of an established single approach to identifying, measuring and reporting on many ESG matters. Additionally, we may announce various targets or product and service offerings in an attempt to improve our ESG profile. However, we cannot guarantee that we will be able to meet any such targets or that such targets or offerings will have the intended results on our ESG profile, including but not limited to as a result of unforeseen costs, consequences, or technical difficulties associated with such targets or offerings. Also, despite any voluntary actions, we may receive pressure from certain investors, lenders, or other groups to adopt more aggressive climate or other ESG-related goals or policies, but we cannot guarantee that we will be able to implement such goals because of potential costs or technical or operational obstacles.

In addition, organizations that provide information to investors on corporate governance and related matters have developed ratings processes for evaluating companies on their approach to ESG matters. Such ratings are used by some investors to inform their investment and voting decisions. Unfavorable ESG ratings and recent activism directed at shifting funding away from companies with energy-related assets could lead to increased negative investor sentiment toward us and our industry and to the diversion of investment to other industries, which could have a negative impact on our stock price and our access to and costs of capital. Additionally, to the extent ESG matters negatively impact our reputation, we may not be able to compete as effectively to recruit or retain employees, which may adversely affect our operations.

Such ESG matters may also impact our customers, which may result in reduced demand for certain of our products and services. We also cannot guarantee that any new product or service offerings we develop in light of ESG matters, including but not limited to the energy transition, will be suitable for our customers' business operations. To the extent alternative technologies are preferred, whether as a result of regulatory impacts or changes in industry practice, it may adversely impact our business or results of operation.

Our operations in foreign countries exposes us to complex regulations and may present us with new obstacles to growth.

We plan to continue to grow both in the United States and in foreign countries. We have established operations in Argentina, Brazil, Finland, Ghana, Mexico, Norway, Saudi Arabia, Sweden, and the United Kingdom, as well as other foreign countries. Foreign operations carry special risks. Our business in the countries in which we currently operate and those in which we may operate in the future could be limited or disrupted by:

- restrictions on repatriating cash back to the United States;
- the impact of compliance with anti-corruption laws on our operations and competitive position in affected countries and the risk that actions taken by us or our agents may violate those laws;
- government controls and government actions, such as expropriation of assets and changes in legal and regulatory environments;
- import and export license requirements;
- political, social, or economic instability;
- trade restrictions;
- changes in tariffs and taxes; and
- our limited knowledge of these markets or our inability to protect our interests.

We and our affiliates operate in countries where governmental corruption has been known to exist. While we and our subsidiaries are committed to conducting business in a legal and ethical manner, there is a risk of violating the U.S. Foreign Corrupt Practices Act, the U.K Bribery Act, or laws or legislation promulgated pursuant to the 1997 OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions or other applicable anti-corruption regulations that generally prohibit the making of improper payments to foreign officials for the purpose of obtaining or keeping business. Violation of these laws could result in monetary penalties against us or our subsidiaries and could damage our reputation and our ability to do business.

Foreign governments and agencies often establish permit and regulatory standards different from those in the U.S. If we cannot obtain foreign regulatory approvals, or if we cannot obtain them in a timely manner, our growth and profitability from foreign operations could be adversely affected.

Regulatory initiatives related to hydraulic fracturing in the countries where we and our customers operate could result in operating restrictions or delays in the completion of oil and gas wells that may reduce demand for our services.

Although we do not directly engage in hydraulic fracturing, our operations support many of our exploration and production customers in such activities. The practice continues to be controversial in certain parts of the country, resulting in increased scrutiny and regulation of the hydraulic fracturing process, including by federal and state agencies and local municipalities.

Hydraulic fracturing typically is regulated by state oil and gas commissions or similar state agencies, but several federal agencies have asserted regulatory authority over certain aspects of the process in the U.S. For example, the EPA has issued rulemakings under several laws governing hydraulic fracturing activities and disposal of wastes associated with the process. In 2016, the U.S. Bureau of Land Management ("BLM") also published a final rule that established new or more stringent standards for performing hydraulic fracturing on federal and Indian lands. BLM under the Trump Administration issued a final rule in late 2018 rescinding the 2016 action; however, a California federal court vacated the 2018 final rule in July 2020, and a Wyoming federal court subsequently vacated the 2016 final rule in October 2020. Accordingly, the 2016 final rule is no longer in effect, but the Wyoming decision has been appealed. Moreover, the Biden Administration is expected to pursue regulatory initiatives that restrict hydraulic fracturing activities on federal lands as well as other actions to more stringently regulate certain aspects of oil and gas development such as air emissions and water discharges. President Biden issued an executive order on

January 27, 2021, that suspends new leasing activities, but not operations under existing leases, for oil and gas exploration and production on non-Indian federal lands and offshore waters pending completion of a comprehensive review and reconsideration of federal oil and gas permitting and leasing practices that take into consideration potential climate and other impacts associated with oil and gas activities on such lands and waters. Although the federal court for the Western District of Louisiana issued a preliminary injunction against the leasing pause, in response to the executive order, the Department of Interior issued a report recommending various changes to the federal leasing program, though many such changes would require Congressional action. As a result, we cannot predict the final scope of regulations or restrictions that may apply to oil and gas operations on federal lands and waters. However, any regulations that ban or effectively ban such operations may adversely impact demand for our products and services.

The United States Congress has from time to time considered legislation to provide for federal regulation of hydraulic fracturing and to require disclosure of the chemicals used in the hydraulic fracturing process. At the state level, some states, including Texas, Oklahoma and New Mexico, have adopted, and other states are considering adopting legal requirements that could impose new or more stringent permitting, public disclosure, or well construction requirements on hydraulic fracturing activities. States could elect to prohibit high volume hydraulic fracturing altogether, following the approach taken by the State of New York in 2015. Local governments also may seek to adopt ordinances within their jurisdictions regulating the time, place and manner of drilling activities in general or hydraulic fracturing activities in particular. If new or more stringent federal, state, or local legal restrictions relating to the hydraulic fracturing process are adopted, our customers could incur potentially significant added costs to comply with such requirements, experience delays or curtailment in the pursuit of exploration, development or production activities, and perhaps even be precluded from drilling wells.

Increased regulation and attention given to the hydraulic fracturing process could lead to greater opposition to oil and gas production activities using hydraulic fracturing techniques. Additional legislation or regulation could also lead to operational delays or increased operating costs for our customers in the production of oil and gas, including from the developing shale plays, or could make it more difficult to perform hydraulic fracturing. The adoption of any federal, state or local laws or the implementation of additional regulations regarding hydraulic fracturing could potentially cause a decrease in the completion of new oil and 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.

Our proprietary rights may be violated or compromised, which could damage our operations.

We own numerous patents, patent applications, and unpatented trade secret technologies in the U.S. and certain foreign countries. There can be no assurance that the steps we have taken to protect our proprietary rights will be adequate to deter misappropriation of these rights. In addition, independent third parties may develop competitive or superior technologies.

Our operations and reputation may be impaired if our information technology systems fail to perform adequately or if we are the subject of a data breach or cyberattack.

Our information technology systems are critically important to operating our business efficiently. We rely on our information technology systems to manage our business data, communications, supply chain, customer invoicing, employee information, and other business processes. We outsource certain business process functions to third-party providers and similarly rely on these third parties to maintain and store confidential information on their systems. The failure of these information technology systems to perform as we anticipate could disrupt our business and could result in transaction errors, processing inefficiencies, and the loss of sales and customers, causing our business and results of operations to suffer.

Although we allocate significant resources to protect our information technology systems, we have experienced varying degrees of cyber-incidents in the normal conduct of our business, including viruses, worms, other destructive software, process breakdowns, phishing and other malicious activities. On January 6, 2020, the Department of Homeland Security issued a public warning that indicated companies in the energy industry might be specific targets of cybersecurity threats. Such breaches have in the past and could again in the future result in unauthorized access to information including customer, supplier, employee, or other company confidential data. We do carry insurance against these risks, although the potential damages we might incur could exceed our available insurance coverage. We also invest in security technology, perform penetration tests from time to time, and design our business processes to attempt to mitigate the risk of such breaches. However, there can be no assurance that

security breaches will not occur. Moreover, the development and maintenance of these measures requires continuous monitoring as technologies change and efforts to overcome security measures evolve. We have experienced and expect to continue to experience, cyber security threats and incidents, none of which has been material to us to date. However, a successful breach or attack could have a material negative impact on our operations or business reputation and subject us to consequences such as litigation and direct costs associated with incident response.

Changes to applicable tax laws and regulations or exposure to additional income tax liabilities could affect our business and future profitability.

We are subject to various complex and evolving United States federal, state, and local and non-U.S. taxes. Our business and future profitability could be affected by numerous factors, including the availability of tax credits, exemptions, refunds and other benefits to reduce our tax liabilities, changes in the relative amount of our earnings subject to tax in the various jurisdictions in which we operate or have subsidiaries, the potential expansion of our business into or otherwise becoming subject to tax in additional jurisdictions, changes to our existing business structure and operations, the extent of our intercompany transactions, and the extent to which taxing authorities in the relevant jurisdictions respect those intercompany transactions.

Further, United States federal, state, and local and non-U.S. tax laws, policies, statutes, rules, regulations, or ordinances could be interpreted, changed, modified, or applied adversely to us, in each case, possibly with retroactive effect, and may have an adverse effect on our business and future profitability. For example, several tax proposals have been set forth that would, if enacted, make significant changes to United States tax laws. Such proposals include an increase in the U.S. income tax rate applicable to corporations (such as us) from 21%, the imposition of a minimum tax on book income for certain corporations, and the imposition of an excise tax on certain corporate stock repurchases that would be borne by the corporation repurchasing such stock. The United States Congress may consider, and could include, some or all of these proposals in connection with tax reform that may be undertaken. It is unclear whether these or similar changes will be enacted and, if enacted, how soon any such changes could take effect. The passage of any legislation as a result of these proposals and other similar changes in United States federal income tax laws could adversely affect our business and future profitability.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

Our facilities consist primarily of our corporate headquarters facility, chemical plants, processing plants and distribution facilities. We believe our facilities are adequate for our present needs. We also hold brine leases on acreage which contains bromine and lithium. The following information describes facilities that we (i) leased or owned and (ii) leased acreage as of December 31, 2021.

Facilities

Completion Fluids & Products Division

Our Completion Fluids & Products Division facilities include six operating chemical production plants located in the states of Arkansas, California, Louisiana, and West Virginia, and the country of Finland, having a total production capacity of more than 1.1 million equivalent liquid tons per year. The two California locations consist of 29 square miles of leased mineral acreage and solar evaporation ponds, and related owned production and storage facilities.

In April 2020, in response to market conditions, we began the process of discontinuing chemical production operations at our El Dorado calcium chloride facility in Arkansas. We continued to manufacture and deliver products through early June 2020, at which time we began a sequenced shutdown of the manufacturing facility. As of December 31, 2020 and continuing through December 31, 2021, the plant was no longer operational.

In addition to the production facilities described above, the Completion Fluids & Products Division owns or leases multiple service center facilities in the United States and in other countries. The Completion Fluids &

Products Division also leases several offices and numerous terminal locations in the United States and in other countries.

Water & Flowback Services Division

The Water & Flowback Services Division conducts its operations through production testing and water management service centers (most of which are leased) in the United States, located in Colorado, Louisiana, New Mexico, North Dakota, Oklahoma, Pennsylvania, Texas and Wyoming. In addition, the Water & Flowback Services Division has leased facilities in Mexico, Argentina and certain countries in Asia, Europe, and the Middle East.

Corporate

Our headquarters is located in The Woodlands, Texas, in a 153,000 square foot office building, which is located on 2.6 acres of land, under a lease that expires in 2027. In addition, we own a 28,000 square foot technical facility in The Woodlands, Texas, to service our Completion Fluids & Products and Water & Flowback Services Divisions' operations.

Bromine and Lithium Exploration Targets

Our Completion Fluids & Products Division leases approximately 31,100 net acres of brine leases in Magnolia, Arkansas, which contain bromine and lithium. This acreage is leased for possible future development and as a source of supply for our bromine and other raw materials. In August 2021, we announced the completion of a preliminary technical assessment by an independent geological consulting firm, APEX Geoscience Ltd. to assess lithium and bromine exploration targets in our approximately 31,100 net acres of brine leases in the Smackover Formation in Southwest Arkansas. We have rights to the brine, including rights to the bromine and lithium contained in the brine underlying this acreage, pursuant to certain brine leases and brine deeds with various landowners. With respect to approximately 27,500 acres of that total acreage, we have granted Standard Lithium an option to acquire the lithium rights. The agreements governing this option contemplate a 2.5% royalty.

The exploration targets were estimated for two separate areas within the property based on our brine lease rights. The scope of the exploration target assessment was for bromine in all of the approximately 31,100 net acres and lithium for the acreage where we hold the lithium rights not subject to the Standard Lithium Ltd. option that cover roughly 3,600 net acres. For bromine, the technical assessment identified a brine exploration target estimated to contain between 2.54 and 8.58 million tons of elemental bromine. For lithium, the technical assessment identified an exploration target estimated to contain between 16,000 and 53,000 tons of elemental lithium. Using an elemental to Lithium Carbonate Equivalent ("LCE") conversion ratio of 5.323, which is accepted in the industry, the estimates of the amounts of lithium present within these acres range from 85,000 to 286,000 tons of LCE. As of February 2022, the market price for lithium is approximately $71,600 per ton and the market price for bromine is approximately $3,100 per metric ton. The exploration target's estimated quantity and grade is conceptual in nature, as there has been insufficient exploration to estimate a mineral resource on this property, and it is uncertain if further exploration will result in the estimation of a mineral resource. The exploration targets expressed should not be understood to represent or misconstrued as an estimate of a mineral resource or mineral reserve.

The basis for the lithium and bromine exploration targets is that hypersaline formation water, or brine, associated with some of the world's oilfields and/or geothermal fields contains confined reservoirs, or aquifers, that are known to contain anomalous concentrations of lithium, bromine and other elements of interest. We propose to assess stratigraphically deep (more than 2,250 meters or 7,450 feet below surface) brine from oil and gas aquifers associated with the Late Jurassic Smackover Formation. The brine is currently pumped from the aquifer to the earth's surface as a wastewater product associated with hydrocarbon production (e.g., oil, gas, and condensate). We expect that we will be able to develop or utilize evolving commercial technologies to economically remove the bromine and lithium from the brine underlying our acreage before the brine is reinjected back down into the subsurface aquifer.

The volume of the Upper and Middle areas of the Smackover Formation within each exploration target was calculated by wireframing the Smackover Formation aquifer domain to create a 3-D geological model. The model utilized oil and gas well data from the AOGC and AGS Information Circular IC-14, which includes an electronic reprint of Vestal (1950) and a stratigraphic horizon pick file with 3,904 records. Historical information was used to estimate mean porosity and mean bromine and lithium concentrations. For the conceptual exploration target

estimates, the range of elemental bromine and lithium was derived by multiplying the mean volume, porosity, and bromine/lithium concentrations of the exploration targets by plus or minus 20%.

While we continue to evaluate the next steps regarding the potential development of our brine leases, we have only recently started to conduct exploration work on the leases, and we are not currently able to determine the economic viability of the extraction of the lithium and bromine from the leased acreage. In addition, the extraction of lithium and bromine from these brine leases will likely require a significant amount of time and capital, which we are not able to estimate at this time. The exploration targets are based on historical oil and gas well data and historical Smackover Formation brine geochemical analyses. To advance the exploration targets to the mineral resource estimation and classification stage, we anticipate the implementation of a work program that will comprise some or all of the following activities:

- validating the historical brine geochemistry and attempting to obtain a greater understanding of the distribution of the bromine and lithium concentrations within the Smackover Formation brine underlying our acreage,
- conducting stratigraphic and hydrogeological studies to advance the geological domain boundaries and hydro-parameters of the Upper and Middle areas of the Smackover Formation, and
- conducting mineral processing test work to explore and develop the bromine and lithium extraction processes.

The timing for progressing the recommended work program will depend on the approach for obtaining Smackover Formation brine samples and conducting mineral processing test work. We anticipate achieving brine access through agreements with current oil and gas operators to conduct appraisal drilling within the first half of 2022. As of February 25, 2022, we are in the process of drilling an exploratory brine well on our dedicated acreage in the Smackover Formation in Arkansas. The results of the well, which is expected to be completed in the first quarter of 2022, are expected to advance our exploratory target lithium and bromine assets to more refined resources targets. Upon completion of the inferred resources target, we intend to move towards a preliminary economic assessment ("PEA") to determine the economics of developing our dedicated acreage for the bromine to meet our growing zinc bromide opportunities and to meet the lithium battery market demands. The PEA is expected to be completed during 2022.

We anticipate that validation of the estimates for geology, mineralization, and mineral processing, would advance the confidence level of the deposit toward mineral resource estimations and a potential preliminary economic assessment study. This work is anticipated to commence and be completed in 2022 and it is possible that the exploration target tonnage and grade could change as these proposed exploration activities are completed and evaluated.

Item 3. Legal Proceedings.

We are named defendants in numerous lawsuits and respondents in certain governmental proceedings arising in the ordinary course of business. While the outcome of lawsuits or other proceedings against us cannot be predicted with certainty, management does not consider it reasonably possible that a loss resulting from such lawsuits or other proceedings in excess of any amounts accrued has been incurred that is expected to have a material adverse effect on our financial condition, results of operations or liquidity. See Note 11 - "Commitments and Contingencies" in the Notes to Consolidated Financial Statements for further information.

Item 4. Mine Safety Disclosures.

None.

PART II

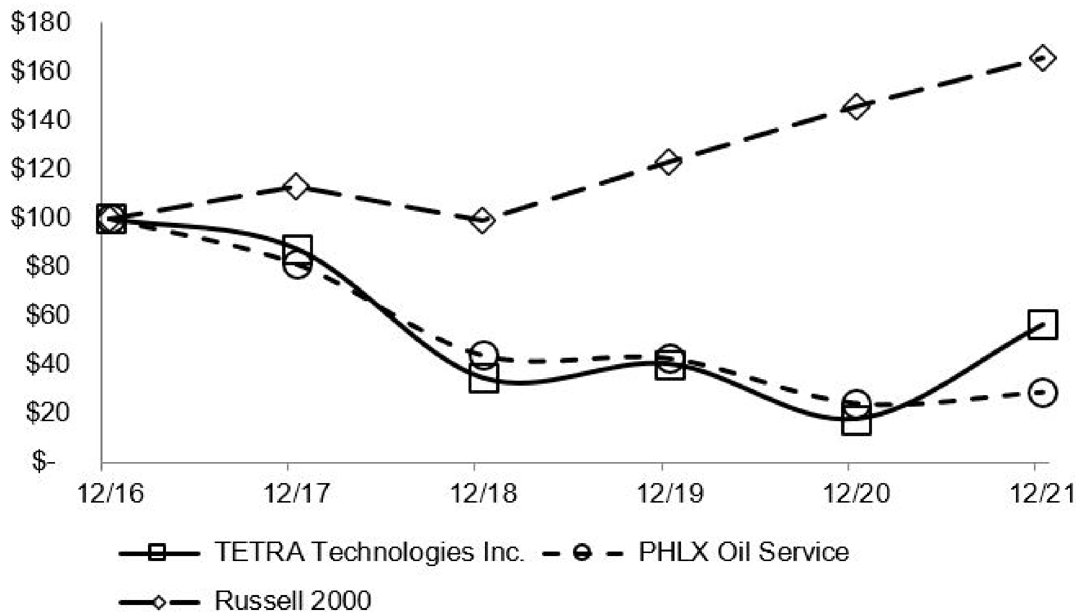
Item 5. Market for Registrant's Common Equity, Related Stockholder Matters, and Issuer Repurchases of Equity Securities.

Common Stock

Our common stock is traded on the New York Stock Exchange under the symbol "TTI." As of February 25, 2022, there were approximately 220 holders of record of the common stock. The actual number of holders of our common stock is greater than this number of record holders and includes common stockholders who are beneficial owners but whose shares are held in street name by banks, brokers and other nominees.

Market Price of Common Stock

The following graph compares the five-year cumulative total returns of our common stock, the Russell 2000 Index ("Russell 2000") and the Philadelphia Oil Service Sector Index ("PHLX Oil Service"), assuming $100 invested in each stock or index on December 31, 2016, all dividends reinvested, and a fiscal year ending December 31. This information shall be deemed furnished, and not filed, in this Form 10-K and shall not be deemed incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934 as a result of this furnishing, except to the extent we specifically incorporate it by reference.



Securities Authorized for Issuance Under Equity Compensation Plans

For additional information about common stock authorized for issuance under equity compensation plans, see Note 13 - "Equity-Based Compensation and Other" in the Notes to Consolidated Financial Statements.

Item 6. [Reserved]

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

The following discussion is intended to analyze major elements of our consolidated financial statements and provide insight into important areas of management's focus. This section should be read in conjunction with the Consolidated Financial Statements and the accompanying Notes included elsewhere in this Annual Report. Statements in the following discussion may include forward-looking statements. These forward-looking statements involve risks and uncertainties. See "Item 1A. Risk Factors" for additional discussion of these factors and risks. For discussion of 2020 compared to 2019, see disclosures titled "Results of Operations" set forth in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations of our Annual Report on Form 10-K for the year ended December 31, 2020 filed with the SEC on March 5, 2021.

Business Overview

We are an industrial oil and gas products and services company operating on six continents, focused on bromine-based completion fluids, calcium chloride, water management solutions, frac flowback and production well testing services. We operate through two reporting segments - Completion Fluids & Products Division and Water & Flowback Services Division.

After declining to historic lows due to depressed oil prices resulting from Russia and Saudi Arabia's price war and the COVID-19 pandemic last year, customer activity levels in the North America onshore business began to recover during the first half of 2021. Customer activity levels continued to improve through the second half of 2021 as oil prices continued to improve, averaging over $70 per barrel for the third and fourth quarters, while natural gas prices averaged over $4 per million Btu.

Completions Fluids & Products Division revenues were lower than the prior year due to lower Gulf of Mexico and international oil and gas activity and global shipping delays, partially offset by an increase in industrial chemicals product sales. In July 2021, we completed our first International TETRA CS Neptune® fluids job, reflecting acceptance of this proprietary technology into new markets. We also saw a significant rebound in our international business, particularly in completion fluid sales during the fourth quarter of 2021.

Our Water & Flowback Services revenues increased significantly compared to the prior year, due to a combination of higher overall customer activity levels and significant price recovery, particularly in the United States land business. Our international production testing business also improved during the fourth quarter of 2021. We also deployed our TETRA SandStorm™ technology for two major long-term projects in Latin America. Revenue growth was a result of a record increase in the number of integrated projects and customers, and TETRA SandStorm™ high utilization and market share gains with private oil and gas operators.

We are also committed to pursuing low-carbon energy initiatives that leverage our fluids and aqueous chemistry core competencies, our significant bromine and lithium assets (including our approximately 31,100 net acres of brine leases in Arkansas) and technologies, and our leading calcium chloride production capabilities. In May 2021, we signed a MOU with CarbonFree. During the one-year MOU period, both Companies will work towards a definitive agreement that might include investments by TETRA into CarbonFree, a joint venture, or other commercial arrangements. In December 2021, we invested $5.0 million in a convertible note issued by CarbonFree.

In August 2021, we announced completion of a preliminary technical assessment by an independent geological consulting firm to assess lithium and bromine exploration targets in our Southwest Arkansas brine leases. Bromine has been identified as a key mineral resource in zinc-bromide energy storage systems and our TETRA PureFlow™ high purity zinc bromide has been qualified by several battery technology companies. The lithium battery market is a rapidly growing market, affording us the opportunity to participate in a meaningful way. We will assess the next steps towards determining whether we can develop these key minerals to augment our current global infrastructure and chemistry expertise, allowing us to further expand beyond the oil and gas market. In December, 2021, we announced a strategic agreement with Eos involving a long-term supply and collaboration agreement to supply our high purity zinc bromide solution, TETRA PureFlow™. TETRA and Eos expect to collaborate for improved battery performance, cost and system life including an end-of-life solution using TETRA's extensive experience with reclaiming and recycling zinc bromide.

Substantially all of our former Compression Division's operations were conducted through our partially-owned CSI Compressco subsidiary. On January 29, 2021, we entered into the Purchase and Sale Agreement pursuant to which we sold the general partner of CSI Compressco, including IDRs in CSI Compressco and

approximately 23.1% of the outstanding limited partner interests in CSI Compressco, in exchange for a combination of $13.9 million in cash and $3.1 million in contingent consideration in the form of cash and/or CSI Compressco common units if CSI Compressco achieves certain financial target on or before December 31, 2022. As of December 31, 2021, we held an interest in CSI Compressco consisting of approximately 3.8% of the outstanding common units. We recorded a book gain of $120.1 million during 2021 in connection with the GP Sale. This gain, most of which was non-cash, was a function of CSI Compressco having a negative carrying value within our consolidated balance sheet due to our share of cumulative losses and distributions. We have reflected the operations of our former Compression Division as discontinued operations for all periods presented. See Note 3 - "Discontinued Operations" in the Notes to Consolidated Financial Statements for further information.

During the first quarter of 2021, we used proceeds from the GP sale and available cash on hand, including $14.2 million of proceeds from the fourth quarter 2020 compressor unit sales to Spartan, to pay down $29.3 million on our term loan, which matures in September 2025. During the fourth quarter of 2021, we sold the 1.6 million Standard Lithium Ltd. shares we owned for approximately $17.6 million, before broker and transaction fees. We repaid an additional $8.2 million of our term loan in July 2021 and $13.0 million of our term loan in December 2021. Our liquidity at the end of the fourth quarter was $67.7 million consisting of $31.6 million of unrestricted cash plus $36.1 million of availability under the ABL Credit Agreement.

Results of Operations

The following data should be read in conjunction with the Consolidated Financial Statements and the associated Notes contained elsewhere in this report.

Consolidated Comparisons

	Year Ended December 31,		Period to Period Change	
	2021	**2020**	**2021 vs. 2020**	**% Change**
	(In Thousands, Except Percentages)			
Revenues	**$ 388,272**	**$ 377,715**	**$ 10,557**	**2.8 %**
Gross profit	**59,237**	**67,543**	**(8,306)**	**(12.3)%**
Gross profit as a percentage of revenue	15.3 %	17.9 %		
General and administrative expense	75,049	76,697	(1,648)	(2.1)%
General and administrative expense as a percentage of revenue	19.3 %	20.3 %		
Interest expense, net	16,377	18,926	(2,549)	(13.5)%
Gain on sale of assets	(1,040)	(2,878)	1,838	(63.9)%
Other income, net	(16,428)	(116)	(16,312)	NM[1]
Loss before taxes and discontinued operations	**(14,721)**	**(25,086)**	**10,365**	**(41.3)%**
Loss before taxes and discontinued operations as a percentage of revenue	(3.8)%	(6.6)%		
Provision for income taxes	2,084	1,758	326	18.5 %
Loss before discontinued operations	(16,805)	(26,844)	10,039	(37.4)%
Income (loss) from discontinued operations, net of taxes	120,407	(72,089)	192,496	(267.0)%
Net income (loss)	103,602	(98,933)	202,535	(204.7)%
(Income) loss attributable to noncontrolling interest	(269)	47,790	(48,059)	(100.6)%
Net loss attributable to TETRA stockholders	**$ 103,333**	**$ (51,143)**	**$ 154,476**	**(302.0)%**

[1] Percent change is not meaningful

Revenues

Consolidated revenues for 2021 increased compared to the prior year primarily due to higher activity in our Water & Flowback Services division, where revenue increased by $33.6 million. The increase in our Water & Flowback Services division is primarily due to increasing customer activity levels from recent lows in response to an improving commodity price environment in 2021 and recovery from industry downturn in 2021 related to the COVID-19 pandemic. The increase in consolidated revenue was offset by decreased revenue in our Completion Fluids &

Products division of $23.0 million, primarily due to lower Gulf of Mexico and international oil and gas activity. See “Divisional Comparisons” section below for additional discussion.

Gross Profit

Consolidated gross profit as a percentage of revenue declined primarily due to a change in revenue mix, with a higher portion of revenues generated from our Water & Flowback Services division. See Divisional Comparisons section below for additional discussion.

General and Administrative Expense

Consolidated general and administrative expenses decreased during 2021 compared to the prior year primarily due to a $6.1 million decrease in bad debt expense. This was offset by a $1.6 million increase in salary related expenses, primarily due to a phased reinstatement of reduced salaries and 401K match; a $1.9 million increase in legal, settlement and other expenses, and a $1.0 million increase in general expenses.

Interest Expense, Net

Consolidated interest expense, net, decreased in 2021 compared to the prior year primarily due to $50.5 million of repayments on our term credit facility during the current year.

Gain on Sale of Assets

Consolidated gain on sale of assets decreased during 2021 compared to the prior year primarily due to decreased asset sales during the year.

Other Income, net

Consolidated other (income) expense, net increased during 2021 compared to the prior year primarily due to an $11.7 million increase in income from our investment in Standard Lithium due to an increase in the Standard Lithium stock price and additional shares received in May 2021. All Standard Lithium shares were sold in the fourth quarter of 2021. Additionally, we benefited from favorable foreign exchange fluctuations of $4.1 million.

Income (Loss) from Discontinued Operations

Income from discontinued operations, net of taxes, was $120.4 million compared to a loss of $72.1 million for the prior year, including $20.8 million of asset impairments. The current year income includes a $120.1 million primarily non-cash accounting gain from the deconsolidation of CSI Compressco. This gain is net of a $0.01 million tax provision after taking into consideration utilization of net operating loss and credit carryforwards.

Provision for Income Tax

Our consolidated provision for income taxes during 2021 was primarily attributable to taxes in certain foreign jurisdictions and Texas gross margin taxes. Our consolidated effective tax rate for the year ended December 31, 2021 of negative 14.2% was primarily the result of losses generated in entities for which no related tax benefit has been recorded. The losses generated by these entities do not result in tax benefits due to offsetting valuation allowances being recorded against the related net deferred tax assets. We establish a valuation allowance to reduce the deferred tax assets when it is more likely than not that some portion or all of the deferred tax assets will not be realized. Included in our deferred tax assets are $114.6 million of net operating loss carryforwards that may be available to offset future income tax liabilities in the U.S. as well as in certain international jurisdictions where net operating loss carryforwards exist.

Divisional Comparisons

Completion Fluids & Products Division

	Year Ended December 31,		Period to Period Change	
	2021	2020	2021 vs. 2020	% Change
	(In Thousands, Except Percentages)			
Revenues	**$ 219,648**	**$ 242,661**	**$ (23,013)**	**(9.5)%**
Gross profit (loss)	**58,458**	**77,206**	**(18,748)**	**(24.3)%**
Gross profit (loss) as a percentage of revenue	26.6 %	31.8 %		
General and administrative expense	20,446	24,852	(4,406)	(17.7)%
General and administrative expense as a percentage of revenue	9.3 %	10.2 %		
Interest (income) expense, net	(596)	(666)	70	(10.5)%
Other income, net	(16,373)	(2,314)	(14,059)	NM
Income before taxes	**$ 54,981**	**$ 55,334**	**$ (353)**	**(0.6)%**
Income before taxes as a percentage of revenue	25.0 %	22.8 %		

Revenues for our Completion Fluids & Products Division decreased primarily due to lower Gulf of Mexico and international oil and gas activity and global shipping delays, partially offset by an increase in industrial chemicals product sales. In addition, the prior year period benefited from two large international orders. The ramp down in activity due to the COVID-19 pandemic and associated reduction in oil prices lagged North America onshore, and did not have a significant impact on offshore Gulf of Mexico and international activity until the third and fourth quarters of 2020.

Completion Fluids & Products Division gross profit during 2021 decreased compared to the prior year due to lower revenue and was also negatively impacted by continued inflationary pressures in certain raw materials and higher logistics costs due to the global shipping crisis. Completion Fluids & Products Division profitability in future periods will continue to be affected by the mix of its products and services, market demand for our products and services, drilling and completions activity and commodity prices.

Pretax income for our Completion Fluids & Products Division remained relatively stable during 2021 compared to the prior year primarily due to the decrease in gross profit discussed above being offset by an increase in other income and a decrease in general and administrative expenses. The division had an $11.7 million increase in income from our investment in Standard Lithium compared to the prior year. Additionally, the Completion Fluids & Products Division bad debt expense decreased $4.1 million due to several bankruptcy-related reserves recorded in the prior year and foreign exchange fluctuations were favorable by $2.0 million.

Water & Flowback Services Division

	Year Ended December 31,		Period to Period Change	
	2021	2020	2021 vs. 2020	% Change
	(In Thousands, Except Percentages)			
Revenues	**$ 168,624**	**$ 135,054**	**$ 33,570**	**24.9 %**
Gross profit	**1,800**	**(8,856)**	**10,656**	**120.3 %**
Gross profit as a percentage of revenue	1.1 %	(6.6)%		
General and administrative expense	14,613	15,644	(1,031)	(6.6)%
General and administrative expense as a percentage of revenue	8.7 %	11.6 %		
Interest (income) expense, net	(511)	(1,135)	624	(55.0)%
Other income, net	(1,186)	(1,515)	329	(21.7)%
Loss before taxes	**$ (11,116)**	**$ (21,850)**	**$ 10,734**	**(49.1)%**
Loss before taxes as a percentage of revenue	(6.6)%	(16.2)%		

Water & Flowback Services Division revenues increased during 2021 compared to the prior year primarily due to increased customer drilling and completion activity in certain onshore North America markets as the industry continues to recover from the COVID-19 pandemic. Revenues for the prior year were significantly impacted by industry-wide reductions in rig and frac count resulting from historically low oil prices. The current year was negatively impacted by severe weather that caused extended shut downs in certain locations during the first quarter.

The Water & Flowback Services Division reflected a gross profit during 2021 compared to a gross loss in the prior year primarily due to increased revenues as described above and pricing improvements offsetting ongoing inflationary pressures.

The Water & Flowback Services Division reported a lower pretax loss compared to the prior year, primarily due to the gross profit improvement described above. General and administrative expenses also decreased primarily due to a $2.0 million decrease in bad debt expense, partially offset by a $0.9 million increase in consulting and legal services.

Corporate Overhead

	Year Ended December 31,		Period to Period Change	
	2021	**2020**	**2021 vs. 2020**	**% Change**
	(In Thousands, Except Percentages)			
Depreciation and amortization	$ 1,032	$ 818	$ 214	26.2 %
General and administrative expense	39,990	36,201	3,789	10.5 %
Interest expense, net	17,483	20,727	(3,244)	(15.7)%
Other (income) expense, net	93	836	(743)	(88.9)%
Loss before taxes	**$ (58,598)**	**$ (58,582)**	**$ (16)**	**— %**

Corporate Overhead pretax loss remained stable during 2021 compared to the prior year primarily due to increased general and administrative expense, offset by decreased interest expense. Corporate general and administrative expense increased primarily due to increased salary related expense of $2.0 million, $1.0 million of increased general expenses and $0.8 million of increased professional fees. Interest expense decreased primarily due to $50.5 million of repayments on our term credit facility during the current year. The warrants issued in 2016 expired in December 2021.

Non-GAAP Financial Measures

We use U.S. GAAP financial measures such as revenues, gross profit, income (loss) before taxes, and net cash provided by operating activities, as well as certain non-GAAP financial measures, including Adjusted EBITDA, as performance measures for our business.

Adjusted EBITDA. We view Adjusted EBITDA as one of our primary management tools, and we track it on a monthly basis, both in dollars and as a percentage of revenues (typically compared to the prior month, prior year period, and to budget). We define Adjusted EBITDA as earnings before interest, taxes, depreciation, amortization, impairments and certain non-cash charges and non-recurring adjustments.

Adjusted EBITDA is used as a supplemental financial measure by our management to:

- evaluate the financial performance of our assets without regard to financing methods, capital structure, or historical cost basis; and
- determine our ability to incur and service debt and fund capital expenditures.

Adjusted EBITDA is a financial measure that is not in accordance with U.S. GAAP and should not be considered an alternative to net income, operating income, cash flows from operating activities, or any other measure of financial performance presented in accordance with U.S. GAAP. This measure may not be comparable to similarly titled financial metrics of other entities, as other entities may not calculate Adjusted EBITDA in the same manner as we do. Management compensates for the limitations of Adjusted EBITDA as analytical tools by reviewing

the comparable U.S. GAAP measures, understanding the differences between the measures, and incorporating this knowledge into management's decision-making processes.

The following table reconciles net income (loss) to Adjusted EBITDA for the periods indicated:

	Year Ended December 31, 2021				
	Completion Fluids & Products	Water & Flowback Services	Corporate SG&A	Other and Eliminations	Total
	(In Thousands, Except Percents)				
Revenue	**$ 219,648**	**$ 168,624**	**$ —**	**$ —**	**$ 388,272**
Net income (loss) before taxes and discontinued operations	**54,981**	**(11,116)**	**(39,990)**	**(18,596)**	**(14,721)**
Adjustment to long-term incentives	—	—	4,675	—	4,675
Transaction and other expenses	322	878	2,419	—	3,619
Restructuring	1,209	840	—	—	2,049
Stock warrant fair value adjustment	—	—	—	(198)	(198)
Former CEO stock appreciation right expense	—	—	865	—	865
Impairments and other charges	—	—	—	132	132
Allowance for bad debt	—	(230)	—	—	(230)
Adjusted income (loss) before taxes and discontinued operations	**$ 56,512**	**$ (9,628)**	**$ (32,031)**	**$ (18,662)**	**$ (3,809)**
Adjusted interest expense, net	(595)	(512)	—	17,483	16,376
Adjusted depreciation and amortization	6,885	25,045	—	889	32,819
Equity compensation expense	—	—	4,664	—	4,664
Adjusted EBITDA	**$ 62,802**	**$ 14,905**	**$ (27,367)**	**$ (290)**	**$ 50,050**
Adjusted EBITDA as % of revenue	28.6 %	8.8 %			12.9 %

	Year Ended December 31, 2020				
	Completion Fluids & Products	Water & Flowback Services	Corporate SG&A	Other and Eliminations	Total
	(In Thousands, Except Percents)				
Revenue	**$ 242,661**	**$ 135,054**	**$ —**	**$ —**	**$ 377,715**
Net income (loss) before taxes and discontinued operations	**55,334**	**(21,850)**	**(36,201)**	**(22,369)**	**$ (25,086)**
Severance	1,166	1,853	1,555	—	4,574
Transaction and other expenses	(90)	124	1,009	—	1,043
Restructuring and severance expenses	1,267	861	—	—	2,128
Stock warrant fair value adjustment	—	—	—	(251)	(251)
Impairments and other charges	108	—	—	98	206
Allowance for bad debt	3,919	1,122	—	—	5,041
Adjusted income (loss) before taxes and discontinued operations	**$ 61,704**	**$ (17,890)**	**$ (33,637)**	**$ (22,522)**	**$ (12,345)**
Adjusted interest expense, net	(853)	(1,594)	—	20,727	18,280
Adjusted depreciation and amortization	7,389	30,384	—	708	38,481
Equity compensation expense	—	—	4,721	—	4,721
Adjusted EBITDA	**$ 68,240**	**$ 10,900**	**$ (28,916)**	**$ (1,087)**	**$ 49,137**
Adjusted EBITDA as % of revenue	28.1 %	8.1 %			13.0 %

	Year Ended December 31, 2019				
	Completion Fluids & Products	Water & Flowback Services	Corporate SG&A	Other and Eliminations	Total
	(In Thousands, Except Percents)				
Revenue	**$ 279,255**	**$ 281,986**	**$ —**	**$ —**	**$ 561,241**
Net income (loss) before taxes and discontinued operations	**(33,969)**	**(21,173)**	**(51,466)**	**(21,501)**	**(128,109)**
Severance	—	—	1,511	—	1,511
Transaction and other expenses	(543)	—	574	(351)	(320)
Restructuring and severance expenses	77	759	—	—	836
Stock warrant fair value adjustment	—	—	—	(1,624)	(1,624)
Impairments and other charges	91,606	24,784	—	—	116,390
Former CEO stock appreciation right expense	—	—	—	504	504
Allowance for bad debt	—	76	—	—	76
Adjusted income (loss) before taxes and discontinued operations	**$ 57,171**	**$ 4,446**	**$ (49,381)**	**$ (22,972)**	**$ (10,736)**
Adjusted interest expense, net	(720)	(1)	—	21,473	20,752
Adjusted depreciation and amortization	13,518	33,424	—	621	47,563
Equity compensation expense	—	—	7,064	—	7,064
Adjusted EBITDA	**$ 69,969**	**$ 37,869**	**$ (42,317)**	**$ (878)**	**$ 64,643**
Adjusted EBITDA as % of revenue	25.1 %	13.4 %			11.5 %

Liquidity and Capital Resources

We believe that our capital structure allows us to meet our financial obligations despite current uncertain operating conditions and financial markets. Our liquidity at the end of the fourth quarter was $67.7 million consisting of $31.6 million of unrestricted cash plus $36.1 million of availability under the ABL Credit Agreement. Liquidity is defined as unrestricted cash plus availability under the revolving credit facility.

Our consolidated sources and uses of cash, including cash activity from our former Compression Division, for the years ended December 31, 2021 (which represents January 2021 prior to the closing of the GP sale), 2020 and 2019 are as follows:

	Year Ended December 31,		
	2021	2020	2019
	(In Thousands)		
Operating activities	$ 4,657	$ 76,912	$ 90,232
Investing activities	(5,175)	6,038	(106,442)
Financing activities	(50,054)	(17,629)	(5,925)

Consolidated cash flows provided by operating activities totaled $4.7 million during 2021 compared to $76.9 million during the prior year, a decrease of $72.3 million, and compared to $90.2 million during the year ended December 31, 2019. Operating cash flows decreased due to including the results of CSI Compressco for one month during the current year compared to twelve months during the prior years. CSI Compressco generated $0.9 million, $20.8 million and $67.7 million of our consolidated cash flows provided by operating activities during the years ended December 31, 2021, 2020 and 2019, respectively. Excluding the activities of CSI Compressco, cash flow from operations decreased $52.4 million compared to the prior year primarily due to lower consolidated margins from the change in product mix and working capital changes. We continue to monitor customer credit risk in the current environment and focus on serving larger capitalized oil and gas operators and national oil companies.

Investing Activities

Total cash capital expenditures during 2021 were $20.5 million. Our Water & Flowback Services Division spent $13.6 million on capital expenditures, primarily to maintain, automate and upgrade its water management and flowback equipment fleet. Our Completion Fluids & Products Division spent $3.8 million on capital expenditures during 2021, the majority of which related to plant and facility additions. Capital expenditures also include $3.0 million from our former Compression Division during January 2021.

Investing activities for 2021 also included $17.6 million of proceeds from sale of our shares of Standard Lithium during October and November of 2021, offset by $5.0 million from our investment in a convertible note issued by CarbonFree in December 2021.

As a result of CSI Compressco's and TETRA's equipment sales, 2020 cash proceeds from the sale of used equipment exceeded the cash outflows to purchase new equipment. During the year ended December 31, 2020, cash provided by investing activities included $5.2 million from CSI Compressco, primarily consisting of $19.4 million in proceeds from sales of compressors and facilities, offset by $14.7 million of capital expenditures. During 2020, CSI Compressco launched an initiative to rationalize its fleet by selling smaller and mid-sized equipment to focus on the larger-horsepower fleet as well as to sell equipment outside its core area of focus. One of CSI Compressco's larger customers purchased a small number of large units recently deployed. Additionally during 2020, CSI Compressco sold its Midland fabrication facility and real estate for $17.0 million. Investing cash flows for 2020 also include $14.2 million from TETRA's sale of 15 high horse power compressor units during the fourth quarter.

During the year ended December 31, 2019, cash used in investing activities included $64.2 million from CSI Compressco, primarily consisting of $75.8 million of capital expenditures. Investing cash flows for 2019 also include proceeds of $12.9 million from our former Compression Division related to the sale of property, plant and equipment primarily the result of a sale-leaseback transaction in which CSI Compressco sold ten compression units and immediately leased them back at a monthly rate.

In August 2021, we announced the completion of a preliminary technical assessment by an independent geological consulting firm, APEX Geoscience Ltd. to assess lithium and bromine exploration targets in our approximately 31,100 net acres of brine leases in the Smackover Formation in Southwest Arkansas. We have rights to the brine, including rights to the bromine and lithium contained in the brine underlying this acreage, pursuant to certain brine leases and brine deeds with various landowners. With respect to approximately 27,500 acres of that total acreage, we have granted Standard Lithium an option to acquire lithium rights. While we continue to evaluate the next steps regarding the potential development of our brine leases, we have only recently started to conduct exploration work on the leases, and we are not currently able to determine the economic viability of the extraction of the lithium and bromine from the leased acreage. As of February 25, 2022, we are in the process of drilling an exploratory brine well on our dedicated acreage in the Smackover Formation in Arkansas. The results of the well, which is expected to be completed in the first quarter of 2022, are expected to advance our exploratory target lithium and bromine assets to more refined resources targets. In addition, the extraction of lithium and bromine from these brine leases will likely require a significant amount of time and capital, which we are not able to estimate at this time.

Historically, a significant majority of our planned capital expenditures have been related to identified opportunities to grow and expand our existing businesses. We are also focused on enhancing shareholder value by capitalizing on our key mineral assets, brine mineral extraction expertise, and deep chemistry competency to expand our offerings into the low carbon energy markets. However, we continue to review all capital expenditure plans carefully in an effort to conserve cash. We currently have no long-term capital expenditure commitments. If the forecasted demand for our products and services increases or decreases, the amount of planned expenditures on growth and expansion may be adjusted.

Financing Activities

During the year ended December 31, 2021, consolidated net cash used in financing activities was $50.1 million, primarily related to the $50.5 million pay down of our Term Credit Agreement. During the year ended December 31, 2020, consolidated net cash used in financing activities was $17.6 million, primarily related to the $8.0 million pay downs of our Term Credit Agreement and our ABL Credit Agreement and $5.0 million cash fees related to CSI Compressco's exchange of debt. During the year ended December 31, 2019, consolidated net cash used in financing activities was $5.9 million primarily due to $28.0 million of net cash redemptions of the CSI Compressco Preferred Units, offset by $21.5 million of borrowings under our Term Credit Agreement and our ABL Credit Agreement. We may supplement our existing cash balances and cash flow from operating activities with short-term borrowings, long-term borrowings, issuances of equity and debt securities, and other sources of capital. We are aggressively managing our working capital and capital expenditure needs in order to maximize our liquidity in the current environment.

Asset-Based Credit Agreement. The amended ABL Credit Agreement provides for a senior secured revolving credit facility of up to $80 million, with a $20.0 million accordion. The credit facility is subject to a borrowing base to be determined by reference to the value of inventory and accounts receivable, and includes a sublimit of $20.0 million for letters of credit, a swingline loan sublimit of $11.5 million, and a $15.0 million sub-facility subject to a borrowing base consisting of certain trade receivables and inventory in the United Kingdom. The ABL Credit Agreement may be used for working capital needs, capital expenditures and other general corporate purposes. The amounts we may borrow under the ABL Credit Agreement are derived from our accounts receivable, certain accrued receivables and certain inventory. Changes in demand for our products and services have an impact on our eligible accounts receivable, accrued receivables and the value of our inventory, which could result in significant changes to our borrowing base and therefore our availability under our ABL Credit Agreement. The ABL Credit Agreement is scheduled to mature on May 31, 2025. As of December 31, 2021, we had $1.6 million outstanding under the ABL Credit Agreement and, subject to compliance with the covenants, borrowing base, and other provisions of the agreement that may limit borrowings, we had an availability of $36.1 million under the ABL Credit Agreement. As of February 25, 2022, we have $0.8 million of outstanding borrowings under our ABL Credit Agreement and $6.0 million letters of credit, resulting in $51.8 million of availability.

Term Credit Agreement. The Term Credit Agreement is scheduled to mature on September 10, 2025. Our Term Credit Agreement requires us to annually prepay up to 50% of Excess Cash Flow (as defined in the Term Credit Agreement) from the most recent full fiscal year. If our Leverage Ratio (as defined in the Term Credit Agreement) at year-end is less than 2.00 to 1.00, the prepayment requirement is decreased to 25%. If our Leverage Ratio at year-end is less than 1.50 to 1.00, then no prepayment is required. As of February 25, 2022, $163.1 million in aggregate principal amount of our Term Credit Agreement is outstanding.

During the first quarter of 2021, we used proceeds from the GP sale and available cash on hand, including $14.2 million of proceeds from the fourth quarter 2020 compressor unit sales to Spartan, to pay down $29.3 million on our term loan. We repaid an additional $8.2 million of our term loan in July 2021 and $13.0 million of our term loan in December 2021.

As of December 31, 2021, we are in compliance with all covenants of our debt agreements. See Note 10 - "Long-Term Debt and Other Borrowings" in the Notes to Consolidated Financial Statements for further information.

Swedish Credit Facility. In January 2022, the Company entered into a new revolving credit facility for seasonal working capital needs of subsidiaries in Sweden and Finland ("Swedish Credit Facility"). There are no borrowings and the facility has availability of 50.0 million Swedish Krona, or approximately $5.3 million United States dollars, as of February 25, 2022. During each year, all outstanding loans under the Swedish Credit Facility must be repaid for at least 30 consecutive days. Borrowings bear interest at a rate of 2.95% per annum. The Swedish Credit Facility expires on December 31, 2022 and the Company intends to renew it annually.

Other Sources and Uses of Cash

In addition to the aforementioned credit facilities and senior notes, we fund our short-term liquidity requirements from cash generated by our operations and from short-term vendor financing. In addition, as of December 31, 2021, the market value of our equity holdings of CSI Compressco was $6.2 million, with no holding restrictions on our ability to monetize our investment. Should additional capital be required, the ability to raise such capital through the issuance of additional debt or equity securities may currently be limited. Instability or volatility in the capital markets at the times we need to access capital may affect the cost of capital and the ability to raise capital for an indeterminable length of time. If it is necessary to issue additional equity to fund our capital needs, additional dilution of our common stockholders will occur. We periodically evaluate engaging in strategic transactions and may consider divesting non-core assets where our evaluation suggests such transaction is in the best interest of our business. In challenging economic environments, we may experience increased delays and failures by customers to pay our invoices. Given the nature and significance of the COVID-19 pandemic and disruption in the oil and gas industry, we could experience delayed customer payments and payment defaults associated with customer liquidity issues and bankruptcies. If our customers delay paying or fail to pay us a significant amount of our outstanding receivables, it could have an adverse effect on our liquidity. An increase of unpaid receivables would also negatively affect our borrowing availability under the ABL Credit Agreement.

On April 11, 2019, we filed a universal shelf Registration Statement on Form S-3 with the SEC. On May 1, 2019, the Registration Statement on Form S-3 was declared effective by the SEC. Pursuant to this registration statement, we have the ability to sell debt or equity securities in one or more public offerings up to an

aggregate public offering price of $400 million. This shelf registration statement currently provides us additional flexibility with regard to potential financings that we may undertake when market conditions permit or our financial condition may require. We intend to renew the shelf Registration Statement during the second quarter of 2022.

Leases

We have operating leases for some of our transportation equipment, office space, warehouse space, operating locations, and machinery and equipment. Our leases have remaining lease terms ranging from 1 to 13 years. See Note 2 - “Basis of Presentation and Significant Accounting Policies” in the Notes to Consolidated Financial Statements for further information our lease obligations.

Asset Retirement Obligations

We operate facilities in various U.S. and foreign locations that are used in the manufacture, storage, and sale of our products, inventories, and equipment. We are required to take certain actions in connection with the retirement of these assets.

Product Purchase Obligations

In the normal course of our Completion Fluids & Products Division operations, we enter into supply agreements with certain manufacturers of various raw materials and finished products. Some of these agreements have terms and conditions that specify a minimum or maximum level of purchases over the term of the agreement. Other agreements require us to purchase the entire output of the raw material or finished product produced by the manufacturer. Our purchase obligations under these agreements apply only with regard to raw materials and finished products that meet specifications set forth in the agreements. We recognize a liability for the purchase of such products at the time we receive them. As of December 31, 2021, the aggregate amount of the fixed and determinable portion of the purchase obligation pursuant to our Completion Fluids & Products Division’s supply agreements was approximately $114.5 million, extending through 2029, including commitments on average of $15.3 million per year from 2021 through 2026.

Off Balance Sheet Arrangements

As of December 31, 2021, we do not have any off balance sheet arrangements that may have a current or future material effect on our consolidated financial condition or results of operations.

Litigation

For information regarding litigation, including contingencies of discontinued operations, see Note 11 - “Commitments and Contingencies” in the Notes to Consolidated Financial Statements.

Critical Accounting Policies and Estimates

This discussion and analysis of our financial condition and results of operations is based upon our consolidated financial statements. We prepared these financial statements in conformity with U.S. GAAP. In preparing our consolidated financial statements, we make assumptions, estimates, and judgments that affect the amounts reported. We base these on historical experience, available information, and various other assumptions that we believe are reasonable. Our assumptions, estimates, and judgments may change as new events occur, as new information is acquired, and as changes in our operating environments are encountered. Actual results are likely to differ from our current estimates, and those differences may be material. The following critical accounting policies reflect the most significant judgments and estimates used in the preparation of our financial statements.

Impairment of Long-Lived Assets

The determination of impairment of long-lived assets, including identified intangible assets, is conducted periodically whenever indicators of impairment are present. If such indicators are present, the determination of the amount of impairment is based on our judgments as to the future operating cash flows to be generated from these assets throughout their estimated useful lives. If an impairment of a long-lived asset is warranted, we estimate the fair value of the asset based on a present value of these cash flows or the value that could be realized from disposing of the asset in a transaction between market participants. The oil and gas industry is cyclical, and our

estimates of the amount of future cash flows, the period over which these estimated future cash flows will be generated, as well as the fair value of an impaired asset, are imprecise. Our failure to accurately estimate these future operating cash flows or fair values could result in certain long-lived assets being overstated, which could result in impairment charges in periods subsequent to the time in which the impairment indicators were first present. Alternatively, if our estimates of future operating cash flows or fair values are understated, impairments might be recognized unnecessarily or in excess of the appropriate amounts.

Impairment of Goodwill

During the third quarter of 2019, we determined that the deteriorating energy industry outlook was an indicator requiring further analysis for impairment of goodwill. We determined at that time that the fair value of the Water Management reporting unit, the only reporting unit with goodwill, exceeded its carrying value and there was no impairment to goodwill.

During the fourth quarter of 2019, due to further deterioration in the energy industry outlook resulting in decreased expected future cash flows for our Water Management reporting unit, a component of our Water & Flowback Services Division, we recorded a full goodwill impairment of $25.9 million. As a result, there was no goodwill balance as of December 31, 2021 or 2020.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk.

Interest Rate Risk

The interest on our borrowings is subject to market risk exposure related to changes in applicable interest rates. Borrowings under our revolving credit facility bear interest at an agreed-upon percentage rate spread above LIBOR. Borrowings under the Term Credit Agreement bear interest at a rate per annum equal to, at the option of TETRA, either (i) LIBOR (subject to a 1% floor) plus a margin of 6.25% per annum or (ii) a base rate plus a margin of 5.25% per annum. The following table sets forth as of December 31, 2021, the principal amount due under our long-term debt obligations and their respective weighted average interest rates. We are not a party to an interest rate swap contract or other derivative instrument designed to hedge our exposure to interest rate fluctuation risk.

	Scheduled Maturity	Interest Rate	December 31, 2021
			(In Thousands)
Asset-based credit agreement	May 31, 2025	4.75%	$ 1,614
Term credit agreement	September 10, 2025	7.25%	163,071
Total long-term debt			$ 164,685

Exchange Rate Risk

We are exposed to fluctuations between the U.S. dollar and the euro with regard to our euro-denominated operating activities. We also have currency exchange rate risk exposure related to revenues, expenses, operating receivables, and payables denominated in foreign currencies. We may enter into 30-day foreign-currency forward derivative contracts as part of a program designed to mitigate the currency exchange rate risk exposure on selected transactions of certain foreign subsidiaries. Although contracts pursuant to this program will serve as an economic hedge of the cash flow of our currency exchange risk exposure, they are not expected to be formally designated as hedge contracts or qualify for hedge accounting treatment. Accordingly, any change in the fair value of these derivative instruments during a period will be included in the determination of earnings for that period. As of December 31, 2021, we did not have any foreign currency exchange contracts outstanding.

Item 8. Financial Statements and Supplementary Data.

The financial statements and supplementary data required to be included in this Item 8 are set forth in Item 15 of this Annual Report.

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

None.

Item 9A. Controls and Procedures.

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of our disclosure controls and procedures, as such term is defined under Rule 13a-15(e) promulgated under the Exchange Act as of the end of the period covered by this report. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of December 31, 2021.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Our Internal control over financial reporting is a process to provide reasonable assurance regarding the reliability of our financial reporting for external purposes in accordance with accounting principles generally accepted in the United States of America.

Our 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 our assets; (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 are being made only in accordance with authorizations of our management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our 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. In addition, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Under the supervision and with the participation of management, including our Chief Executive Officer and Chief Financial Officer, an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2021 was conducted based on the framework in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) ("COSO"). Based on this assessment, management has determined that our internal control over financial reporting was effective as of December 31, 2021.

Grant Thornton LLP, our independent registered public accounting firm, has issued an attestation report on the effectiveness of our internal control over financial reporting as of December 31, 2021. Grant Thornton LLP's report on our internal control over financial reporting is included herein.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during the fourth quarter of the fiscal year ended December 31, 2021, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information.

None.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections.

None.

PART III

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

The information required by this Item is hereby incorporated by reference from the information appearing under the captions "Proposal No. 1: Election of Directors," "Executive Officers," "Corporate Governance," "Board Meetings and Committees," in our definitive proxy statement (the "Proxy Statement") for the annual meeting of stockholders to be held on May 24, 2022, which involves the election of directors and is to be filed with the SEC pursuant to the Exchange Act within 120 days of the end of our fiscal year on December 31, 2021.

Item 11. Executive Compensation.

The information required by this Item is hereby incorporated by reference from the information appearing under the captions "Management and Compensation Committee Report," "Management and Compensation Committee Interlocks and Insider Participation," "Compensation Discussion and Analysis," "Compensation of Executive Officers," and "Director Compensation" in our Proxy Statement. Notwithstanding the foregoing, in accordance with the instructions to Item 407 of Regulation S-K, the information contained in our Proxy Statement under the subheading "Compensation Committee Report" shall be deemed furnished, and not filed, in this Form 10-K, and shall not be deemed incorporated by reference into any filing under the Securities Act, or the Exchange Act, as a result of this furnishing, except to the extent we specifically incorporate it by reference.

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

The information required by this Item is hereby incorporated by reference from the information appearing under the captions "Beneficial Stock Ownership of Certain Stockholders and Management" and "Equity Compensation Plan Information" in our Proxy Statement.

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

The information required by this Item is hereby incorporated by reference from the information appearing under the captions "Certain Transactions" and "Director Independence" in our Proxy Statement.

Item 14. Principal Accounting Fees and Services.

The information required by this Item is hereby incorporated by reference from the information appearing under the caption "Fees Paid to Principal Accounting Firm" in our Proxy Statement.

PART IV

Item 15. Exhibits and Financial Statement Schedules.

(a) List of documents filed as part of this Report

1. Financial Statements of the Company

	Page
Reports of Independent Registered Public Accounting Firms (PCAOB ID Numbers Grant Thornton LLP: 248 & Ernst & Young LLP: 42)	F-1
Consolidated Balance Sheets at December 31, 2021 and 2020	F-4
Consolidated Statements of Operations for the years ended December 31, 2021, 2020, and 2019	F-6
Consolidated Statements of Comprehensive Income (Loss) for the years ended December 31, 2021, 2020, and 2019	F-7
Consolidated Statements of Equity for the years ended December 31, 2021, 2020, and 2019	F-8
Consolidated Statements of Cash Flows for the years ended December 31, 2021, 2020, and 2019	F-9
Notes to Consolidated Financial Statements	F-10

2. Financial statement schedules

All other schedules for which provision is made in the applicable accounting regulation of the Securities and Exchange Commission are not required under the related instructions or are inapplicable and therefore have been omitted.

3. List of Exhibits

2.1+++	Asset Purchase and Sale Agreement, dated February 28, 2018, by and between Maritech Resources, LLC, TETRA Technologies, Inc., and Orinoco Natural Resources, LLC (incorporated by reference to Exhibit 2.1 to the Company's Quarterly Report filed on May 10, 2018 (SEC File No. 001-13455)).
2.2+++	Equity Interest Purchase and Sale Agreement, dated February 28, 2018, by and among TETRA Technologies, Inc., TETRA Production Testing Holding LLC, and Epic Offshore Specialty, LLC (incorporated by reference to Exhibit 2.2 to the Company's Quarterly Report filed on May 10, 2018 (SEC File No. 001-13455)).
2.3+++	Equity Interest Purchase Agreement, dated February 13, 2018, by and among the sellers listed therein, the sellers representative and TETRA Technologies, Inc (incorporated by reference to Exhibit 2.3 to the Company's Quarterly Report filed on May 10, 2018 (SEC File No. 001-13455)).
2.4+++	Membership Interest Purchase And Sale Agreement, dated as of February 28, 2018, by and among TETRA Applied Technologies, LLC, Maritech Resources, LLC, TETRA Technologies, Inc., and Orinoco Natural Resources, LLC (incorporated by reference to Exhibit 2.4 to the Company's Quarterly Report filed on May 10, 2018 (SEC File No. 001-13455)).
2.5+++	Purchase and Sale Agreement dated as of January 29, 2021 between Spartan Energy Holdco, LLC, TETRA Technologies, Inc., and, solely for the limited purposes set forth therein, Spartan Energy Partners LP (incorporated by reference to Exhibit 2.1 to the Company's Form 8-K filed on January 29, 2021 (SEC File No. 001-13455)).
3.1	Restated Certificate of Incorporation of TETRA Technologies, Inc. (incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-8 filed on December 22, 2016 (SEC File No. 333-215283)).
3.2	Amended and Restated Bylaws of TETRA Technologies, Inc. (incorporated by reference to Exhibit 4.6 to the Company's Registration Statement on Form S-8 filed on May 4, 2006 (SEC File No. 333-133790)).
3.3	Certificate of Amendment of Restated Certificate of Incorporation of TETRA Technologies, Inc. (incorporated by reference to Exhibit 3.1 to the Company's Quarterly Report filed on August 9, 2017 (SEC File No. 001-13455)).
4.1	Form of Senior Indenture (including form of senior debt security) (incorporated by reference to Exhibit 4.10 to the Company's Registration Statement on Form S-3 filed on April 12, 2019 (SEC File No. 333-230818)).
4.2	Form of Subordinated Indenture (incorporated by reference to Exhibit 4.11 to the Company's Registration Statement on Form S-3 filed on April 12, 2019 (SEC File No. 333-230818)).
4.3	Credit Agreement, date September 10, 2018, among TETRA Technologies, Inc. and JPMorgan Chase Bank (incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed on September 13, 2018 (SEC File No. 001-13455)).
4.4	Credit Agreement, date September 10, 2018, among TETRA Technologies, Inc. and Wilmington Trust, National Association (incorporated by reference to Exhibit 10.2 to the Company's Form 8-K filed on September 13, 2018 (SEC File No. 001-13455)).
4.5	Intercreditor Agreement, date September 10, 2018, among TETRA Technologies, Inc., JPMorgan Chase Bank, and Wilmington Trust, National Association (incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed on September 13, 2018 (SEC File No. 001-13455)).
4.6	Term Loan Letter Agreement, dated March 29, 2021, amending Credit Agreement, dated September 10, 2018, among the Company and Wilmington Trust, National Association (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report filed on May 5, 2021 (SEC File No. 001-13455)).

4.7	Second Amendment to the Credit Agreement dated as of July 30, 2021, by and among the Company, certain subsidiaries of TETRA party thereto, JPMorgan Chase Bank, N.A., as administrative agent, and each of the lenders and issuing banks party thereto (incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed on August 2, 2021 (SEC File No. 001-13455)).
4.8	Amendment to Credit Agreement dated as of July 30, 2021, by and among the Company, Wilmington Trust, National Association, as administrative agent, and each of the lenders party thereto (incorporated by reference to Exhibit 10.2 to the Company's Form 8-K filed on August 2, 2021 (SEC File No. 001-13455)).
4.9	Description of the Registrant's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934.
10.1***	TETRA Technologies, Inc. Nonqualified Deferred Compensation Plan (incorporated by reference to Exhibit 10.9 to the Company's Form 10-Q filed on August 13, 2002 (SEC File No. 001-13455)).
10.2***	TETRA Technologies, Inc. Nonqualified Deferred Compensation Plan and The Executive Excess Plan Adoption Agreement effective on June 30, 2005 (incorporated by reference to Exhibit 10.2 to the Company's Form 10-Q/A filed on March 16, 2006 (SEC File No. 001-13455)).
10.3***	TETRA Technologies, Inc. 401(k) Retirement Plan, as amended and restated (incorporated by reference to Exhibit 99.1 to the Company's Registration Statement on Form S-8 filed on February 22, 2008 (SEC File No. 333-149348)).
10.4***	TETRA Technologies, Inc. 2007 Equity Incentive Compensation Plan (incorporated by reference to Exhibit 4.12 to the Company's Registration Statement on Form S-8 filed on May 4, 2007 (SEC File No. 333-142637)).
10.5***	TETRA Technologies, Inc. Amended and Restated 2007 Equity Incentive Compensation Plan (incorporated by reference to Exhibit 4.12 to the Company's Registration Statement on Form S-8 filed on May 9, 2008 (SEC File No. 333-150783)).
10.6***	TETRA Technologies, Inc. 2007 Long Term Incentive Compensation Plan (incorporated by reference to Exhibit 4.11 to the Company's Registration Statement on Form S-8 filed on May 5, 2010 (SEC File No. 333-166537)).
10.7***	TETRA Technologies, Inc. Amended and Restated 2007 Long Term Incentive Compensation Plan, as amended through February 20, 2015 (incorporated by reference to Exhibit 10.3 to the Company's Form 10-Q filed on August 10, 2015 (SEC File No. 001-13455)).
10.8***	TETRA Technologies, Inc. 2011 Long-Term Incentive Compensation Plan (incorporated by reference to Exhibit 4.11 to the Company's Registration Statement on Form S-8 filed on May 10, 2011 (SEC File No. 333-174090)).
10.9***	TETRA Technologies, Inc. 2011 Amended and Restated Long Term Incentive Compensation Plan (incorporated by reference to Exhibit 4.9 to the Company's Registration Statement on Form S-8 filed on May 9, 2013 (SEC File No. 333-188494)).
10.10***	TETRA Technologies, Inc. Second Amended and Restated 2011 Long Term Incentive Compensation Plan, as amended through February 20, 2015 (incorporated by reference to Exhibit 10.4 to the Company's Form 10-Q filed on August 10, 2015 (SEC File No. 001-13455)).
10.11***	Third Amended and Restated 2011 Long Term Incentive Compensation Plan (incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed on May 6, 2016 (SEC File No. 001-13455)).
10.12***	Employee Equity Award Agreement dated August 15, 2012 by and between TETRA Technologies, Inc. and Elijio V. Serrano (incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed on August 16, 2012 (SEC File No. 001-13455)).
10.13	Lease Agreement dated December 31, 2012 by and between Tetris Property LP and TETRA Technologies, Inc. (incorporated by reference to Exhibit 10.36 to the Company's Form 10-K filed on March 4, 2013 (SEC File No. 001-13455)).
10.14	Bonding Agreement, dated February 28, 2018, between TETRA Technologies, Inc., Orinoco Natural Resources, LLC, and Epic Offshore Specialty, LLC.
10.15***	Form of Change in Control Agreement (incorporated by reference to Exhibit 10.21 to the Company's Form 10-K filed on March 16, 2020 (SEC File No. 001-13455)).
10.16***	TETRA Technologies, Inc. Cash Incentive Compensation Plan (incorporated by reference to Exhibit 4.1 to the Company's Form 10-Q filed on May 10, 2010 (SEC File No. 001-13455)).
10.17***	Amendment No. 2 to the TETRA Technologies, Inc. Cash Incentive Compensation Plan (incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed on February 26, 2016 (SEC File No. 001-13455)).
10.18***	Stand-Alone Cash-Settled Stock Appreciation Rights Award Agreement, dated August 9, 2017, between TETRA Technologies, Inc. and Stuart M. Brightman (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report filed on November 9, 2017 (SEC File No. 001-13455)).
10.19***	Stand-Alone Cash-Settled Stock Appreciation Rights Award Agreement, dated February 22, 2018, between TETRA Technologies, Inc. and Stuart M. Brightman (incorporated by reference to Exhibit 10.44 to the Company's Form 10-K filed on March 4, 2019 (SEC File No. 001-13455)).

10.20***	TETRA Technologies, Inc. 2018 Inducement Restricted Stock Plan (incorporated by reference to Exhibit 4.5 to the Company's Registration Statement on Form S-8 filed on February 12, 2018 ((SEC File No. 333-222976)).
10.21***	Form of TETRA Technologies, Inc. 2018 Inducement Restricted Stock Plan Restricted Stock Award Agreement (incorporated by reference to Exhibit 4.6 to the Company's Registration Statement on Form S-8 filed on February 12, 2018 (SEC File No. 333-222976)).
10.22***	Transition Agreement dated as of May 8, 2019 between TETRA Technologies, Inc. and Stuart M. Brightman (incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed on May 8, 2019 (SEC File No. 001-13455)).
10.23***	Amendment to Transition Agreement dated April 8, 2020 between TETRA Technologies, Inc. and Stuart M. Brightman (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report filed on August 7, 2020 (SEC File No. 001-13455)).
10.24***	Transition Agreement dated July 27, 2020 between TETRA Technologies, Inc. and Bass C. Wallace, Jr. (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report filed on November 3, 2020 (SEC File No. 001-13455)).
10.25***	TETRA Technologies, Inc. 2018 Equity Incentive Plan (incorporated by reference to Exhibit 4.5 to the Company's registration statement on Form S-8 filed on May 4, 2018 (SEC File No. 333-224679).
10.26***	Form of TETRA Technologies, Inc. 2018 Equity Incentive Plan Restricted Stock Award Agreement (incorporated by reference to Exhibit 4.6 to the Company's registration statement on Form S-8 filed on May 4, 2018 (SEC File No. 333-224679).
10.27***	Form of TETRA Technologies, Inc. 2018 Equity Incentive Plan Incentive Stock Option Award Agreement (incorporated by reference to Exhibit 4.7 to the Company's registration statement on Form S-8 filed on May 4, 2018 (SEC File No. 333224679).
10.28***	Form of TETRA Technologies, Inc. 2018 Equity Incentive Plan Nonqualified Stock Option Award Agreement (incorporated by reference to Exhibit 4.8 to the Company's registration statement on Form S-8 filed on May 4, 2018 (SEC File No. 333-224679).
10.29***	Form of TETRA Technologies, Inc. 2018 Equity Incentive Plan Cash Retention Award Agreement (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report filed on November 3, 2020 (SEC File No. 001-13455)).
10.30***	TETRA Technologies, Inc. First Amended and Restated 2018 Equity Incentive Plan (incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-8 filed with the SEC on May 26, 2021 (SEC File No. 333-256494)).
10.31***	Form of TETRA Technologies, Inc. First Amended and Restated 2018 Equity Incentive Plan Restricted Stock Unit Award (incorporated by reference to Exhibit 4.2 to the Company's Registration Statement on Form S-8 filed with the SEC on May 26, 2021 (SEC File No. 333-256494)).
10.32***	Form of TETRA Technologies, Inc. First Amended and Restated 2018 Equity Incentive Plan Restricted Stock Unit Award for Outside Directors (incorporated by reference to Exhibit 4.3 to the Company's Registration Statement on Form S-8 filed with the SEC on May 26, 2021 (SEC File No. 333-256494)).
10.33***	Form of TETRA Technologies, Inc. First Amended and Restated 2018 Equity Incentive Plan Cash Award Agreement (incorporated by reference to Exhibit 4.4 to the Company's Registration Statement on Form S-8 filed with the SEC on May 26, 2021 (SEC File No. 333-256494)).
10.34***	Cooperation Agreement, dated March 24, 2021, by and among TETRA Technologies, Inc., Bradley L. Radoff and the Radoff Family Foundation (incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed on March 26, 2021 (SEC File No. 001-13455).
21+	Subsidiaries of the Company.
23.1+	Consent of Grant Thornton LLP
23.2+	Consent of Ernst & Young LLP
31.1+	Certification Pursuant to Rule 13(a)-14(a) or 15(d)-14(a) of the Exchange Act, As Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2+	Certification Pursuant to Rule 13(a)-14(a) or 15(d)-14(a) of the Exchange Act, As Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	Certification Furnished Pursuant to 18 U.S.C. Section 1350, As Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Chief Executive Officer).
32.2**	Certification Furnished Pursuant to 18 U.S.C. Section 1350, As Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Chief Financial Officer).
101.INS++	XBRL Instance Document.
101.SCH++	XBRL Taxonomy Extension Schema Document.

101.CAL++	XBRL Taxonomy Extension Calculation Linkbase Document.
101.LAB++	XBRL Taxonomy Extension Label Linkbase Document.
101.PRE++	XBRL Taxonomy Extension Presentation Linkbase Document.
101.DEF++	XBRL Taxonomy Extension Definition Linkbase Document.
104++	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).

+ Filed with this report

** Furnished with this report.

*** Management contract or compensatory plan or arrangement.

++ Attached as Exhibit 101 to this report are the following documents formatted in XBRL (Extensible Business Reporting Language): (i) Consolidated Statements of Operations for the years ended December 31, 2021, 2020 and 2019; (ii) Consolidated Balance Sheets as of December 31, 2021 and December 31, 2020; (iii) Consolidated Statements of Comprehensive Income for the years ended December 31, 2021, 2020 and 2019; (iv) Consolidated Statements of Cash Flows for the years ended December 31, 2021, 2020 and 2019; (v) Consolidated Statements of Stockholders' Equity for the years ended December 31, 2021, 2020 and 2019; and (vi) Notes to Consolidated Financial Statements for the year ended December 31, 2021.

+++ Certain schedules have been omitted pursuant to Item 601(a)(5) of Regulation S-K. The registrant agrees to furnish supplementally a copy of any such omitted schedule to the SEC upon request.

Item 16. Form 10-K Summary.

None.

SIGNATURES

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

TETRA Technologies, Inc.

Date: February 28, 2022

By: /s/Brady M. Murphy

Brady M. Murphy, President and 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/William D. Sullivan William D. Sullivan	Chairman of the Board of Directors	February 28, 2022
/s/Brady M. Murphy Brady M. Murphy	President, Chief Executive Officer, and Director (Principal Executive Officer)	February 28, 2022
/s/Elijio V. Serrano Elijio V. Serrano	Senior Vice President and Chief Financial Officer (Principal Financial Officer)	February 28, 2022
/s/Richard D. O’Brien Richard D. O’Brien	Vice President – Finance and Global Controller (Principal Accounting Officer)	February 28, 2022
/s/Mark E. Baldwin Mark E. Baldwin	Director	February 28, 2022
/s/Thomas R. Bates, Jr. Thomas R. Bates, Jr.	Director	February 28, 2022
/s/John F. Glick John F. Glick	Director	February 28, 2022
/s/Gina A. Luna Gina A. Luna	Director	February 28, 2022
/s/Sharon B. McGee Sharon B. McGee	Director	February 28, 2022
/s/Shawn D. Williams Shawn D. Williams	Director	February 28, 2022

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Shareholders
TETRA Technologies, Inc.

Opinion on the financial statements

We have audited the accompanying consolidated balance sheets of TETRA Technologies, Inc. (a Delaware corporation) and subsidiaries (the "Company") as of December 31, 2021 and 2020, the related consolidated statements of operations, comprehensive income (loss), equity, and cash flows for each of the two years in the period ended December 31, 2021, 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, 2021 and 2020, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2021, in conformity with accounting principles generally accepted in the United States of America.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the Company's internal control over financial reporting as of December 31, 2021, based on criteria established in the 2013 *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"), and our report dated February 28, 2022 expressed an unqualified opinion.

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 Public Company Accounting Oversight Board (United States) ("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. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. 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 matters

Critical audit matters are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. We determined that there are no critical audit matters.

/s/ GRANT THORNTON LLP

We have served as the Company's auditor since 2020.

Houston, Texas
February 28, 2022

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Stockholders of
TETRA Technologies, Inc. and Subsidiaries

Opinion on the Financial Statements

We have audited the accompanying consolidated statements of operations, comprehensive income (loss), equity, and cash flows of TETRA Technologies, Inc. and subsidiaries (the Company) for the year ended December 31, 2019, and the related notes to the consolidated financial statements (collectively referred to as the "consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the results of the Company's operations and cash flows for the year ended December 31, 2019, in conformity with U.S. generally accepted accounting principles.

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 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 the financial statements are free of material misstatement, whether due to error or fraud. Our audit 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 audit 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 audit provides a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We served as the Company's auditor from 1981 to 2020.

Houston, Texas
March 16, 2020, except for Note 3, as to
which the date is March 5, 2021

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Stockholders
TETRA Technologies, Inc.

Opinion on internal control over financial reporting
We have audited the internal control over financial reporting of TETRA Technologies, Inc. (a Delaware corporation) and subsidiaries (the "Company") as of December 31, 2021, based on criteria established in the 2013 *Internal Control—Integrated Framework* 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, 2021, based on criteria established in the 2013 *Internal Control—Integrated Framework* issued by COSO.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated financial statements of the Company as of and for the year ended December 31, 2021, and our report dated February 28, 2022 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/ GRANT THORNTON LLP

Houston, Texas
February 28, 2022

TETRA Technologies, Inc. and Subsidiaries
Consolidated Balance Sheets
(In Thousands)

	December 31, 2021	December 31, 2020
ASSETS		
Current assets:		
Cash and cash equivalents	$ 31,551	$ 67,252
Restricted cash	—	65
Trade accounts receivable, net of allowance for doubtful accounts of $289 in 2021 and $6,824 in 2020	91,202	64,078
Inventories	69,098	76,658
Current assets associated with discontinued operations	—	710,006
Prepaid expenses and other current assets	18,539	13,487
Total current assets	210,390	931,546
Property, plant, and equipment:		
Land and building	26,380	26,506
Machinery and equipment	345,454	365,296
Automobiles and trucks	16,174	18,446
Chemical plants	61,565	62,714
Construction in progress	5,349	1,526
Total property, plant, and equipment	454,922	474,488
Less accumulated depreciation	(365,946)	(377,632)
Net property, plant, and equipment	88,976	96,856
Other assets:		
Other intangibles, net	36,958	41,487
Operating lease right-of-use assets	36,973	43,448
Investments	11,233	2,675
Other assets	13,736	16,827
Total other assets	98,900	104,437
Total assets	$ 398,266	$ 1,132,839

See Notes to Consolidated Financial Statements

TETRA Technologies, Inc. and Subsidiaries
Consolidated Balance Sheets
(In Thousands, Except Share Amounts)

	December 31, 2021	December 31, 2020
LIABILITIES AND EQUITY		
Current liabilities:		
Trade accounts payable	$ 37,943	$ 22,573
Compensation and employee benefits	20,811	14,336
Operating lease liabilities, current portion	8,108	8,795
Accrued taxes	7,085	4,323
Accrued liabilities and other	21,810	14,012
Current liabilities associated with discontinued operations	1,385	734,039
Total current liabilities	97,142	798,078
Long-term debt, net	151,936	199,894
Operating lease liabilities	31,429	37,569
Asset retirement obligations	12,984	12,484
Deferred income taxes	1,669	1,942
Other liabilities	4,543	11,810
Total long-term liabilities	202,561	263,699
Commitments and contingencies (Note 11)		
Equity:		
TETRA stockholders' equity:		
Common stock, par value $0.01 per share; 250,000,000 shares authorized at December 31, 2021 and December 31, 2020; 130,075,838 shares issued at December 31, 2021, and 128,304,354 shares issued at December 31, 2020	1,301	1,289
Additional paid-in capital	475,624	472,134
Treasury stock, at cost; 3,138,675 shares held at December 31, 2021, and 2,953,976 shares held at December 31, 2020	(19,957)	(19,484)
Accumulated other comprehensive income (loss)	(46,932)	(49,914)
Retained deficit	(310,332)	(413,665)
Total TETRA stockholders' equity	99,704	(9,640)
Noncontrolling interests	(1,141)	80,702
Total equity	98,563	71,062
Total liabilities and equity	$ 398,266	$ 1,132,839

See Notes to Consolidated Financial Statements

TETRA Technologies, Inc. and Subsidiaries
Consolidated Statements of Operations
(In Thousands, Except Per Share Amounts)

	Year Ended December 31,		
	2021	2020	2019
Revenues:			
Product sales	$ 215,229	$ 232,721	$ 259,553
Services	173,043	144,994	301,688
Total revenues	388,272	377,715	561,241
Cost of revenues:			
Cost of product sales	148,280	150,627	176,643
Cost of services	146,672	120,775	233,191
Depreciation, amortization, and accretion	33,502	38,214	47,563
Impairments and other charges	581	556	92,037
Total cost of revenues	329,035	310,172	549,434
Gross profit	59,237	67,543	11,807
General and administrative expense	75,049	76,697	96,466
Goodwill impairment	—	—	25,784
Interest expense, net	16,377	18,926	21,256
Gain on sales of assets	(1,040)	(2,878)	(1,665)
Other (income) expense, net	(16,428)	(116)	(1,925)
Loss before taxes and discontinued operations	(14,721)	(25,086)	(128,109)
Provision for income taxes	2,084	1,758	2,811
Loss from continuing operations	(16,805)	(26,844)	(130,920)
Income (loss) from discontinued operations, net of taxes	120,407	(72,089)	(29,580)
Net income (loss)	103,602	(98,933)	(160,500)
Less: (income) loss attributable to noncontrolling interest[(1)]	(269)	47,790	13,087
Net income (loss) attributable to TETRA stockholders	$ 103,333	$ (51,143)	$ (147,413)
Basic and diluted net income (loss) per common share attributable to TETRA stockholders:			
Loss from continuing operations	$ (0.13)	$ (0.22)	$ (1.04)
Income (loss) from discontinued operations	0.95	(0.19)	(0.13)
Net income (loss)	$ 0.82	$ (0.41)	$ (1.17)
Weighted average common shares outstanding:			
Basic and diluted	126,602	125,838	125,600

[(1)] (Income) loss attributable to noncontrolling interest includes (income) loss from discontinued operations, net of taxes of $(333), $47,898 and $13,538 for the years ended December 31, 2021, 2020 and 2019, respectively.

See Notes to Consolidated Financial Statements

TETRA Technologies, Inc. and Subsidiaries
Consolidated Statements of Comprehensive Income (Loss)
(In Thousands)

	Year Ended December 31,		
	2021	2020	2019
Net income (loss)	103,602	(98,933)	(160,500)
Foreign currency translation gain (loss), net of taxes of $0 in 2021, $0 in 2020, and $0 in 2019	(4,623)	2,386	(188)
Comprehensive income (loss)	98,979	(96,547)	(160,688)
Less: comprehensive (income) loss attributable to noncontrolling interest	(269)	47,673	12,755
Comprehensive income (loss) attributable to TETRA stockholders	$ 98,710	$ (48,874)	$ (147,933)

See Notes to Consolidated Financial Statements

TETRA Technologies, Inc. and Subsidiaries
Consolidated Statements of Equity
(In Thousands)

	Common Stock Par Value	Additional Paid-In Capital	Treasury Stock	Accumulated Other Comprehensive Income (Loss) Currency Translation	Retained Earnings	Noncontrolling Interest	Total Equity
Balance at December 31, 2018	$ 1,285	$ 460,680	$ (18,950)	$ (51,663)	$ (217,952)	$ 139,349	$ 312,749
Net loss for 2019	—	—	—	—	(147,413)	(13,087)	(160,500)
Translation adjustment, net of taxes of $0	—	—	—	(520)	—	332	(188)
Comprehensive loss							(160,688)
Distributions to CSI Compressco public unitholders	—	—	—	—	—	(1,233)	(1,233)
Equity award activity	(2)	—	—	—	—	—	(2)
Treasury stock activity, net	—	—	(214)	—	—	—	(214)
Equity compensation expense	—	6,358	—	—	—	986	7,344
Conversions of CSI Compressco Series A Preferred	—	—	—	—	—	2,539	2,539
Cumulative effect adjustment					2,843		2,843
Other	—	(79)	—	—	—	(433)	(512)
Balance at December 31, 2019	$ 1,283	$ 466,959	$ (19,164)	$ (52,183)	$ (362,522)	$ 128,453	$ 162,826
Net loss for 2020	—	—	—	—	(51,143)	(47,790)	(98,933)
Translation adjustment, net of taxes of $0	—	—	—	2,269	—	117	2,386
Comprehensive loss							(96,547)
Distributions to CSI Compressco public unitholders	—	—	—	—	—	(1,244)	(1,244)
Equity award activity	6	—	—	—	—	—	6
Treasury stock activity, net	—	—	(320)	—	—	—	(320)
Equity compensation expense	—	5,184	—	—	—	1,254	6,438
Other	—	(9)	—	—	—	(88)	(97)
Balance at December 31, 2020	$ 1,289	$ 472,134	$ (19,484)	$ (49,914)	$ (413,665)	$ 80,702	$ 71,062
Net income for 2021	—	—	—	—	103,333	269	103,602
Translation adjustment, net of taxes of $0	—	—	—	(4,623)	—	—	(4,623)
Comprehensive income							98,979
Deconsolidation of CSI Compressco				7,605	—	(82,775)	(75,170)
Dividend	—	—	—	—	—	(110)	(110)
Equity award activity	12	—	—	—	—	—	12
Treasury stock activity, net	—	—	(473)	—	—	—	(473)
Equity compensation expense	—	4,664	—	—	—	580	5,244
Other	—	(1,174)	—	—	—	193	(981)
Balance at December 31, 2021	$ 1,301	$ 475,624	$ (19,957)	$ (46,932)	$ (310,332)	$ (1,141)	$ 98,563

See Notes to Consolidated Financial Statements

TETRA Technologies, Inc. and Subsidiaries
Consolidated Statements of Cash Flows
(In Thousands)

	Year Ended December 31,		
	2021	2020	2019
Operating activities:			
Net income (loss)	$ 103,602	$ (98,933)	$ (160,500)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation, amortization, and accretion	33,532	118,747	124,278
(Gain on sale) or loss on disposal of discontinued operations	(120,137)	—	7,500
Impairments and other charges	581	20,940	95,196
Impairment of goodwill	—	—	25,784
Unrealized loss on CSI Compressco units	2,227	—	—
Realized gain on sale of Standard Lithium shares	(15,479)	—	—
Equity-based compensation expense	4,664	6,616	8,127
(Recovery of) provision for doubtful accounts	(654)	6,857	5,039
Amortization and expense of financing costs	3,091	5,252	4,782
CSI Compressco debt exchange expenses	—	4,892	—
CSI Compressco Series A Preferred Unit distributions and adjustments	—	—	3,574
Gain on sale of assets	(482)	(4,668)	(2,333)
Other non-cash charges and credits	(805)	(706)	(4,692)
Changes in operating assets and liabilities, net of assets acquired:			
Accounts receivable	(27,795)	62,569	6,471
Inventories	5,387	16,983	(2,770)
Prepaid expenses and other current assets	(6,533)	1,672	579
Trade accounts payable and accrued expenses	27,006	(62,274)	(16,545)
Other	(3,548)	(1,035)	(4,258)
Net cash provided by operating activities	4,657	76,912	90,232
Investing activities:			
Purchases of property, plant, and equipment, net	(20,533)	(29,386)	(108,273)
Acquisition of businesses, net of cash acquired	—	—	(12,024)
Purchase of CarbonFree convertible note	(5,000)	—	—
Proceeds from sale of investment	17,627	—	—
Proceeds from sale of property, plant, and equipment	1,687	36,168	12,885
Proceeds from insurance recoveries associated with damaged equipment	110	643	1,771
Other investing activities	934	(1,387)	(801)
Net cash provided by (used in) investing activities	(5,175)	6,038	(106,442)
Financing activities:			
Proceeds from long-term debt	1,614	477,647	282,590
Principal payments on long-term debt	(50,477)	(487,574)	(258,217)
Distributions to CSI Compressco public unitholders	—	(1,244)	(1,233)
Redemptions of CSI Compressco Series A Preferred	—	—	(28,049)
Debt issuance costs and other financing activities	(1,191)	(6,458)	(1,016)
Net cash used in financing activities	(50,054)	(17,629)	(5,925)
Effect of exchange rate changes on cash	(1,771)	805	(199)
(Decrease) increase in cash and cash equivalents and restricted cash	(52,343)	66,126	(22,334)
Cash and cash equivalents and restricted cash at beginning of period	83,894	17,768	40,102
Cash and cash equivalents at beginning of period associated with discontinued operations	16,577	2,370	15,858
Cash and cash equivalents and restricted cash at beginning of period associated with continuing operations	67,317	15,398	24,244
Cash and cash equivalents and restricted cash at end of period	31,551	83,894	17,768
Cash and cash equivalents and restricted cash at end of period associated with discontinued operations	—	16,577	2,370
Cash and cash equivalents and restricted cash at end of period associated with continuing operations	$ 31,551	$ 67,317	$ 15,398

See Notes to Consolidated Financial Statements

TETRA Technologies, Inc. and Subsidiaries
Notes to Consolidated Financial Statements
December 31, 2021

NOTE 1 — ORGANIZATION AND OPERATIONS

We are an industrial oil and gas products and services company operating on six continents, focused on bromine-based completion fluids, calcium chloride, water management solutions, frac flowback and production well testing services. We were incorporated in Delaware in 1981. Our products and services are delivered through two reporting segments – Completion Fluids & Products Division and Water & Flowback Services Division. Unless the context requires otherwise, when we refer to “we,” “us,” and “our,” we are describing TETRA Technologies, Inc. and its consolidated subsidiaries on a consolidated basis.

Our *Completion Fluids & Products Division* manufactures and markets clear brine fluids, additives, and associated products and services to the oil and gas industry for use in well drilling, completion, and workover operations in the United States and in certain countries in Latin America, Europe, Asia, the Middle East and Africa. The Division also markets liquid and dry calcium chloride products manufactured at its production facilities or purchased from third-party suppliers to a variety of markets outside the energy industry.

Our *Water & Flowback Services Division* provides onshore oil and gas operators with comprehensive water management services. The Division also provides frac flowback, production well testing, and other associated services in many of the major oil and gas producing regions in the United States and Mexico, as well as in oil and gas basins in certain countries in Latin America, Europe, and the Middle East.

NOTE 2 — BASIS OF PRESENTATION AND SIGNIFICANT ACCOUNTING POLICIES

Principles of Consolidation

Our consolidated financial statements include the accounts of our wholly owned subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation.

Our former subsidiary, CSI Compressco LP (“CSI Compressco”) is a publicly traded limited partnership with its common units traded on the NASDAQ Exchange (“NASDAQ”) under the symbol “CCLP.” TETRA’s capital structure and CSI Compressco’s capital structure were separate, and did not include cross default provisions, cross collateralization provisions or cross guarantees. Through January 29, 2021, our cash flows from our investment in CSI Compressco were limited to the quarterly distributions we received on our CSI Compressco common units and general partner interest (including incentive distribution rights (“IDRs”)) and the amounts collected for services we performed on behalf of CSI Compressco. Through January 29, 2021, CSI Compressco was determined to be a variable interest entity and we, through our ownership of the general partner in CSI Compressco, controlled the financial interests of CSI Compressco and had the ability to direct the activities of CSI Compressco that most significantly impacted its economic performance. As such, we were considered the primary beneficiary and consolidated the financial statements of CSI Compressco through January 29, 2021.

On January 29, 2021, we entered into the Purchase and Sale Agreement with Spartan Energy Partners LP and Spartan Energy Holdco, LLC (together, “Spartan”) pursuant to which we sold the general partner of CSI Compressco, including the IDRs in CSI Compressco and approximately 23.1% of the outstanding limited partner interests in CSI Compressco, in exchange for a combination of $13.9 million in cash and $3.1 million in contingent consideration in the form of cash and/or CSI Compressco common units if CSI Compressco achieves certain financial targets on or before December 31, 2022. Following the closing of the transaction, we retained an interest in CSI Compressco representing approximately 3.8% of the outstanding common units as of December 31, 2021. We refer to this transaction with Spartan as the “GP Sale.” Substantially all of our former Compression Division’s operations were conducted through our partially-owned CSI Compressco subsidiary. We have reflected the operations of our former Compression Division as discontinued operations for all periods presented. See Note 3 - “Discontinued Operations” for further information.

Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles ("U.S. GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclose contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues, expenses and impairments during the reporting period. Actual results could differ from those estimates, and such differences could be material.

Reclassifications

Certain previously reported financial information has been reclassified to conform to the current year's presentation. For a discussion of the reclassification of the financial presentation of our former Compression Division as discontinued operations, see Note 3 - "Discontinued Operations". Unless otherwise noted, amounts and disclosures throughout these Notes to Consolidated Financial Statements relate solely to continuing operations and exclude all discontinued operations.

Cash Equivalents

We consider all highly liquid cash investments with a maturity of three months or less when purchased to be cash equivalents.

Financial Instruments

Financial instruments that subject us to concentrations of credit risk consist principally of trade receivables with companies in the energy industry. Our policy is to evaluate, prior to providing goods or services, each customer's financial condition and to determine the amount of open credit to be extended. We generally require appropriate, additional collateral as security for credit amounts in excess of approved limits. Our customers consist primarily of major, well-established oil and gas producers and independent oil and gas companies, as well as industrial, agricultural, road, and food and beverage purchasers for the chemicals we manufacture. Payment terms are on a short-term basis.

We have currency exchange rate risk exposure related to transactions denominated in a foreign currency as well as to investments in certain of our international operations. Our risk management activities include the use of foreign currency forward purchase and sale derivative contracts as part of a program designed to mitigate the currency exchange rate risk exposure on selected international operations.

We have $1.6 million outstanding balance under our variable rate revolving credit facilities as of December 31, 2021. Outstanding balances on variable-rate bank credit facilities create market risk exposure related to changes in applicable interest rates.

Allowance for Doubtful Accounts

The allowance for doubtful accounts is determined on a specific identification basis when we believe that the collection of specific amounts owed to us is not probable. Changes in the allowance are as follows:

	Year Ended December 31,		
	2021	**2020**	**2019**
		(In Thousands)	
At beginning of period	$ 6,824	$ 1,912	$ 1,354
Activity in the period:			
Provision for doubtful accounts	(4)	5,672	2,580
Account (charge offs) recoveries, net	(6,531)	(760)	(2,022)
At end of period	$ 289	$ 6,824	$ 1,912

Inventories

Inventories are stated at the lower of cost or net realizable value. Except for work in progress inventory, cost is determined using the weighted average method. The cost of work in progress is determined using the specific identification method.

Property, Plant, and Equipment

Property, plant, and equipment are stated at cost. Expenditures that increase the useful lives of assets are capitalized. The cost of repairs and maintenance is charged to operations as incurred. Depreciation is computed using the straight-line method over the estimated useful lives of the assets, which are generally as follows:

Buildings	25 years
Machinery and equipment	3 – 10 years
Automobiles and trucks	4 – 5 years
Chemical plants	15 – 30 years

Leasehold improvements are depreciated over the shorter of the remaining term of the associated lease or its useful life. Depreciation expense, excluding impairments and other charges, for the years ended December 31, 2021, 2020, and 2019 was $27.8 million, $32.4 million and $42.9 million, respectively.

Construction in progress as of December 31, 2021 and 2020 consisted primarily of equipment fabrication projects.

Intangible Assets other than Goodwill

Customer relationships, trademarks, tradenames, marketing rights and other intangible assets are amortized on a straight-line basis over their estimated useful lives, with remaining useful lives up to 12 years. Amortization of intangible assets was $5.1 million, $5.3 million, and $5.1 million for the years ended December 31, 2021, 2020, and 2019, respectively, and is included in depreciation, amortization and accretion. The estimated future annual amortization expense of intangible assets is $4.1 million for 2022, $3.8 million for 2023, $3.7 million for 2024, $3.7 million for 2025, $3.6 million for 2026 and $18.1 million thereafter. See Note 5 - "Intangibles" for additional discussion.

Intangible assets other than goodwill are tested for recoverability whenever events or changes in circumstances indicate that the carrying value of the asset may not be recoverable. In such an event, we will determine the fair value of the asset using an undiscounted cash flow analysis of the asset at the lowest level for which identifiable cash flows exist. If an impairment has occurred, we will recognize a loss for the difference between the carrying value and the estimated fair value of the intangible asset. See "Impairments of Long-Lived Assets" section in Note 6 - "Impairments and Other Charges".

Leases

As a lessee, unless the lease meets the criteria of short-term and is excluded per our policy election described below, we initially recognize a lease liability and related right-of-use asset on the commencement date. The right-of-use asset represents our right to use an underlying asset and the lease liability represents our obligation to make lease payments to the lessor over the lease term.

Long-term operating leases are included in operating lease right-of-use assets, operating lease liabilities - current portion, and operating lease liabilities in our consolidated balance sheet as of December 31, 2021. Long-term finance leases are not material. We determine whether a contract is or contains a lease at inception of the contract. Where we are a lessee in a contract that includes an option to extend or terminate the lease, we include the extension period or exclude the period covered by the termination option in our lease term in determining the right-of-use asset and lease liability, if it is reasonably certain that we would exercise the option.

As an accounting policy election, we do not include short-term leases on our balance sheet. Short-term leases include leases with a term of 12 months or less, inclusive of renewal options we are reasonably certain to exercise. The lease payments for short-term leases are included as operating lease costs on a straight-line basis over the lease term in cost of revenues or general and administrative expense based on the use of the underlying

asset. We recognize lease costs for variable lease payments not included in the determination of a lease liability in the period in which an obligation is incurred.

Our operating and finance leases are recognized at the present value of lease payments over the lease term. When the implicit discount rate is not readily determinable, we use our incremental borrowing rate to calculate the discount rate used to determine the present value of lease payments. Consistent with other long-lived assets or asset groups that are held and used, we test for impairment of our right-of-use assets when impairment indicators are present.

Impairments of Long-Lived Assets

Impairments of long-lived assets, including identified intangible assets, are determined periodically when indicators of impairment are present. If such indicators are present, the determination of the amount of impairment is based on our judgments as to the future undiscounted operating cash flows to be generated from these assets throughout their remaining estimated useful lives. If these undiscounted cash flows are less than the carrying amount of the related asset, an impairment is recognized for the excess of the carrying value over its fair value. Assets held for disposal are recorded at the lower of carrying value or estimated fair value less estimated selling costs. See Note 6 - "Impairments and Other Charges" for additional discussion of recorded impairments.

Revenue Recognition

Performance Obligations. Revenue is generally recognized when we transfer control of our products or services to our customers. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring products or providing services to our customers. We receive cash equal to the invoice price for most sales of product and services and payment terms typically range from 30 to 60 days from the date we invoice our customer. Since the period between when we deliver products or services and when the customer pays for such products or services is not expected to exceed one year, we have elected not to calculate or disclose a financing component for our customer contracts.

Depending on the terms of the arrangement, we may also defer the recognition of revenue for a portion of the consideration received because we have to satisfy a future performance obligation.

For any arrangements with multiple performance obligations, we use management's estimated selling price to determine the stand-alone selling price for separate performance obligations. For revenue associated with mobilization of service equipment as part of a service contract arrangement, such revenue, if significant, is deferred and amortized over the estimated service period.

Product Sales. Product sales revenues are recognized at a point in time when we transfer control of our product offerings to our customers, generally when we ship products from our facility to our customer. The product sales for our Completion Fluids & Products Division consist primarily of clear brine fluids ("CBFs"), additives, and associated manufactured products. Product sales for our Water & Flowback Services Division are typically attributed to specific performance obligations within certain production testing service arrangements.

Services. Service revenues represent revenue recognized over time, as our customer arrangements typically provide agreed upon day-rates and we recognize service revenue based upon the number of days services have been performed. Service revenue recognized over time is associated with a majority of our Water & Flowback Services Division arrangements, and a small portion of Completion Fluids & Products Division revenue that is associated with completion fluid service arrangements. Our customer contracts are generally for terms of one year or less. The majority of the service arrangements in the Water & Flowback Services Division are for a period of 90 days or less.

Sales taxes, value added taxes, and other taxes we collect concurrent with revenue-producing activities are excluded from revenue. We have elected to recognize the cost for freight and shipping costs as part of cost of product sales when control over our products (i.e. delivery) has transferred to the customer.

Use of Estimates. In recognizing revenue for variable consideration arrangements, the amount of variable consideration recognized is limited so that it is probable that significant amounts of revenues will not be reversed in future periods when the uncertainty is resolved. For products returned by the customer, we estimate the expected returns based on an analysis of historical experience. For volume discounts earned by the customer, we estimate

the discount (if any) based on our estimate of the total expected volume of products sold or services to be provided to the customer during the discount period. In certain contracts for the sale of CBFs, we may agree to issue credits for the repurchase of reclaimable used fluids from certain customers at an agreed price that is based on the condition of the fluids.

Contract Assets and Liabilities. We consider contract assets to be trade accounts receivable when we have an unconditional right to consideration and only the passage of time is required before payment is due. In certain instances, particularly those requiring customer specific documentation prior to invoicing, our invoicing of the customer is delayed until certain documentation requirements are met. In those cases, we recognize a contract asset rather than a billed trade accounts receivable until we are able to invoice the customer. Contract assets, along with billed trade accounts receivable, are included in trade accounts receivable in our consolidated balance sheets.

We classify contract liabilities as unearned income in our consolidated balance sheets. Unearned income includes amounts in which the Company was contractually allowed to invoice prior to satisfying the associated performance obligations.

Operating Costs

Cost of product sales includes direct and indirect costs of manufacturing and producing our products, including raw materials, fuel, utilities, labor, overhead, repairs and maintenance, materials, services, transportation, warehousing, equipment rentals, insurance, and certain taxes. Cost of services includes operating expenses we incur in delivering our services, including labor, equipment rental, fuel, repair and maintenance, transportation, overhead, insurance, and certain taxes. We include in product sales revenues the reimbursements we receive from customers for shipping and handling costs. Shipping and handling costs are included in cost of product sales. Amounts we incur for “out-of-pocket” expenses in the delivery of our services are recorded as cost of services. Reimbursements for “out-of-pocket” expenses we incur in the delivery of our services are recorded as service revenues. Depreciation, amortization, and accretion includes depreciation expense for all of our facilities, equipment and vehicles, amortization expense on our intangible assets, and accretion expense related to our decommissioning and other asset retirement obligations.

We include in general and administrative expense all costs not identifiable to our specific product or service operations, including divisional and general corporate overhead, professional services, corporate office costs, sales and marketing expenses, insurance, and certain taxes.

Equity-Based Compensation

We have various equity incentive compensation plans which provide for the granting of restricted common stock, options for the purchase of our common stock, and other performance-based, equity-based compensation awards to our executive officers, key employees, nonexecutive officers, and directors. Total equity-based compensation expense, net of taxes, for the three years ended December 31, 2021, 2020, and 2019, was $4.6 million, $4.3 million and $4.6 million, respectively. For further discussion of equity-based compensation, see Note 13 – “Equity-Based Compensation and Other”.

Mineral Resources Arrangements

We are party to agreements in which Standard Lithium has the right to explore, produce and extract lithium in our Arkansas leases as well as additional potential resources in the Mojave region of California. The Company receives cash and stock of Standard Lithium under the terms of the arrangements. The cash and stock component of consideration received is initially recorded as unearned income based on the quoted market price at the time the stock is received, then recognized in income over the contract term. During the years ended December 31, 2021, 2020 and 2019, income from this arrangement was $1.1 million, $3.1 million and $1.1 million, respectively, including the value of cash and stock received, and changes in the value of stock held. This income is included in other income (expense), net in our consolidated statements of operations. We also recognized $15.5 million of income during 2021 from the sale of our shares in Standard Lithium. See Note 14 - “Fair Value Measurements” for further discussion.

Income Taxes

Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis amounts. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect of a change in tax rates is recognized as income or expense in the period that includes the enactment date. A portion of the carrying value of certain deferred tax assets are subject to a valuation allowance. See Note 15 – "Income Taxes" for further discussion.

In January 2018, the FASB released guidance on the accounting for tax on the global intangible low-taxed income ("GILTI") provisions of the Tax Reform Act. The GILTI provisions impose a tax on foreign income in excess of a deemed return on tangible assets of foreign corporations. The guidance indicates that either accounting for deferred taxes related to GILTI inclusions or to treat any taxes on GILTI inclusions as period costs are both acceptable methods subject to an accounting policy election. We elected to account for GILTI as a period cost in the year the tax is incurred.

Noncontrolling Interests

Noncontrolling interests represent third-party ownership in the net assets of the Company's consolidated subsidiaries and are presented as a component of equity. Substantially all of the Company's noncontrolling interests represented third-party ownership in CSI Compressco prior to the GP sale in January 2021.

Accumulated Other Comprehensive Income (Loss)

Certain of our international operations maintain their accounting records in the local currencies that are their functional currencies. For these operations, the functional currency financial statements are converted to United States dollar equivalents, with the effect of the foreign currency translation adjustment reflected as a component of accumulated other comprehensive income (loss). Accumulated other comprehensive income (loss) is included in equity in the accompanying consolidated balance sheets and consists of the cumulative currency translation adjustments associated with such international operations. Activity within our accumulated other comprehensive income (loss) is not subject to reclassifications to net income.

Income (Loss) per Common Share

The calculation of basic and diluted earnings per share excludes losses attributable to noncontrolling interests. The calculation of basic earnings per share excludes any dilutive effects of equity awards or warrants. The calculation of diluted earnings per share includes the effect of equity awards and warrants, if dilutive, which is computed using the treasury stock method during the periods such equity awards and warrants were outstanding. For the years ended December 31, 2021, 2020, and 2019, the average diluted shares outstanding excludes the impact of all outstanding equity awards and warrants, as the inclusion of these shares would have been anti-dilutive due to the net losses recorded during the year.

Foreign Currency Translation

We have designated the Euro, the British pound, the Canadian dollar, the Brazilian real, and the Mexican peso as the functional currencies for our operations in Finland and Sweden, the United Kingdom, Canada, Brazil, and certain of our operations in Mexico, respectively. The United States dollar is the designated functional currency for all of our other non-U.S. operations. The cumulative translation effects of translating the applicable accounts from the functional currencies into the U.S. dollar at current exchange rates are included as a separate component of equity. Foreign currency exchange (gains) and losses are included in other (income) expense, net, and totaled $(1.4) million, $2.7 million, and $(0.5) million for the years ended December 31, 2021, 2020 and 2019, respectively.

During 2021, we determined our business operations in Norway were primarily operating using the United States dollar. Effective July 1, 2021, the functional currency of our operations in Norway was changed from the Norwegian krone to the United States dollar. The remeasurement did not have a material impact on our consolidated financial position or results of operations.

Fair Value Measurements

We utilize fair value measurements to account for certain items and account balances within our consolidated financial statements. Fair value measurements are utilized on a recurring basis in the determination of the carrying values of certain investments. See Note 14 - “Fair Value Measurements” for further discussion.

Fair value measurements are also utilized on a nonrecurring basis in certain circumstances, such as in the allocation of purchase consideration for acquisition transactions to the assets and liabilities acquired, including intangible assets and goodwill (a Level 3 fair value measurement), the initial recording of our asset retirement obligations, and for the impairment of long-lived assets, including goodwill (a Level 3 fair value measurement).

Supplemental Cash Flow Information

Supplemental cash flow information from continuing and discontinued operations is as follows:

	Year Ended December 31,		
	2021	**2020**	**2019**
		(in thousands)	
Supplemental cash flow information[1]:			
Interest paid	$ 14,347	$ 63,935	$ 68,332
Income taxes paid	2,100	5,633	7,274
Accrued capital expenditures at year end	7,491	1,573	3,625

[1] Prior-year information includes the activity for CSI Compressco for the full period. Current-year information includes activity for CSI Compressco for January only.

New Accounting Pronouncements

Standards adopted in 2021

In December 2019, the FASB issued Accounting Standards Update (“ASU”) 2019-12, “Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes.” ASU 2019-12 simplifies the accounting for income taxes by eliminating certain exceptions related to intraperiod tax allocation, interim period income tax calculation methodology, and the recognition of deferred tax liabilities for outside basis differences. It also simplifies certain aspects of accounting for franchise taxes and clarifies the accounting for transactions that results in a step-up in the tax basis of goodwill. On January 1, 2021, we adopted ASU 2019-12. The adoption of this standard did not have a material impact on our consolidated financial statements.

Standards not yet adopted

In June 2016, the FASB issued ASU 2016-13, “Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments”. ASU 2016-13 amends the impairment model to utilize an expected loss methodology in place of the currently used incurred loss methodology, which will result in the more timely recognition of losses on financial instruments not accounted for at fair value through net income. The provisions require credit impairments to be measured over the contractual life of an asset and developed with consideration for past events, current conditions, and forecasts of future economic information. Credit impairment will be accounted for as an allowance for credit losses deducted from the amortized cost basis at each reporting date. Updates at each reporting date after initial adoption will be recorded through selling, general, and administrative expense. ASU 2016-13 is effective for us the first quarter of fiscal 2023. We continue to assess the potential effects of these changes to our consolidated financial statements.

In March 2020, the FASB issued ASU 2020-04, “Reference Rate Reform (Topic 848)”, which provides optional expedients and exceptions for applying U.S. GAAP to contracts, hedging relationships, and other transactions affected by the discontinuation of the London Interbank Offered Rate (“LIBOR”) or by another reference rate expected to be discontinued. Entities may elect to apply the amendments for contract modifications made on or before December 31, 2022. During the three months ended September 30, 2021, our asset-based credit agreement and term credit agreement were amended to allow replacement of LIBOR with another benchmark rate, such as the secured overnight financing rate (“SOFR”) in the event that LIBOR cannot be determined or does not fairly reflect

the cost to our lenders of funding our loans. If LIBOR is not available, we cannot predict what alternative index would be negotiated with our lenders. We will assess the impact of adopting ASU 2020-04 on our consolidated financial statements if or when our contracts are modified to eliminate references to LIBOR.

NOTE 3 – DISCONTINUED OPERATIONS

On January 29, 2021, we entered into the Purchase and Sale Agreement with Spartan pursuant to which we sold the general partner of CSI Compressco, including the IDRs in CSI Compressco and approximately 23.1% of the outstanding limited partner interests in CSI Compressco. As a result of these transactions, we no longer consolidate CSI Compressco as of January 29, 2021. We recognized a primarily non-cash accounting gain of $120.1 million during the year ended December 31, 2021 related to the GP Sale. The gain is included in income (loss) from discontinued operations, net of taxes in our consolidated statement of operations. We also provided back-office support to CSI Compressco under a Transition Services Agreement for one year until CSI Compressco completed a full separation from our back-office support functions. During the year ended December 31, 2021, we received $7.0 million from CSI Compressco for services provided under the Transition Services Agreement and other reimbursements and paid $0.5 million to CSI Compressco for reimbursement of expenses. Our interest in CSI Compressco and the general partner represented substantially all of our Compression Division.

In addition, on March 1, 2018, we closed a series of related transactions that resulted in the disposition of our Offshore Division, consisting of our Offshore Services and Maritech segments. Our former Compression and Offshore Divisions are reported as discontinued operations for all periods presented. Our consolidated balance sheets and consolidated statements of operations report discontinued operations separate from continuing operations. Our consolidated statements of comprehensive income, statements of equity and statements of cash flows combine continuing and discontinued operations. Our current-year consolidated statement of operations, statement of comprehensive income, statement of equity and statement of cash flows include CSI Compressco activity for January 1 through January 29. Our consolidated statements of cash flows for the years ended December 31, 2021, 2020 and 2019 included $3.0 million, $14.7 million and $75.8 million, respectively, of capital expenditures related to our former Compression division. Our consolidated statements of cash flows also included $411.1 million of proceeds from long-term debt, $413.1 million of payments of long-term debt, $19.4 million from proceeds from sale of property, plant and equipment, $4.9 million of debt exchange expenses and $2.6 million from amortization of deferred financing discounts, costs and gains for the year ended December 31, 2020, and included $45.0 million of proceeds from long-term debt, $41.6 million of payments of long-term debt, $11.0 million from proceeds from sale of property, plant and equipment, and $2.6 million from amortization of deferred financing discounts, costs and gains for the year ended December 31, 2019. Our current-year results do not include CSI Compressco depreciation or amortization as the assets were considered held for sale. A summary of financial information related to our discontinued operations is as follows:

Reconciliation of the Line Items Constituting Pretax Loss from Discontinued Operations to the After-Tax Loss from Discontinued Operations
(in thousands)

	Year Ended December 31, 2021		
	Compression	Offshore Services	Total
Revenue	$ 18,968	$ —	$ 18,968
Cost of revenues	11,471	(142)	11,329
General and administrative expense	2,766	(179)	2,587
Interest expense, net	4,336	—	4,336
Other expense, net	164	252	416
Pretax income from discontinued operations	231	69	300
Pretax income on disposal of discontinued operations			120,137
Total pretax income from discontinued operations			120,437
Income tax provision			30
Income from discontinued operations			120,407
Income from discontinued operations attributable to noncontrolling interest			(333)
Income from discontinued operations attributable to TETRA stockholders			$ 120,074

	Year Ended December 31, 2020		
	Compression	Offshore Services	Total
Revenue	338,246	—	338,246
Cost of revenues	212,253	(330)	211,923
Depreciation, amortization, and accretion	80,533	—	80,533
Impairments and other charges	20,841	—	20,841
General and administrative expense	37,895	473	38,368
Interest expense, net	52,771	—	52,771
Other expense, net	2,688	—	2,688
Pretax loss from discontinued operations	(68,735)	(143)	(68,878)
Income tax provision			3,211
Loss from discontinued operations			(72,089)
Loss from discontinued operations attributable to noncontrolling interest			47,898
Loss from discontinued operations attributable to TETRA stockholders			(24,191)

	Year Ended December 31, 2019			
	Compression	Offshore Services	Maritech	Total
Revenue	476,692	—	—	476,692
Cost of revenues	320,037	(192)	—	319,845
Depreciation, amortization, and accretion	76,663	52	—	76,715
General and administrative expense	43,281	2,618	—	45,899
Interest expense, net	51,974	—	—	51,974
CSI Compressco Series A Preferred Units fair value adjustment expense	1,309	—	—	1,309
Other (income) expense, net	(558)	117	118	(323)
Pretax loss from discontinued operations	(16,014)	(2,595)	(118)	(18,727)
Pretax loss on disposal of discontinued operations				(7,500)
Total pretax loss from discontinued operations				(26,227)
Income tax provision				3,353
Loss from discontinued operations				(29,580)
Loss from discontinued operations attributable to noncontrolling interest				13,538
Loss from discontinued operations attributable to TETRA stockholders				$ (16,042)

Reconciliation of Major Classes of Assets and Liabilities of the Discontinued Operations to Amounts Presented Separately in the Statement of Financial Position
(in thousands)

	December 31, 2021		
	Offshore Services	Maritech	Total
Carrying amounts of major classes of liabilities included as part of discontinued operations			
Trade payables	$ 1,157	$ —	$ 1,157
Accrued liabilities and other	—	228	228
Total liabilities associated with discontinued operations	$ 1,157	$ 228	$ 1,385

	December 31, 2020			
	Compression	Offshore Services	Maritech	Total
Carrying amounts of major classes of assets included as part of discontinued operations				
Cash and cash equivalents	$ 16,577	$ —	$ —	$ 16,577
Trade receivables	43,837	—	—	43,837
Inventories	31,220	—	—	31,220
Other current assets	5,231	—	—	5,231
Property, plant, and equipment	551,401	—	—	551,401
Other assets	61,740	—	—	61,740
Total assets associated with discontinued operations[1]	$ 710,006	$ —	$ —	$ 710,006
Carrying amounts of major classes of liabilities included as part of discontinued operations				
Trade payables	$ 19,766	$ 1,222	$ —	$ 20,988
Unearned income	269	—	—	269
Accrued liabilities and other	36,318	352	228	36,898
Long-term debt, net	638,631	—	—	638,631
Other liabilities	37,253	—	—	37,253
Total liabilities associated with discontinued operations[1]	$ 732,237	$ 1,574	$ 228	$ 734,039

[1] All assets and liabilities associated with discontinued operations of our former Compression Division are classified as current as of December 31, 2020 due to completion of the GP Sale within one year.

NOTE 4 — REVENUE FROM CONTRACTS WITH CUSTOMERS

Our contract asset balances, primarily associated with customer documentation requirements, were $20.5 million, $12.8 million and $25.3 million as of December 31, 2021, 2020 and 2019, respectively. Contract assets, along with billed trade accounts receivable, are included in trade accounts receivable in our consolidated balance sheets.

Unearned income includes amounts in which the Company was contractually allowed to invoice prior to satisfying the associated performance obligations. Unearned income balances were $3.2 million and $1.9 million as of December 31, 2021 and 2020, respectively, and vary based on the timing of invoicing and performance obligations being met. Unearned income is included in accrued liabilities and other in our consolidated balance sheets. Revenue recognized during the years ended December 31, 2021, 2020 and 2019 deferred as of the end of the preceding year was not significant. During the years ended December 31, 2021, 2020 and 2019, contract costs were not significant.

We disaggregate revenue from contracts with customers into Product Sales and Services within each segment, as noted in our two reportable segments in Note 17 - Industry Segments and Geographic Information. In addition, we disaggregate revenue from contracts with customers by geography based on the following table below.

	Year Ended December 31,		
	2021	2020	2019
		(In Thousands)	
Completion Fluids & Products			
United States	$ 96,291	$ 100,076	$ 149,191
International	123,357	142,585	130,064
	219,648	242,661	279,255
Water & Flowback Services			
United States	155,495	125,759	262,093
International	13,129	9,295	19,893
	168,624	135,054	281,986
Total Revenue			
United States	251,786	225,835	411,284
International	136,486	151,880	149,957
	$ 388,272	$ 377,715	$ 561,241

NOTE 5 — INTANGIBLES

The components of intangible assets and their related accumulated amortization are as follows:

	December 31, 2021		
	Gross Intangibles	Accumulated Amortization	Net Intangibles
		(In Thousands)	
Customer Relationships	$ 56,122	$ (24,470)	$ 31,652
Trademarks and Tradenames	4,658	(2,091)	2,567
Marketing Rights	14,630	(13,310)	1,320
Other intangibles	5,871	(4,452)	1,419
Total intangibles	$ 81,281	$ (44,323)	$ 36,958

	December 31, 2020		
	Gross Intangibles	Accumulated Amortization	Net Intangibles
		(In Thousands)	
Customer Relationships	$ 56,117	$ (21,579)	$ 34,538
Trademarks and Tradenames	4,672	(1,703)	2,969
Marketing Rights	14,728	(12,726)	2,002
Other intangibles	6,039	(4,061)	1,978
Total intangibles	$ 81,556	$ (40,069)	$ 41,487

NOTE 6 — IMPAIRMENTS AND OTHER CHARGES

Impairments of Long-Lived Assets

During the fourth quarter of 2019, we recorded an impairment of $91.6 million in our Completion Fluids & Products Division related to our El Dorado, Arkansas calcium chloride production plant facility assets. The impairment charge was primarily the result of a reduction in the cost of raw materials for certain of our other chemical production plants, following the execution of a long-term raw material supply agreement during the fourth quarter of 2019. As a result, we expected to reduce our dependence on calcium chloride produced at the El Dorado facility, which used a different production process, involving mechanical evaporation. In addition, demand for calcium chloride from the El Dorado plant was expected to be reduced due to general market conditions in the oil and gas industry. Using the reduced expected future net cash flows on an undiscounted basis, we determined that the carrying value of the El Dorado facility was not recoverable. Fair value of the El Dorado facility was determined using a fair value in-exchange assumption, and the difference between the carrying value of the El Dorado facility asset group and its indicated fair value was recorded as an impairment.

Impairment of Goodwill

Our Water & Flowback Services Division consists of two reporting units, Production Testing and Water Management. During the fourth quarter of 2019, coinciding with the timing of our annual goodwill assessment, there was further decline in the energy industry outlook, resulting in decreased expected future cash flows for our Water Management reporting unit. As part of the first step of goodwill impairment testing for our Water Management reporting unit, the only reporting unit with goodwill, we updated our assessment of the future cash flows, applying expected long-term growth rates, discount rates, and terminal values that we considered reasonable for the reporting unit. We calculated a present value of the cash flows for the Water Management reporting unit to arrive at an estimate of fair value using a combination of the income approach and the market approach. Based on these assumptions, we determined that the fair value of the Water Management reporting unit was less than its carrying value indicating an impairment. The amount of impairment was calculated based on the difference between the fair value and carrying value in accordance with our early adoption of ASU 2017-04 “Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment.” This resulted in an impairment of the entire goodwill balance of $25.8 million at December 31, 2019.

NOTE 7 – INVENTORIES

Components of inventories, net of reserve, are as follows:

	December 31,	
	2021	2020
	(In Thousands)	
Finished goods	$ 59,925	$ 68,121
Raw materials	2,827	2,910
Parts and supplies	4,713	4,001
Work in progress	1,633	1,626
Total inventories	$ 69,098	$ 76,658

Finished goods inventories include newly manufactured clear brine fluids as well as used brines that are repurchased from certain customers for recycling.

NOTE 8 — INVESTMENTS

As of December 31, 2021, we retained an interest in CSI Compressco representing approximately 3.8% of the outstanding common units.

We are party to agreements in which Standard Lithium has the right to explore, produce and extract lithium in our Arkansas leases as well as additional potential resources in the Mojave region of California. The Company receives cash and stock of Standard Lithium (NYSE:SLI) under the terms of the arrangements. The cash and stock component of consideration received is initially recorded as unearned income based on the quoted market price at

the time the stock is received, then recognized in income over the contract term. During the fourth quarter of 2021, we sold the 1.6 million shares of Standard Lithium shares we owned for approximately $17.6 million, before broker and transaction fees.

In May 2021, we signed a memorandum of understanding ("MOU") with CarbonFree Chemicals Holdings, LLC ("CarbonFree"), a carbon capture company with patented technologies that capture CO_2 and mineralize emissions to make commercial, carbon-negative chemicals. During the one-year MOU period, both Companies will work towards a definitive agreement that might include investments by TETRA into CarbonFree, a joint venture, or other commercial arrangements. In December 2021, we invested $5.0 million in a convertible note issued by CarbonFree. Our exposure to potential losses by CarbonFree is limited to our investment in the convertible note.

Our investments as of December 31, 2021 and 2020, consist of the following:

	December 31,	
	2021	2020
	(In Thousands)	
Investment in CSI Compressco	$ 6,233	$ —
Investment in CarbonFree	5,000	—
Investment in Standard Lithium	—	2,675
Total investments	$ 11,233	$ 2,675

See Note 14 - "Fair Value Measurements" for further information.

NOTE 9 — LEASES

We have operating leases for some of our transportation equipment, office space, warehouse space, operating locations, and machinery and equipment. We have finance leases for certain facility storage tanks and equipment rentals. These finance leases are not material to our financial statements. Our leases have remaining lease terms ranging from 1 to 13 years. Some of our leases have options to extend for various periods, while some have termination options with prior notice of generally 30 days or six months. The office space, warehouse space, operating location leases, and machinery and equipment leases generally require us to pay all maintenance and insurance costs.

Our corporate headquarters facility located in The Woodlands, Texas, was sold on December 31, 2012, pursuant to a sale and leaseback transaction. As a condition to the completion of the purchase and sale of the facility, the parties entered into a lease agreement for the facility having an initial lease term of 15 years, which is classified as an operating lease. Under the terms of the lease agreement, we have the ability to extend the lease for five successive five-year periods at base rental rates to be determined at the time of each extension.

Components of lease expense, included in either cost of revenues or general and administrative expense based on the use of the underlying asset, are as follows (inclusive of lease expense for leases not included on our consolidated balance sheet based on our accounting policy election to exclude leases with a term of 12 months or less):

	Year Ended December 31,		
	2021	2020	2019
	(In Thousands)		
Operating lease expense	$ 12,905	$ 13,946	$ 15,131
Short-term lease expense	22,055	17,125	36,348
Total lease expense	$ 34,960	$ 31,071	$ 51,479

For the years ended December 31, 2021, 2020 and 2019, we recognized sublease income of $1.0 million. Variable rent expense was not material. At December 31, 2021, future minimum rental receipts under non-cancelable subleases for office space in two of our locations totaled $5.1 million.

Supplemental cash flow information:

	Year Ended December 31,		
	2021	2020	2019
		(In Thousands)	
Cash paid for amounts included in the measurement of lease liabilities:			
Operating cash flows - operating leases	$ 12,962	$ 13,612	$ 15,064
Right-of-use assets obtained in exchange for lease obligations:			
Operating leases	$ 3,168	$ 5,612	$ 3,944

Supplemental balance sheet information:

	December 31, 2021	December 31, 2020
	(In Thousands)	
Operating leases:		
Operating lease right-of-use assets	$ 36,973	$ 43,448
Operating lease liabilities, current portion	$ 8,108	$ 8,795
Operating lease liabilities	$ 31,429	$ 37,569
Total operating lease liabilities	$ 39,537	$ 46,364

Additional operating lease information:

	December 31, 2021	December 31, 2020
Weighted average remaining lease term:		
Operating leases	6.4 years	6.8 years
Weighted average discount rate:		
Operating leases	9.67 %	9.62 %

Future minimum lease payments by year and in the aggregate, under non-cancelable operating leases with terms in excess of one year consist of the following at December 31, 2021:

	Operating Leases
	(In Thousands)
2022	$ 11,507
2023	9,241
2024	7,412
2025	5,721
2026	5,635
Thereafter	13,867
Total lease payments	53,383
Less imputed interest	(13,846)
Total lease liabilities	$ 39,537

NOTE 10 — LONG-TERM DEBT AND OTHER BORROWINGS

Consolidated long-term debt consists of the following:

		December 31,	
		2021	2020
		(In Thousands)	
TETRA	Scheduled Maturity		
Asset-based credit agreement [1]	May 31, 2025	$ 67	$ —
Term credit agreement [2]	September 10, 2025	151,869	199,894
Total long-term debt		$ 151,936	$ 199,894

[1] Net of deferred financing costs of $1.5 million as of December 31, 2021. Because there was no outstanding balance on the ABL Credit Agreement as of December 31, 2020, associated deferred financing costs of $1.0 million were classified as other long-term assets on the accompanying consolidated balance sheet.
[2] Net of unamortized discount of $4.5 million and $5.5 million as of December 31, 2021 and 2020, respectively, and net of unamortized deferred financing costs of $6.7 million and $8.2 million as of December 31, 2021 and 2020, respectively.

Scheduled maturities for the next five years and thereafter are as follows, not considering annual prepayment offers required by our Term Credit Agreement described below:

	December 31, 2021
	(In Thousands)
2022	$ —
2023	—
2024	—
2025	164,685
2026	—
Thereafter	—
Total maturities	$ 164,685

Asset-Based Credit Agreement.

On July 30, 2021, we entered into an amendment to our asset-based credit agreement (“ABL Credit Agreement”) that, among other things, extended the term of the credit facility to May 31, 2025 and revised our commitment to $80.0 million, with a $20.0 million accordion. The amendment increased the availability by adding the value of accrued Unites States receivables, increased the forward rates on accounts receivable for investment grade customers and incorporated a new $15.0 million sub-facility subject to a borrowing base consisting of certain trade receivables and inventory in the United Kingdom.

As of December 31, 2021, TETRA had $1.6 million balance outstanding and had $7.5 million in letters of credit against its asset-based lending agreement (“ABL Credit Agreement”). The ABL Credit Agreement provides for a senior secured revolving credit facility of up to $80.0 million, with a $20.0 million accordion. The credit facility is subject to a borrowing base to be determined by reference to the value of inventory and accounts receivable, and includes a sublimit of $20.0 million for letters of credit, a swingline loan sublimit of $11.5 million, and a $15.0 million sub-facility subject to a borrowing base consisting of certain trade receivables and inventory in the United Kingdom. The ABL Credit Agreement is subject to compliance with the covenants, borrowing base, and other provisions of the agreement that may limit borrowings. TETRA had availability of $36.1 million under this agreement as of December 31, 2021.

Borrowings under the ABL Credit Agreement bear interest at a rate per annum equal to, at the option of TETRA, either (i) LIBOR plus a margin based upon a fixed charge coverage ratio or (ii) a base rate plus a margin based on a fixed charge coverage ratio. The base rate is determined by reference to the highest of (a) the prime rate of interest as announced from time to time by JPMorgan Chase Bank, N.A. (b) the Federal Funds Effective Rate (as defined in the ABL Credit Agreement) plus 0.5% per annum and (c) LIBOR (adjusted to reflect any required bank reserves) for a one-month period on such day plus 1.0% per annum. Borrowings outstanding have an applicable margin ranging from 1.75% to 2.25% per annum for LIBOR-based loans and 0.75% to 1.25% per annum for base-rate loans, based upon the applicable fixed charge coverage ratio. As of December 31, 2021, the interest rate per annum on borrowings under the ABL Credit Agreement is 4.75%. In addition to paying interest on the outstanding principal under the ABL Credit Agreement, TETRA is required to pay a commitment fee in respect of the unutilized commitments at an applicable rate ranging from 0.375% to 0.5% per annum, paid monthly in arrears based on utilization of the commitments under the ABL Credit Agreement. TETRA is also required to pay a customary letter of credit fee equal to the applicable margin on LIBOR-based loans and fronting fees.

All obligations under the ABL Credit Agreement and the guarantees of those obligations are secured, subject to certain exceptions, by a security interest for the benefit of the ABL Lenders on substantially all of the personal property of TETRA and certain subsidiaries of TETRA, the equity interests in certain domestic subsidiaries, and a maximum of 65% of the equity interests in certain foreign subsidiaries.

Term Credit Agreement

As of December 31, 2021 TETRA had $151.9 million outstanding, net of unamortized discounts and unamortized deferred financing costs under the Term Credit Agreement. Our Term Credit Agreement requires us to offer to prepay a percentage of Excess Cash Flow (as defined in the Term Credit Agreement) within five business days of filing our Annual Report. The minimum amount of $8.2 million that we would have been required to offer to prepay pursuant to this obligation for the year ending December 31, 2021 was paid on July 30, 2021 in connection with the amendment of our ABL Credit Agreement.

Borrowings under the Term Credit Agreement bear interest at a rate per annum equal to, at the option of TETRA, either (i) LIBOR (subject to a 1% floor) plus a margin of 6.25% per annum or (ii) a base rate plus a margin of 5.25% per annum. As of December 31, 2021, the interest rate per annum on borrowings under the Term Credit Agreement is 7.25%. In addition to paying interest on the outstanding principal under the Term Credit Agreement, TETRA is required to pay a commitment fee in respect of the unutilized commitments at the rate of 1.0% per annum, paid quarterly in arrears based on utilization of the commitments under the Term Credit Agreement.

All obligations under the Term Credit Agreement and the guarantees of those obligations are secured, subject to certain exceptions, by a security interest for the benefit of the Term Lenders on substantially all of the personal property of TETRA and certain of its subsidiaries, the equity interests in certain domestic subsidiaries, and a maximum of 65% of the equity interests in certain foreign subsidiaries.

Our credit agreements contain certain affirmative and negative covenants, including covenants that restrict the ability to pay dividends or other restricted payments. As of December 31, 2021, we were in compliance with all covenants under the credit agreements.

NOTE 11 — COMMITMENTS AND CONTINGENCIES

Litigation

We are named defendants in several lawsuits and respondents in certain governmental proceedings arising in the ordinary course of business. While the outcome of lawsuits or other proceedings against us cannot be predicted with certainty, management does not consider it reasonably possible that a loss resulting from such lawsuits or other proceedings in excess of any amounts accrued has been incurred that is expected to have a material adverse impact on our financial condition, results of operations, or liquidity.

Product Purchase Obligations

In the normal course of our Completion Fluids & Products Division operations, we enter into supply agreements with certain manufacturers of various raw materials and finished products. Some of these agreements have terms and conditions that specify a minimum or maximum level of purchases over the term of the agreement.

Other agreements require us to purchase the entire output of the raw material or finished product produced by the manufacturer. Our purchase obligations under these agreements apply only with regard to raw materials and finished products that meet specifications set forth in the agreements. We recognize a liability for the purchase of such products at the time we receive them. As of December 31, 2021, the aggregate amount of the fixed and determinable portion of the purchase obligation pursuant to our Completion Fluids & Products Division's supply agreements was approximately $114.5 million, including on average $15.3 million per year from 2022 to 2026 and $38.1 million thereafter, extending through 2029. Amounts purchased under these agreements for each of the years ended December 31, 2021, 2020, and 2019, was $23.2 million, $17.3 million, and $18.7 million, respectively.

Contingencies of Discontinued Operations

In early 2018, we closed the Maritech Asset Purchase and Sale Agreement with Orinoco Natural Resources, LLC ("Orinoco") that provided for the purchase by Orinoco of Maritech's remaining oil and gas properties and related assets. Also in early 2018, we closed the Maritech Membership Interest Purchase and Sale Agreement with Orinoco that provided for the purchase by Orinoco of all of the outstanding membership interests in Maritech. As a result of these transactions, we have effectively exited the business of our former Maritech segment.

Under the Maritech Asset Purchase and Sale Agreement, Orinoco assumed all of Maritech's decommissioning liabilities related to the leases sold to Orinoco (the "Orinoco Lease Liabilities") and, under the Maritech Membership Interest Purchase and Sale Agreement, Orinoco assumed all other liabilities of Maritech, including the decommissioning liabilities associated with the oil and gas properties previously sold by Maritech (the "Legacy Liabilities"), subject to certain limited exceptions unrelated to the decommissioning liabilities. To the extent that Maritech or Orinoco fails to satisfy decommissioning liabilities associated with any of the Orinoco Lease Liabilities or the Legacy Liabilities, we may be required to satisfy such liabilities under third party indemnity agreements and corporate guarantees that we previously provided to the U.S. Department of the Interior and other parties, respectively.

Pursuant to a Bonding Agreement entered into as part of these transactions (the "Bonding Agreement"), Orinoco provided non-revocable performance bonds in an aggregate amount of $46.8 million to cover the performance by Orinoco and Maritech of the asset retirement obligations of Maritech (the "Initial Bonds") and agreed to replace, within 90 days following the closing, the Initial Bonds with other non-revocable performance bonds, meeting certain requirements, in the aggregate sum of $47.0 million (collectively, the "Interim Replacement Bonds"). Orinoco further agreed to replace, within 180 days following the closing, the Interim Replacement Bonds with a maximum of three non-revocable performance bonds in the aggregate sum of $47.0 million, meeting certain requirements (the "Final Bonds" and, together with the Interim Replacement Bonds, the "Replacement Bonds"). Among the other requirements of the Final Bonds was that they must provide coverage for all of the asset retirement obligations of Maritech instead of only relating to specific properties. In the event Orinoco does not provide the Interim Replacement Bonds or the Final Bonds, Orinoco is required to make certain cash escrow payments to us.

The payment obligations of Orinoco under the Bonding Agreement were guaranteed by Thomas M. Clarke and Ana M. Clarke pursuant to a separate guaranty agreement (the "Clarke Bonding Guaranty Agreement"). Orinoco has not delivered the Replacement Bonds and neither it nor the Clarkes has made any of the agreed upon cash escrow payments and we filed a lawsuit against Orinoco and the Clarkes to enforce the terms of the Bonding Agreement and the Clarke Bonding Guaranty Agreement. A summary judgment was initially granted in favor of Orinoco and the Clarkes which dismissed our claims against Orinoco under the Bonding Agreement and against the Clarkes under the Clarke Bonding Guaranty Agreement. We filed an appeal and also asked the trial court to grant a new trial on the summary judgment or to modify the judgment because we believe this judgment should not have been granted. On November 5, 2019, the trial court signed an order granting our motion for new trial and vacating the prior order granting summary judgment for Orinoco and the Clarkes. The parties are awaiting direction from the court on a new scheduling order and/or trial setting. The Initial Bonds, which are non-revocable, remain in effect.

If we become liable in the future for any decommissioning liability associated with any property covered by either an Initial Bond or an Interim Replacement Bond while such bonds are outstanding and the payment made to us under such bond is not sufficient to satisfy such liability, the Bonding Agreement provides that Orinoco will pay us an amount equal to such deficiency and if Orinoco fails to pay any such amount, such amount must be paid by the Clarkes under the Clarke Bonding Guaranty Agreement. However, if the Final Bonds or the full amount of the escrowed cash have been provided, neither Orinoco nor the Clarkes would be liable to pay us for any such deficiency. Our financial condition and results of operations may be negatively affected if Orinoco is unable to cover any such deficiency or if we become liable for a significant portion of the decommissioning liabilities.

In early 2018, we also closed the sale of our Offshore Division to Epic Companies, LLC (“Epic Companies,” formerly known as Epic Offshore Specialty, LLC). Part of the consideration we received was a promissory note of Epic Companies in the original principal amount of $7.5 million (the “Epic Promissory Note”). At the end of August 2019, Epic Companies filed for bankruptcy and we recorded a reserve of $7.5 million for the full amount of the promissory note, including accrued interest, and certain other receivables in the amount of $1.5 million during the quarter ended September 30, 2019. The Epic Promissory Note became due on December 31, 2019 and neither Epic nor the Clarkes made payment. TETRA filed a lawsuit against the Clarkes on January 15, 2020 for breach of the promissory note guaranty agreement. In September 2020, the court granted TETRA’s Motion for Summary Judgment and entered Final Judgment in our favor, dismissing counterclaims by the Clarkes and awarded TETRA $7.9 million in damages. The Clarkes have filed an appeal of the Final Judgment, and the parties are awaiting a ruling from the court of appeals. Since obtaining the Final Judgment, TETRA has undertaken efforts to abstract the judgment in Texas, Utah, Nevada, Massachusetts, and Georgia. TETRA continues to work on identifying potential assets and/or engage with the Clarkes to resolve this dispute. We cannot provide any assurance the Clarkes will pay the judgment or that they will not file for bankruptcy protection. If the Clarkes do file for bankruptcy protection, we likely would be unable to collect all, or even a significant portion of, the judgment owed to us.

See Note 3 - “Discontinued Operations” for further discussion.

NOTE 12 — CAPITAL STOCK

Our Restated Certificate of Incorporation, as amended during 2017, authorizes us to issue 250,000,000 shares of common stock, par value $.01 per share, and 5,000,000 shares of preferred stock, par value $.01 per share. As of December 31, 2021, we had 126,937,163 shares of common stock outstanding, with 3,138,675 shares held in treasury, and no shares of preferred stock outstanding. The voting, dividend, and liquidation rights of the holders of common stock are subject to the rights of the holders of preferred stock. The holders of common stock are entitled to one vote for each share held. There is no cumulative voting. Dividends may be declared and paid on common stock as determined by our Board of Directors, subject to any preferential dividend rights of any then outstanding preferred stock.

A summary of the activity of our common shares outstanding and treasury shares held for the three-year period ending December 31, 2021, is as follows:

Common Shares Outstanding	**Year Ended December 31,**		
	2021	**2020**	**2019**
At beginning of period	125,976,071	125,481,163	125,737,565
Exercise of common stock options, net	10,929	—	—
Grants of restricted stock, net [1]	950,163	494,908	(256,402)
At end of period	126,937,163	125,976,071	125,481,163

[1] Prior to 2019, we primarily granted restricted stock awards, which immediately impacted common shares outstanding. In contrast, during 2021, 2020 and 2019, we primarily granted restricted stock units which do not impact common shares outstanding until vesting. Vesting for restricted stock units began in 2020.

Treasury Shares Held	**Year Ended December 31,**		
	2021	**2020**	**2019**
At beginning of period	2,953,976	2,823,191	2,717,569
Shares received upon vesting of restricted stock, net	184,699	130,785	105,622
At end of period	3,138,675	2,953,976	2,823,191

Our Board of Directors is empowered, without approval of the stockholders, to cause shares of preferred stock to be issued in one or more series and to establish the number of shares to be included in each such series and the rights, powers, preferences, and limitations of each series. Because the Board of Directors has the power to establish the preferences and rights of each series, it may afford the holders of any series of preferred stock preferences, powers and rights, voting or otherwise, senior to the rights of holders of common stock. The issuance of the preferred stock could have the effect of delaying or preventing a change in control of the Company.

Upon our dissolution or liquidation, whether voluntary or involuntary, holders of our common stock will be entitled to receive all of our assets available for distribution to our stockholders, subject to any preferential rights of any then outstanding preferred stock.

NOTE 13 — EQUITY-BASED COMPENSATION AND OTHER

Equity-Based Compensation

We have various equity incentive compensation plans that provide for the granting of restricted common stock, options for the purchase of our common stock, and other performance-based, equity-based compensation awards to our executive officers, key employees, nonexecutive officers, and directors. Stock options are exercisable for periods of up to ten years. Compensation cost for all share-based payments is based on the grant date fair value and is recognized in earnings over the requisite service period. Total equity-based compensation expense before tax for the three years ended December 31, 2021, 2020, and 2019, was $4.7 million, $5.5 million, and $5.8 million, respectively, and is included in general and administrative expense.

Stock Incentive Plans

In May 2007, our stockholders approved the adoption of the TETRA Technologies, Inc. 2007 Equity Incentive Compensation Plan. In May 2008, our stockholders approved the adoption of the TETRA Technologies, Inc. Amended and Restated 2007 Equity Incentive Compensation Plan, which among other changes, resulted in an increase in the maximum number of shares authorized for issuance. In May 2010, our stockholders approved further amendments to the TETRA Technologies, Inc. Amended and Restated 2007 Equity Incentive Compensation Plan (renamed as the 2007 Long Term Incentive Compensation Plan) which, among other changes, resulted in an additional increase in the maximum number of shares authorized for issuance. Pursuant to the 2007 Long Term Incentive Compensation Plan, we are authorized to grant up to 5,590,000 shares in the form of stock options (including incentive stock options and nonqualified stock options); restricted stock; bonus stock; stock appreciation rights; and performance awards to employees, and non-employee directors. As of February 2017, no further awards may be granted under the TETRA Technologies, Inc. Amended and Restated 2007 Equity Incentive Compensation Plan.

In May 2011, our stockholders approved the adoption of the TETRA Technologies, Inc. 2011 Long Term Incentive Compensation Plan. Pursuant to this plan, we were authorized to grant up to 2,200,000 shares in the form of stock options, restricted stock, bonus stock, stock appreciation rights, and performance awards to employees, and non-employee directors. On May 3, 2013, shareholders approved the TETRA Technologies, Inc. 2011 Long Term Incentive Compensation Plan that, among other things, increased the number of authorized shares to 5,600,000. On May 3, 2016, shareholders approved the TETRA Technologies, Inc. Third Amended and Restated 2011 Long Term Incentive Compensation Plan which, among other things, increased the number of authorized shares to 11,000,000. As of May 2018, no further awards may be granted under the TETRA Technologies, Inc. Third Amended and Restated 2011 Long Term Incentive Compensation Plan.

In February 2018, the board of directors adopted the 2018 Inducement Restricted Stock Plan (“2018 Inducement Plan”). The 2018 Inducement Plan provides for grants of restricted stock up to a plan maximum of 1,000,000 shares.

In May 2018, our stockholders approved the adoption of the TETRA Technologies, Inc. 2018 Equity Incentive Plan (“2018 Equity Plan”) and the TETRA Technologies, Inc. 2018 Non-Employee Director Equity Incentive Plan (“2018 Director Plan”). In May 2021, our stockholders approved the First Amended and Restated 2018 Equity Incentive Plan (the “Amended 2018 Equity Plan”), which amended the 2018 Equity Plan and terminated the 2018 Director Plan. Pursuant to the Amended 2018 Equity Plan, we are authorized to grant up to 11,865,000 shares in the form of stock options, restricted stock, restricted stock units, stock appreciation rights, performance units, performance shares, other stock-based awards and cash-based awards to employees and non-employee directors.

Stock Options

We did not grant any stock options during the year ended December 31, 2021 and 2020. The weighted average fair value of options granted during the year ended December 31, 2019 was $0.76, using the Black-Scholes option valuation model with the following weighted average assumptions:

	Year Ended December 31, 2019
Expected stock price volatility	61 %
Expected life of options	4.4 years
Risk-free interest rate	2.3 %
Expected dividend yield	—

The risk-free interest rate is based on the U.S. Treasury yield curve in effect on the grant date for a period commensurate with the estimated expected life of the stock options. Expected volatility is based on the historical volatility of our stock over the period commensurate with the expected life of the stock options and other factors. The dividend yield is based on the current annualized dividend rate in effect during the quarter in which the grant was made. At the time of the stock option grant during the year ended December 31, 2019, we had not historically paid any dividends and did not expect to pay any dividends during the expected life of the stock options.

The following is a summary of stock option activity for the year ended December 31, 2021:

	Shares Under Option	Weighted Average Option Price Per Share	Weighted-Average Remaining Contractual Life	Aggregate Intrinsic Value
	(In Thousands)			(In Thousands)
Outstanding at January 1, 2021	3,208	$ 6.73		
Options canceled	(61)	6.82		
Options exercised	(11)	3.87		
Options expired	(152)	12.94		
Outstanding at December 31, 2021	2,984	6.42	4.0 years	$ 13
Expected to vest at December 31, 2021	2,984	6.42	4.0 years	13
Exercisable at December 31, 2021	2,984	$ 6.42	4.0 years	$ 13

Intrinsic value is the difference between the market value of our stock option multiplied by the number of stock options outstanding for those stock options where the market value exceeds their exercise price. The total intrinsic value of stock options exercised during the year ended December 31, 2021, was less than $0.1 million. There were no options exercised during the years ended December 31, 2020 or 2019. At December 31, 2021, total unrecognized compensation cost related to unvested stock options is not significant.

Restricted Stock

Restricted stock awards and restricted stock units are periodically granted to key employees, including grants for employment inducements, as well as to members of our Board of Directors. These awards historically have provided for vesting periods of three years. Non-employee director grants vest in full before the first anniversary of the grant. Upon vesting of restricted stock awards, shares are issued to award recipients. Restricted stock units may be settled in cash or shares at vest, as determined by the Compensation Committee or the Non-Executive Award Committee, as applicable. The following is a summary of activity for our outstanding restricted stock for the year ended December 31, 2021:

	Shares	Weighted Average Grant Date Fair Value Per Share
	(In Thousands)	
Non-vested restricted stock outstanding at December 31, 2020	3,733	$ 2.11
Granted	2,246	2.74
Vested	(2,294)	2.42
Canceled/Forfeited	(94)	2.22
Non-vested restricted stock outstanding at December 31, 2021	3,591	2.31

Total compensation cost recognized for restricted stock was $4.6 million, $5.1 million, and $4.8 million for the years ended December 31, 2021, 2020, and 2019, respectively. Total unrecognized compensation cost at December 31, 2021, related to restricted stock is approximately $4.7 million which is expected to be recognized over a weighted-average remaining amortization period of 1.8 years. During the years ended December 31, 2021, 2020, and 2019, the total fair value of shares vested was $5.5 million, $4.5 million and $4.0 million, respectively.

During 2021, 2020, and 2019, we received 184,699, 130,785 and 105,622 shares, respectively, of our common stock related to the vesting of certain employee restricted stock. Such surrendered shares received by us are included in treasury stock. At December 31, 2021, net of options previously exercised pursuant to our various equity compensation plans, we have a maximum of 5,738,412 shares of common stock issuable pursuant to awards previously granted and outstanding and awards authorized to be granted in the future.

401(k) Plan

We have a 401(k) retirement plan (the “Plan”) that covers substantially all employees and entitles them to contribute up to 75% of their annual compensation, subject to maximum limitations imposed by the Internal Revenue Code. Effective October 1, 2018, enhancements were made to the Plan, including changing the employer match to 50% of each employee’s contribution up to 8%. Participants will be 100% vested in employer match contributions after 3 years of service, instead of after 5 years of service. In addition, we can make discretionary contributions which are allocable to participants in accordance with the Plan. During the fourth quarter of 2021, we reinstated the 401(k) matching for our employees which was suspended during 2020 due to the COVID pandemic and market conditions. Total expense related to our 401(k) plan was $0.5 million, $1.5 million, and $5.1 million for the years ended December 31, 2021, 2020, and 2019, respectively.

Deferred Compensation Plan

We provide our officers, directors, and certain key employees with the opportunity to participate in an unfunded, deferred compensation program. There were 16 participants in the program at December 31, 2021. Under the program, participants may defer up to 100% of their yearly total cash compensation. The amounts deferred remain our sole property, and we use a portion of the proceeds to purchase life insurance policies on the lives of certain of the participants. The insurance policies, which also remain our sole property, are payable to us upon the death of the insured. We separately contract with the participant to pay to the participant the amount of deferred compensation, as adjusted for gains or losses, invested in participant-selected investment funds. Participants may elect to receive deferrals and earnings at termination, death, or at a specified future date while still employed. Distributions while employed must be at least three years after the deferral election. The program is not qualified under Section 401 of the Internal Revenue Code. At December 31, 2021, the amounts payable under the plan approximated the value of the corresponding assets we owned.

NOTE 14 — FAIR VALUE MEASUREMENTS

Fair value is defined as “the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date” within an entity’s principal market, if any. The principal market is the market in which the reporting entity would sell the asset or transfer the liability with the greatest volume and level of activity, regardless of whether it is the market in which the entity will ultimately transact for a particular asset or liability or if a different market is potentially more advantageous. Accordingly, this exit price concept may result in a fair value that may differ from the transaction price or market price of the asset or liability.

Under U.S. GAAP, the fair value hierarchy prioritizes inputs to valuation techniques used to measure fair value. Fair value measurements should maximize the use of observable inputs and minimize the use of unobservable inputs, where possible. Observable inputs are developed based on market data obtained from sources independent of the reporting entity. Unobservable inputs may be needed to measure fair value in situations where there is little or no market activity for the asset or liability at the measurement date and are developed based on the best information available in the circumstances, which could include the reporting entity’s own judgments about the assumptions market participants would utilize in pricing the asset or liability.

Financial Instruments

Investments

We retained an interest in CSI Compressco (NASDAQ: CCLP) representing approximately 3.8% of the outstanding common units as of December 31, 2021. In December 2021, we invested $5.0 million in a convertible note issued by CarbonFree. The Company receives cash and stock of Standard Lithium (NYSE: SLI) under the terms of its arrangements.

Our investments in CSI Compressco and Standard Lithium are recorded in investments on our consolidated balance sheets based on the quoted market stock price (Level 1 fair value measurements). The stock component of consideration received from Standard Lithium is initially recorded as unearned income based on the quoted market price at the time the stock is received, then recognized in income over the contract term. Changes in the value of stock are recorded in other income (expense) in our consolidated statements of operations.

Our investment in CarbonFree is also recorded in investments on our consolidated balance sheets based on an internal valuation (a Level 3 fair value measurement).

Derivative Contracts

We are exposed to financial and market risks that affect our businesses. We have concentrations of credit risk as a result of trade receivables owed to us by companies in the energy industry. We have currency exchange rate risk exposure related to transactions denominated in foreign currencies as well as to investments in certain of our international operations. As a result of our variable rate debt facilities, we face market risk exposure related to changes in applicable interest rates. Our financial risk management activities may at times involve, among other measures, the use of derivative financial instruments, such as swap and collar agreements, to hedge the impact of market price risk exposures.

We entered into, and we may in the future enter into, short-term foreign currency forward derivative contracts with third parties as part of a program designed to mitigate the currency exchange rate risk exposure on selected transactions of certain foreign subsidiaries. Although contracts pursuant to this program will serve as an economic hedge of the cash flow of our currency exchange risk exposure, they are not formally designated as hedge contracts or qualify for hedge accounting treatment. Accordingly, any change in the fair value of these derivative instruments during a period will be included in the determination of earnings for that period. The fair values of foreign currency derivative instruments are based on quoted market values (a Level 2 fair value measurement). The fair values of our foreign currency derivative instruments as of December 31, 2021 and 2020 was insignificant. During the years ended December 31, 2021, 2020, and 2019, we recognized approximately less than $0.1 million, $0.2 million and $1.5 million of net (gains) losses, respectively, reflected in other (income) expense, net, associated with our foreign currency derivative program.

A summary of significant recurring fair value measurements by valuation hierarchy as of December 31, 2021 and December 31, 2020, is as follows:

Description	Total as of Dec 31, 2021	Fair Value Measurements Using: Quoted Prices in Active Markets for Identical Assets or Liabilities (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
	(In Thousands)			
Investment in CSI Compressco	$ 6,233	6,233	—	—
Investment in CarbonFree	5,000	—	—	5,000
Total	$ 11,233			

Description	Total as of Dec 31, 2020	Fair Value Measurements Using: Quoted Prices in Active Markets for Identical Assets or Liabilities (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
	(In Thousands)			
Investment in Standard Lithium	$ 2,675	$ 2,675	$ —	$ —
Total	$ 2,675			

During 2019, our Completion Fluids & Products and Water & Flowback Services Divisions each recorded certain long-lived tangible asset impairments. The Completion Fluids & Products Division recorded an impairment of $91.6 million related to our El Dorado, Arkansas calcium chloride production plant facility assets primarily due to a reduction in the cost of raw materials for certain of our other chemical production plants, following the execution of a long-term raw material supply agreement during the fourth quarter of 2019. Also in 2019, our Water & Flowback Services Division recorded goodwill impairment of $25.8 million.

The fair values used in these impairment calculations were estimated based on discounted estimated future cash flows, including projected future cash flows and/or estimated replacement costs, or a fair value in-exchange assumption, which are based on significant unobservable inputs (Level 3) in accordance with the fair value hierarchy. For further discussion, see Note 6 - “Impairments and Other Charges”.

A summary of these nonrecurring fair value measurements during the year ended December 31, 2019, using the fair value hierarchy, is as follows:

Description	Fair Value	Fair Value Measurements Using: Quoted Prices in Active Markets for Identical Assets or Liabilities (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Year-to-Date Impairment Losses
	(In Thousands)				
Completion Fluids & Products production facility	$ 9,459	$ —	$ —	$ 9,459	$ 91,606
Water & Flowback Services goodwill	$ —	—	—	—	25,784
Water & Flowback Services equipment	$ —	—	—	—	284
Total	$ 9,459	$ —	$ —	$ 9,459	$ 117,674

Other

The fair values of cash, restricted cash, accounts receivable, accounts payable, accrued liabilities, short-term borrowings and long-term debt pursuant to TETRA's ABL Credit Agreement and Term Credit Agreement approximate their carrying amounts.

NOTE 15 — INCOME TAXES

The income tax provision attributable to continuing operations for the years ended December 31, 2021, 2020, and 2019, consists of the following:

	Year Ended December 31,		
	2021	2020	2019
		(In Thousands)	
Current			
State	$ 124	$ 191	$ 400
Foreign	2,031	1,598	2,837
	2,155	1,789	3,237
Deferred			
Federal	—	(175)	(161)
State	(4)	(125)	(395)
Foreign	(67)	269	130
	(71)	(31)	(426)
Total tax provision	$ 2,084	$ 1,758	$ 2,811

A reconciliation of the provision (benefit) for income taxes attributable to continuing operations, computed by applying the federal statutory rate to income (loss) before income taxes and the reported income taxes, is as follows:

	Year Ended December 31,		
	2021	2020	2019
		(In Thousands)	
Income tax benefit computed at statutory federal income tax rates	$ (3,091)	$ (5,268)	$ (26,903)
State income taxes (net of federal benefit)	(386)	(2,124)	(2,388)
Impact of international operations	(4,083)	4,036	672
Valuation allowance	9,055	4,598	30,640
Other	589	516	790
Total tax provision	$ 2,084	$ 1,758	$ 2,811

Income (loss) before taxes and discontinued operations includes the following components:

	Year Ended December 31,		
	2021	2020	2019
		(In Thousands)	
Domestic	$ (25,198)	$ (25,929)	$ (135,668)
International	10,477	843	7,559
Total	$ (14,721)	$ (25,086)	$ (128,109)

A reconciliation of the beginning and ending amount of our gross unrecognized tax benefit is as follows:

	Year Ended December 31,		
	2021	2020	2019
		(In Thousands)	
Gross unrecognized tax benefits at beginning of period	$ 17	$ 137	$ 328
Lapse in statute of limitations	(17)	(120)	(191)
Gross unrecognized tax benefits at end of period	$ —	$ 17	$ 137

We recognize interest and penalties related to uncertain tax positions in income tax expense. During the years ended December 31, 2021, 2020, and 2019, we recognized less than $(0.1) million, $(0.2) million, and $(0.3) million, respectively, of interest and penalties. As of December 31, 2021 and 2020, we had zero and less than $0.1 million, respectively, of accrued potential interest and penalties associated with uncertain tax positions. The total amount of unrecognized tax benefits that would affect our effective tax rate if recognized was zero and less than $0.1 million as of December 31, 2021 and 2020, respectively. We do not expect a significant change to the unrecognized tax benefits during the next twelve months.

We file tax returns in the U.S. and in various state, local, and non-U.S. jurisdictions. The following table summarizes the earliest tax years that remain subject to examination by taxing authorities in any major jurisdiction in which we operate:

Jurisdiction	Earliest Open Tax Period
United States – Federal	2012
United States – State and Local	2004
Non-U.S. jurisdictions	2011

We use the liability method for reporting income taxes, under which current and deferred tax assets and liabilities are recorded in accordance with enacted tax laws and rates. Under this method, at the end of each period, the amounts of deferred tax assets and liabilities are determined using the tax rate expected to be in effect when the taxes are actually paid or recovered. We establish a valuation allowance to reduce the deferred tax assets when it is more likely than not that some portion or all of the deferred tax assets will not be realized. We considered all available evidence, both positive and negative, in determining whether, based on the weight of that evidence, a valuation allowance is needed for some portion or all of our deferred tax assets. In determining the need for a valuation allowance on our deferred tax assets we placed greater weight on recent and objectively verifiable current information, as compared to more forward-looking information that is used in valuating other assets on the balance sheet. While we have considered taxable income in prior carryback years, future reversals of existing taxable temporary differences, future taxable income, and tax planning strategies in assessing the need for the valuation allowance, there can be no guarantee that we will be able to realize our net deferred tax assets. Significant components of our deferred tax assets and liabilities as of December 31, 2021 and 2020 are as follows:

	December 31,	
	2021	2020
	(In Thousands)	
Net operating losses	$ 114,597	$ 104,478
Accruals	16,500	16,515
Depreciation and amortization for book in excess of tax expense	10,965	12,608
Investment in Partnership	—	23,344
All other	11,913	12,743
Total deferred tax assets	153,975	169,688
Valuation allowance	(127,058)	(146,678)
Net deferred tax assets	$ 26,917	$ 23,010

	December 31,	
	2021	2020
	(In Thousands)	
Right of use asset	$ 7,071	$ 7,808
Depreciation and amortization for tax in excess of book expense	14,037	15,402
Investment in Partnership	5,471	—
All other	2,007	1,690
Total deferred tax liabilities	28,586	24,900
Net deferred tax liabilities	$ 1,669	$ 1,890

We believe that it is more likely than not we will not realize all the tax benefits of the deferred tax assets within the allowable carryforward period. Therefore, an appropriate valuation allowance has been provided. The valuation allowance as of December 31, 2021 and 2020 primarily relates to federal deferred tax assets. The $19.6 million decrease in the valuation allowance during the year ended December 31, 2021 was primarily due to the decrease in Federal deferred tax assets, the majority of which is related to the sale of our partnership interest in CSI Compressco in January 2021. Entering into the GP Sale in January 2021 resulted in the recognition of temporary deferred assets associated with the outside basis difference of some of our subsidiaries at December 31, 2020, which were then reversed at the time of the sale in January 2021. These temporary differences were fully offset by a valuation allowance.

At December 31, 2021, we had federal, state, and foreign net operating loss carryforwards/carrybacks equal to approximately $92.5 million, $12.3 million, and $9.9 million, respectively. In those countries and states in which net operating losses are subject to an expiration period, our loss carryforwards, if not utilized, will expire at various dates from 2022 through 2041. Utilization of the net operating loss and credit carryforwards may be subject to a significant annual limitation due to ownership changes that have occurred previously or could occur in the future provided by Section 382 of the Internal Revenue Code.

NOTE 16 — NET INCOME (LOSS) PER SHARE

The average diluted shares outstanding excludes the impact of certain outstanding equity awards and warrants of 1.8 million, 21 thousand and 48 thousand shares for the twelve-month periods ended December 31, 2021, 2020 and 2019, respectively, as the inclusion of these shares would have been anti-dilutive due to the net loss from continuing operations recorded during these periods.

NOTE 17 — INDUSTRY SEGMENTS AND GEOGRAPHIC INFORMATION

We manage our operations through two divisions: Completion Fluids & Products Division and Water & Flowback Services Division. We generally evaluate the performance of and allocate resources to our segments based on profit or loss from their operations before income taxes and nonrecurring charges, return on investment, and other criteria. Transfers between segments and geographic areas are priced at the estimated fair value of the products or services as negotiated between the operating units. “Corporate overhead” includes corporate general and administrative expenses, corporate depreciation and amortization, interest income and expense, and other income and expense.

Summarized financial information concerning the business segments is as follows:

	Year Ended December 31,		
	2021	2020	2019
		(In Thousands)	
Revenues from external customers			
Product sales			
Completion Fluids & Products Division	$ 211,201	$ 229,809	$ 258,632
Water & Flowback Services Division	4,028	2,912	921
Consolidated	$ 215,229	$ 232,721	$ 259,553
Services			
Completion Fluids & Products Division	$ 8,447	$ 12,852	$ 20,623
Water & Flowback Services Division	164,596	132,142	281,065
Consolidated	$ 173,043	$ 144,994	$ 301,688
Total revenues			
Completion Fluids & Products Division	$ 219,648	$ 242,661	$ 279,255
Water & Flowback Services Division	168,624	135,054	281,986
Consolidated	$ 388,272	$ 377,715	$ 561,241
Depreciation, amortization, and accretion			
Completion Fluids & Products	$ 7,542	$ 7,581	$ 13,518
Water & Flowback Services	25,060	29,913	33,410
Corporate	900	720	635
Consolidated	$ 33,502	$ 38,214	$ 47,563
Interest expense			
Completion Fluids & Products	$ 44	$ 73	$ 68
Water & Flowback Services	7	4	7
Corporate	16,506	19,249	21,733
Consolidated interest expense	16,557	$ 19,326	$ 21,808
Consolidated interest income	(180)	(400)	(552)
Consolidated interest expense, net	$ 16,377	$ 18,926	$ 21,256
Income (loss) before taxes and discontinued operations			
Completion Fluids & Products	$ 54,981	$ 55,334	$ (33,969)
Water & Flowback Services	(11,116)	(21,850)	(21,173)
Interdivision eliminations	12	12	14
Corporate[1]	(58,598)	(58,582)	(72,981)
Consolidated	$ (14,721)	$ (25,086)	$ (128,109)

[1] Amounts reflected include the following general corporate expenses:

	Year Ended December 31,		
	2021	2020	2019
		(In Thousands)	
General and administrative expense	$ 39,990	$ 36,201	$ 51,466
Depreciation, amortization and impairment	1,032	818	631
Interest expense, net	17,483	20,727	21,977
Other general corporate (income) expense, net	93	836	(1,093)
Total	$ 58,598	$ 58,582	$ 72,981

	December 31,	
	2021	2020
	(In Thousands)	
Total assets		
Completion Fluids & Products	$ 200,869	$ 218,952
Water & Flowback Services	146,110	136,511
Corporate, other and eliminations	51,287	67,370
Assets of discontinued operations	—	710,006
Consolidated	$ 398,266	$ 1,132,839

	Year Ended December 31,		
	2021	2020	2019
		(In Thousands)	
Capital expenditures			
Completion Fluids & Products	$ 3,828	$ 4,016	$ 7,140
Water & Flowback Services	13,620	9,651	24,340
Corporate	105	1,023	1,033
Discontinued operations [1]	2,980	14,696	75,760
Consolidated	$ 20,533	$ 29,386	$ 108,273

[1] Amounts presented are net of cost of equipment sold, including zero during 2021, $12.7 million during 2020 and $6.5 million during 2019 for our former Compression Division.

Summarized financial information concerning the geographic areas of our customers and in which we operate at December 31, 2021, 2020, and 2019, is presented below:

	Year Ended December 31,		
	2021	2020	2019
		(In Thousands)	
Revenues from external customers			
United States	$ 251,786	$ 225,835	$ 411,284
Canada and Mexico	5,363	1,347	6,616
South America	10,473	11,583	13,188
Europe	88,136	90,303	93,327
Africa	2,262	8,128	16,874
Middle East, Asia and other	30,252	40,519	19,952
Total	$ 388,272	$ 377,715	$ 561,241
Transfers between geographic areas:			
Europe	195	848	1,802
Eliminations	(195)	(848)	(1,802)
Total revenues	$ 388,272	$ 377,715	$ 561,241

During each of the two years ended December 31, 2021 and 2020, no single customer accounted for more than 10% of our consolidated revenues. One customer provided more than 10% of our consolidated revenues during the year ended December 31, 2019. As of December 31, 2021 and 2020, no receivables from individual customers represented 10% or more of our consolidated trade accounts receivables net of allowance for doubtful accounts.

	December 31,	
	2021	2020
	(In Thousands)	
Identifiable assets		
United States	$ 291,986	$ 285,765
Canada and Mexico	5,891	6,452
South America	21,837	10,388
Europe	72,685	85,733
Africa	199	9,195
Middle East, Asia and other	5,668	25,300
Assets of discontinued operations	—	710,006
Total identifiable assets	$ 398,266	$ 1,132,839

NOTE 18 — SUBSEQUENT EVENTS

The Company has evaluated subsequent events through the filing of this Annual Report on Form 10-K, and determined that there have been no events that have occurred that would require adjustments to our disclosures in the consolidated financial statements except for the transactions described below.

In January 2022, the Company entered into a new revolving credit facility for seasonal working capital needs of subsidiaries in Sweden and Finland (“Swedish Credit Facility”). There are no borrowings and the facility has availability of 50.0 million Swedish Krona, or approximately $5.3 million United States dollars, as of February 25, 2022. During each year, all outstanding loans under the Swedish Credit Facility must be repaid for at least 30 consecutive days. Borrowings bear interest at a rate of 2.95% per annum. The Swedish Credit Facility expires on December 31, 2022 and the Company intends to renew it annually.

Our Lake Charles facility incurred damage due to Hurricane Laura in 2020 for which we received partial insurance proceeds in 2020. In February 2022, we reached a voluntary settlement of an additional approximately $3.8 million, which we expect to recognize as other income during the first quarter of 2022.

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BOARD OF DIRECTORS

WILLIAM D. SULLIVAN (3; Ex-Officio member of 1 and 2*)
Chairman of the Board of Directors of TETRA Technologies, Inc. Retired Executive Vice President, E&P, Anadarko Petroleum Corporation. Chairman of the Board of Directors of SM Energy Company. Director of TETRA Technologies, Inc., since 2007.

BRADY M. MURPHY
President and Chief Executive Officer of TETRA Technologies, Inc. Director of TETRA Technologies, Inc., since 2018.

MARK E. BALDWIN (1*)
Retired Executive Vice President and Chief Financial Officer of Dresser-Rand Group, Inc. Director of KBR, Inc. Director of Nine Energy Service Inc. Director of TETRA Technologies, Inc., since 2014.

THOMAS R. BATES, JR. (2*)
Chairman of the Board of Directors of Vantage Drilling International. Director of SSR Mining, Inc. Adjunct Professor at the Neely School of Business, Texas Christian University. Director of TETRA Technologies, Inc., since 2011.

JOHN F. GLICK (2, 3*)
Retired President, Chief Executive Officer and a Director of Lufkin Industries, Inc. Non-Executive Chairman of the Board of Directors of Hunting PLC. Director of TETRA Technologies, Inc., since 2014.

GINA A. LUNA (1, 3*)
Managing partner of GP Capital Partners, LP. Director of Roku, Inc. Director of TETRA Technologies, Inc., since 2018.

SHARON B. McGEE (2, 3*)
Founder of SDBM Executive and Strategic Advisory, LLC. Retired Vice President of Albemarle Corporation. Director of TETRA Technologies, Inc., since February 2022.

SHAWN D. WILLIAMS (1, 2*)
Retired Chief Executive Officer of Nexeo Plastics Holdings, Inc. Chairman of the Board of Directors of Covia Holdings, LLC. Director of Kirby Corporation. Director of TETRA Technologies, Inc., since 2021.

EXECUTIVE OFFICERS

BRADY M. MURPHY
President and Chief Executive Officer

ELIJIO V. SERRANO
Senior Vice President and Chief Financial Officer

MATTHEW J. SANDERSON
Senior Vice President — Water & Flowback Services Division and Completion Fluids & Products Division

TIMOTHY C. MOELLER
Senior Vice President — Global Supply Chain and Chemicals

ALICIA P. BOSTON
General Counsel and Chief Compliance Officer

RICHARD D. O'BRIEN
Vice President — Finance, Global Controller, Assistant Treasurer

JACEK M. MUCHA
Vice President — Finance and Treasurer

STOCKHOLDER INFORMATION

CORPORATE HEADQUARTERS
TETRA Technologies, Inc.
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The Woodlands, TX 77380
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www.tetratec.com

STOCKHOLDER RELATIONS
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24955 Interstate 45 North
The Woodlands, TX 77380

TRANSFER AGENT AND REGISTRAR
Computershare Investor Services
350 Indiana Street, Suite 800
Golden, CO 80401
+1 303.262.0600

STOCK LISTING
Shares of common stock of TETRA Technologies, Inc. trade on the New York Stock Exchange under the ticker symbol TTI.

INDEPENDENT AUDITORS
Grant Thornton LLP
700 Milam Street, Suite 300
Houston, TX 77002

FORM 10-K
The Company's Form 10-K for the year ended December 31, 2021, is included in this Annual Report. Additional copies may be obtained free of charge by visiting the Company's website (www.tetratec.com) or by writing to:

Stockholder Relations
TETRA Technologies, Inc.
24955 Interstate 45 North
The Woodlands, TX 77380

ANNUAL MEETING
The annual meeting of stockholders will be held at 11:00 a.m. Central Time on Tuesday, May 24, 2022, at our Corporate Headquarters in The Woodlands, Texas.

DISCLOSURE CERTIFICATION
As required by the NYSE listing standards, Brady M. Murphy, our Chief Executive Officer, certified on May 28, 2021, that he was not aware of any violation by the Company of NYSE corporate governance listing standards. The certification required by Section 302 of the Sarbanes-Oxley Act was filed with the SEC on February 28, 2022, as an exhibit to our Annual Report on Form 10-K.

(1) Member, Audit Committee
(2) Member, Human Capital Management and Compensation Committee
(3) Member, Nominating, Governance and Sustainability Committee
(*) Indicates Committee Chairmanship

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