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 January 31, 2018

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: 001-34195

Layne Christensen Company

(Exact name of registrant as specified in its charter)

Delaware	**48-0920712**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

1800 Hughes Landing Boulevard Ste 800 The Woodlands, TX 77380
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: (281) 475-2600

Securities Registered Pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common stock, $.01 par value	**NASDAQ Global Select Market**

Securities Registered Pursuant to Section 12(g) of the Act: None

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

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

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§29.405 of this chapter) is not contained herein and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

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

(Check one):

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

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

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

The aggregate market value of the 18,000,115,shares of Common Stock of the registrant held by non-affiliates of the registrant on July 31, 2017, the last business day of the registrant's second fiscal quarter, computed by reference to the closing sale price of such stock on the NASDAQ Global Select Market on that date was $190,621,218.

At March 31, 2018, there were 19,917,043 shares of the Registrant's Common Stock outstanding.

Documents Incorporated by Reference
Portions of the following document are incorporated by reference into the indicated parts of this report: Definitive Proxy Statement for the 2018 Annual Meeting of Stockholders to be filed with the Commission pursuant to Regulation 14A.

LAYNE CHRISTENSEN COMPANY

Form 10-K

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PART I

Item 1. Business

General

Layne Christensen Company ("Layne", "our", "we" or "us") is a leading global water management and services and drilling company, with more than 130 years of industry experience. We provide responsible, sustainable, integrated solutions to address the world's water, minerals and infrastructure challenges. Protecting essential natural resources is a continuing focus within Layne. Our customers include government agencies, investor-owned utilities, industrial companies, multi-national mining companies, consulting engineering firms, oil and gas companies, power companies and agribusiness.

We operate approximately 52 sales and operations offices located throughout North America, Brazil and through our affiliates in Latin America. We maintain executive offices at 1800 Hughes Landing Boulevard, Suite 800, The Woodlands, Texas 77380. The telephone number is (281) 475-2600 and the website address is www.layne.com which is where you can find periodic and current reports, free of charge, as such material is filed with the Securities and Exchange Commission ("SEC").

We manage for our customers, water and related infrastructure throughout its lifecycle, including supply, treatment, delivery, maintenance and rehabilitation. Throughout each phase, we work to ensure compliance with complex state and federal regulations and to meet increasingly high demand for quality, reliability and efficiency. Our mineral services teams extract representative samples that accurately reflect the underlying mineral deposits for our global mining customers and also offer mine water management services consisting of vertical, large diameter wells for sourcing and dewatering, and horizontal drains for slope de-pressurization.

Current Event

On February 13, 2018, we entered into a definitive agreement (the "Merger Agreement") whereby Granite Construction Incorporated will acquire all of the outstanding shares of Layne in a stock-for-stock transaction with each share of Layne common stock exchanged for 0.27 shares of Granite common stock. The transaction is subject to the approval by Layne's shareholders and other customary closing conditions.

Business Segments

During the first quarter of fiscal year ended January 31, 2018, we completed the sale of substantially all of the assets of our Heavy Civil business. The results of operations related to the Heavy Civil business have been classified as discontinued operations for all periods presented. Unless noted otherwise, discussion in this Form 10-K pertain to continuing operations. See Note 16 to the Consolidated Financial Statements for a discussion of discontinued operations.

As of fiscal year ended January 31, 2018, we operate our business in three segments: Water Resources, Inliner and Mineral Services. Each of our segments has major customers; however, no single customer accounted for 10% or more of revenues in any of the past three fiscal years. See Note 17 to the Consolidated Financial Statements for financial information pertaining to the operations and geographic spread of the segments and foreign operations.

Water Resources

Operations

We provide a full suite of water-related products and services throughout the United States ("U.S."), including hydrologic design, source of supply exploration, well and intake construction, including radial collector wells (Ranney® Collector Wells) and well and pump maintenance and rehabilitation. The radial collector well group specializes in the design and turnkey infrastructure of high capacity water supply systems including radial collector wells, surface water intakes, infiltration galleries, riverbank filtration and sea water systems. Collector wells which are less intrusive on the environment, typically combine high yields with cost-effective operating and maintaining costs. We also offer water treatment equipment and engineering services, providing systems for the treatment of regulated and nuisance contaminants, specifically iron, manganese, hydrogen sulfide, arsenic, radium, nitrate, perchlorate and volatile organic compounds.

Water supply solutions for government agencies, industry and agriculture require the integration of hydrogeology and engineering with proven knowledge and application of drilling techniques. The drilling methods, size and type of equipment required depend upon the depth of the wells and the geological formations encountered at the project site. We have extensive well archives in addition to technical personnel who determine geological conditions and aquifer characteristics. We provide feasibility studies, analyze the results and define the source, depth and magnitude of an aquifer. We can estimate recharge rates, recommend well design features, plan well field design and develop water management plans. To conduct these services, we maintain a staff of professional employees including engineers, geologists and hydrogeologists.

Our involvement in the initial drilling of wells positions us to win follow-up maintenance and rehabilitation business. Such rehabilitation is periodically required during the life of a well, as groundwater may contain bacteria, iron, high mineral content, or other contaminants and screen openings may become blocked, reducing the capacity and productivity of the well. We offer complete diagnostic and rehabilitation services for existing wells, pumps and related equipment through our network of regional offices. In addition to our well service rigs, we have equipment capable of conducting downhole closed circuit televideo inspections, one of the most effective methods for investigating water well problems, enabling us to effectively diagnose and respond quickly to well and pump performance problems. Our personnel can perform a variety of well rehabilitation techniques, using both chemical and mechanical methods. We also have the capability and inventory to repair, in our own machine shops, most water well pumps, regardless of manufacturer, as well as to repair well screens, casings and related equipment such as chlorinators, aerators and filtration systems. Water Resources also offers investigative services to assist in assessing, monitoring and characterizing water quality and aquifer parameters.

Water Resources provides water management solutions to the oil and natural gas industry's exploration and production water related challenges. Our water management services specialize in hydrogeological assessments and sourcing, transfer, storage and treatment. Our Water Midstream business provides responsible water lifecycle solutions to energy producers in the Delaware Basin in West Texas through the creation of sustainable high-capacity water delivery infrastructure. Operations include our Hermosa Pipeline system, a 26 mile pipeline near Pecos, Texas, delivering up to 175,000 barrels of non-potable water per day for use in energy drilling and completion activities, water storage facilities and the exclusive right to develop non-potable water resources for use in energy drilling and completion activities on approximately 88,000 acres owned by the State of Texas General Land Office in Reeves and Culberson counties.

Customers & Markets

In Water Resources, our customers are typically government agencies, national and regional consulting firms engaged by federal and state agencies and local operations of agricultural, industrial and energy businesses. The term "government agencies" includes federal, state and local entities.

Demand for water solutions are expected to grow as government agencies, industrial, agricultural and energy companies compete for increasingly limited water resources. The combination of tightening regulations and water scarcity has resulted in increasingly sophisticated water consumers and this in turn has created opportunities for the introduction of long-term sustainable methods and technologies such as aquifer recharge, water re-use, injection wells and zero-liquid discharge treatment systems. Injection wells place fluid deep underground into porous rock formations, and we have seen increasing market demand driven by new regulations and the need to economically dispose of waste associated with municipal and industrial water treatment.

Main drivers for water supply and treatment include shifting demographics, new residential and commercial development, deteriorating water quality and infrastructure that supplies our water, increasing water demand from industrial expansion, increasing amounts of water used in oil and gas production, stricter regulation and new technology that allows us to achieve new standards of quality. Well and pump rehabilitation demand depends on the age and application of the equipment, the quality of material and workmanship applied in the original well infrastructure and changes in depth and quality of the groundwater. The demand for well and pump rehabilitation in the public market is highly influenced by municipal budgets.

Competition

The U.S. water well drilling and rehabilitation markets are highly fragmented, consisting of several thousand regional and local contractors. Water well drilling work is usually obtained on a competitive bid basis for government agencies, while work for industrial customers is obtained both on a competitive bid and negotiated basis. The majority of these water well drilling contractors are primarily involved in drilling low-volume water wells for agricultural and residential customers, markets in which we do not generally participate. Competition in the energy market is primarily from local or regional small and mid-sized contractors.

There are no proprietary technologies or other significant factors that prevent other firms from entering these local or regional markets or from consolidating into larger companies more comparable in size to us.

Well and pump rehabilitation work is typically negotiated on an emergency basis or within a relatively short period of time. Those companies with available rigs and the requisite expertise have a competitive advantage by being able to respond quickly to repair requests.

Inliner

Operations

Inliner is an infrastructure solutions provider offering a wide range of rehabilitation techniques and services for wastewater, storm water and process sewer pipeline networks. The foundation of our services remains our proprietary Inliner® and Inliner STX® cured-in-place pipe ("CIPP") products. These products allow us to rehabilitate aging and deteriorated infrastructure to provide structural rebuilding as well as infiltration and inflow reduction. The trenchless nature of the products reduces rehabilitation costs, minimizes environmental impact and reduces or eliminates surface and social disruption.

Since Inliner's start as the first U.S. licensee of the Inliner® technology in 1991, we have expanded and have come to own and operate Inliner Technologies and Liner Products, the technology company and lining tube manufacturer, respectively. This vertical integration gives us control of the Inliner® product from raw material purchases to product installation. In our 27 year history, we have successfully installed more than 25 million feet of 4 to 96-inch CIPP throughout the U.S. in traditional round as well as non-circular pipe geometries. Inliner's lining tube manufacturing, design, saturation (both felt and ultra violet ("UV")), and installation techniques are all ISO 9001:2015 certified, bringing an added level of quality control to our products and offered services.

Inliner has the ability to supply both traditional felt-based or composite CIPP lining tubes cured with water or steam, and fiberglass-based lining tubes cured with ultraviolet light. We continue to offer outside sales of dry as well as install-ready, resin-saturated felt liners and install-ready, resin-saturated fiberglass/UV liners to other marketplace installers.

While Inliner focuses on CIPP, we also provide full system renewal and infrastructure management services. Renewal methods include Janssen structural renovation of service lateral connections, traditional excavation and replacement and manhole renewal. Inliner's expertise, experience and customer-oriented contracting combined with an ability to provide a diverse line of products and services differentiates us from other rehabilitation contractors and allows Inliner to provide clients with single source accountability for rehabilitative and large construction type projects.

Customers & Markets

Inliner's primary customer base is comprised of municipalities, operating groups of municipal systems and local operations of industrial businesses. Customers for both felt and fiberglass based tube supplied through Liner Products remain predominantly U.S. based. Inliner's current geographic reach stretches from the east coast westward to the Rocky Mountains.

Many of the drivers for wastewater, storm water and process sewer rehabilitation demand are largely a function of deteriorating urban infrastructure compounded by population growth and deteriorating water quality. U.S. Environmental Protection Agency (EPA) mandated consent decrees continue to drive the larger rehabilitation programs and force those entities to address infiltration and inflow of groundwater into damaged or leaking sewer lines, within defined timelines. These factors and enforcement of stricter regulation drive the rehabilitation market to continue to deploy technologies like CIPP and combine them with new technologies all while continuing to focus on the achievement of lasting solutions and high quality standards.

Competition

The U.S. competitive landscape remains fragmented with a limited number of CIPP providers able to provide nationwide coverage. Numerous, smaller scale, regionalized competitors in both the felt and UV arenas exist. Municipal work is most often obtained on a competitive bid basis with some exceptions of qualification-based or design build proposals used predominantly in larger, longer-term and more complex projects. Multi-year contracts, although typically obtained at least initially through a structure that involves a competitive pricing element, continue to exist and remain a focal point for Inliner. Industrial or private work is only a small percentage of revenue and is a mix of competitive bid and negotiated.

Larger competitors share the same vertical integration-tube manufacturing/assembly, resin-saturation (wetout) and installation- as Inliner, while most of our smaller competitors rely on third party tube supply and wetout. This readily-available, saturated tube supply for both traditional, heat cured, felt based products and UV cured fiberglass products combined with the ability to not have to construct and permit saturation facilities, allows smaller competitors to continue to enter and remain in the CIPP market. The smaller installers often perform CIPP as a side product to complement other work they perform.

Despite widespread competition, Inliner remains one of the most diversified providers in the industry by supplying a good quality, competitively priced group of core products and then complementing that product group with ancillary product offerings, subcontracting partnerships and construction management services all designed to provide broader solutions that go beyond just CIPP installation.

Mineral Services

Operations

Before investing heavily in development to extract minerals, global mining and junior mining companies hire companies such as Mineral Services to extract rock and soil samples for analyses of mineral content and grade. Mineral Services conducts drilling activities, including all phases of core drilling, reverse circulation, dual tube, hammer and rotary air-blast methods. Samples extracted must be free of contamination and accurately reflect the location and orientation of underlying mineral deposits. We also drill to support the definition of ore bodies to maximize the efficiency of mining operations. Mines often face water problems; with either too little water to supply processing needs or too much water, causing concerns with flooding and/or mine stabilization. Layne's mine water management services utilize our expertise at completing high yield wells to find new sources of water or to construct wells that efficiently de-water areas for depressurization to increase slope stability.

Mineral Services also has ownership interests in foreign affiliates operating in Latin America that form our primary presence in Chile and Peru. Mineral Services manages interests in our foreign affiliates, where we do not have majority ownership or operating control, through regular management meetings and analysis of key operating and financial information. The foreign affiliates are engaged in similar operations to Mineral Services and also the manufacture and supply of drilling equipment, parts and supplies.

The mining industry has experienced improvement with the increase in demand for mineral exploration over the past year. This improvement has been driven by strengthening commodity prices of base and precious metals. Mineral Services has continually adjusted our operations to respond to the industry's market conditions, which are cyclical in nature. Our safety record and ability to re-deploy assets quickly positions Mineral Services well to respond to such opportunities.

Customers and Markets

Mineral Services customers are major gold and copper producers and to a lesser extent, other base metal producers including iron ore. Mineral Services' largest customers are multi-national corporations headquartered in the U.S., Brazil, Europe and Canada. The success of Mineral Services is closely tied to global commodity prices and demand for the products of our global mining customers. Our primary markets are in North America, Brazil and through our affiliates in Latin America. See Item 1A, Risk Factors for a discussion of the risks associated with operating in these foreign countries.

Demand for mineral exploration drilling is driven by the need to identify, define and develop underground base and precious mineral deposits. Factors influencing the demand for mineral-related drilling services include the absolute price level and volatility in commodity prices, international economic and political conditions, inflation, foreign exchange levels, the economic feasibility of mineral exploration and production, the discovery rate of new mineral reserves and the ability of mining companies to access capital for their activities.

The mineral exploration market is dependent on financial and credit markets being readily available to fund drilling and mining programs. In addition, mining companies' ability to raise capital for their operations through other avenues, which traditionally have been available to them, is dependent on market pricing trends for base and precious metals.

Competition

Mineral Services competes with a number of drilling companies, as well as vertically integrated mining companies that conduct their own exploration drilling activities. In the mineral exploration drilling market, Mineral Services competes based on price, technical expertise and reputation. Mineral Services work is typically performed on a private bid basis.

Contracts

We identify potential projects from a variety of sources. After determining which projects are available, we make a decision on which projects to pursue based on factors such as client history, project size, duration, availability of personnel, current backlog, profitability expectations, risk profile, type of contract, prior experience, source of project funding and geographic location.

We execute our contracts through a variety of methods, including cost-plus, fixed-price, time and material, day rate, unit price or some combination of these methods. Customers may consider price, technical capabilities of equipment and personnel, safety record and reputation, among other factors.

Fixed-price contracts have historically been used in competitively bid public water well and specialty contracts. These contracts commit us to provide all of the resources required to complete a project for a fixed sum. Usually, fixed-price contracts transfer more risk to us.

Most of our contract revenues and costs are recognized using the percentage of completion method. For each contract, we regularly review contract price and cost estimates as the work progresses and reflect adjustments in profit proportionate to the percentage of completion of the related project in the period when we revise those estimates. To the extent that these adjustments result in a reduction or elimination of previously reported profits with respect to a project, we recognize a charge against current earnings which could be material.

Backlog Analysis

Backlog represents the dollar amount of revenues we expect to recognize in the future from contracts that have been awarded. We include a project in backlog at such time as contracts are executed or notices to proceed are obtained, depending on terms of the contract. Backlog amounts include anticipated revenues associated with the original contract amounts, executed change orders and any claims that may be outstanding with customers for which recovery is considered probable. The backlog figures are subject to modifications, alterations or cancellation provisions contained in the various contracts. Historically, those provisions have not had a material effect on the consolidated financial statements.

Backlog may not be indicative of future operating results. There have been no changes in the methodology used to determine backlog during the fiscal years ended January 31, 2018 and 2017. Backlog is not a measure defined by generally accepted accounting principles in the United States (“GAAP”) and is not a measure of profitability. Our method for calculating backlog may not be comparable to methodologies used by other companies.

Layne’s backlog of uncompleted contracts at January 31, 2018, was approximately $178.6 million compared to $166.6 million at January 31, 2017. The following table provides an analysis of backlog by segment for the fiscal year ended January 31, 2018.

(in millions)	Backlog at January 31, 2017	New Business Awarded (1)	Revenues Recognized FY 2018	Backlog at January 31, 2018 (2)
Water Resources	$ 49.2	$ 171.1	$ 172.4	$ 47.9
Inliner	117.4	219.2	205.9	130.7
Total	$ 166.6	$ 390.3	$ 378.3	$ 178.6

(1) New business awarded consists of the original contract price of projects added to our backlog plus or minus subsequent changes to the estimated total contract price of existing contracts.

(2) As of January 31, 2018, approximately 11% of total backlog is not reasonably expected to be completed during the next twelve months.

Of Layne’s total backlog of $178.6 million as of January 31, 2018, approximately $6.3 million relates to active contracts that are in a loss position. The remaining contracts in backlog have future revenues which are expected to equal or exceed costs when recognized. We can provide no assurance as to the profitability of the contracts reflected in backlog. It is possible that the estimates of profitability could increase or decrease based on changes in productivity, actual downtime and the resolution of change orders and any claims with customers. As of January 31, 2018, there were no significant contracts in backlog not moving forward as originally scheduled.

During the fiscal years ended January 31, 2018 and 2017, there were no significant cancellations of contracts previously included in backlog and no significant changes in anticipated gross margin trends based on current backlog.

Seasonality

The domestic drilling and infrastructure services activities and related revenues and earnings tend to decrease in the winter months when adverse weather conditions interfere with access to project sites. Additionally, drilling activities and services typically slow down during Thanksgiving, Christmas and New Year holidays. As a result, revenues and earnings in our first and fourth fiscal quarters tend to be less than revenues and earnings in the second and third fiscal quarters.

Regulation

General

Each of our segments is subject to various laws and regulations relating to the protection of the environment and worker health and safety. In addition, each segment is subject to its own unique set of laws and regulations imposed by federal, state, local and foreign laws relating to licensing, permitting, approval, reporting, bonding and insurance requirements.

Management believes that our operations comply in all material respects with applicable laws and regulations and that the existence and enforcement of such laws and regulations have no more restrictive effect on the method of operations than on other similar companies in the industries in which we operate. Layne has internal procedures and policies that management believes help to ensure that our operations are conducted in compliance with current regulations.

We are subject to the reporting requirements of the Securities and Exchange Act of 1934, as amended ("the Exchange Act"), the Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act"), the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act"), the listing requirements of NASDAQ and other applicable securities rules and regulations.

Environmental

Our operations are subject to stringent and complex federal, state, local and foreign environmental laws and regulations. These include, for example, (1) the federal Clean Air Act and comparable state and foreign laws and regulations that impose obligations related to air emissions, (2) the federal Resource Conservation and Recovery Act and comparable state and foreign laws that regulate the management of waste from our facilities, (3) the Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("CERCLA") and comparable state and foreign laws that regulate the cleanup of hazardous substances that may have been released at properties owned or operated by us, our predecessors or locations where we or our predecessors sent waste for disposal and (4) the federal Clean Water Act and the Safe Drinking Water Act and analogous state and foreign laws and regulations that impose detailed permit requirements and strict controls regarding water quality and the discharge of pollutants into waters of the U.S. and state and foreign waters.

Such regulations impose permit requirements, effluent standards, waste handling and disposal restrictions and other design and operational requirements, as well as record keeping and reporting requirements, upon various aspects of Layne's businesses. Some environmental laws impose liability and cleanup responsibility for the release of hazardous substances regardless of fault, legality of original disposal or ownership of a disposal site. Any changes in the laws and regulations governing environmental protection, land use and species protection may subject us to more stringent environmental control and mitigation standards. In addition, these and other laws and regulations may affect many of our customers and influence their determination whether to engage in projects which utilize our products and services.

As part of Layne's adherence to environmental laws and regulation, we focus on sustainability. Our employees contribute to the economic and environmental sustainability of the communities in which we operate.

We have made and will continue to make expenditures in our efforts to comply with these environmental requirements. Management does not believe that, to date, we have expended material amounts in connection with such activities or that compliance with these requirements will have a material adverse effect on our capital expenditures, earnings or competitive position.

Safety and Health

Our operations are also subject to various federal, state, local and foreign laws and regulations relating to worker health and safety. In many cases, a solid safety record is a requirement of doing business with our customers.

The Occupational Safety and Health Administration ("OSHA") establishes certain employer responsibilities, including maintenance of a workplace free of recognized hazards likely to cause death or serious injury, compliance with standards promulgated by OSHA and various recordkeeping, disclosure and procedural requirements. Various standards, including standards for notices of hazards and safety in excavation and demolition work may apply to our operations.

The operations of Mineral Services are also subject to the Federal Mine Safety and Health Act of 1977 (the "Mine Act"). In addition to federal regulatory programs, all of the states and foreign governments in which Mineral Services operates have programs for mine safety and health regulation and enforcement. The Mine Act requires mandatory inspections of surface and underground mines and requires the issuance of citations or orders, as well as the imposition of civil penalties or criminal liability for violations of mandatory health and safety standards and record keeping requirements.

The operation and registration of our motor vehicles are subject to various regulations, including those promulgated by the U.S. Department of Transportation ("DOT"), including rules on commercial driver licensing, controlled substance testing, medical and other qualifications for drivers, equipment maintenance and drivers' hours of service.

Permits and Licenses

Many states require regulatory mandated construction permits which typically specify that wells, water and sewer pipelines and other infrastructure projects be constructed in accordance with applicable statutes. Our water treatment business is also subject to legislation and municipal requirements that set forth discharge parameters, constrain water source availability and set quality and treatment standards. Various state, local and foreign laws require that water wells and monitoring wells be installed by licensed well drillers. Many of the jurisdictions in which we operate require construction contractors to be licensed. We maintain well drilling and contractor's licenses in those jurisdictions in which we operate and in which such licenses are required. In addition, we employ licensed engineers, geologists and other professionals necessary to the conduct of our business. In those circumstances in which we do not have a required professional license, we subcontract that portion of the work to a firm employing the necessary licensed professionals. Our operations are also subject to various permitting and inspection requirements and building and electrical codes. In Mineral Services, drilling also frequently requires environmental permits, which are usually obtained by our customers.

Anti-corruption and Bribery

We are subject to the Foreign Corrupt Practices Act ("FCPA"), which prohibits U.S. and other business entities from making improper payments to foreign government officials, political parties or political party officials. We are also subject to the applicable anti-corruption laws in the jurisdictions in which we operate, thus potentially exposing us to liability and potential penalties in multiple jurisdictions. The anti-corruption provisions of the FCPA are enforced by the Department of Justice ("DOJ"). In addition, the SEC requires strict compliance with certain accounting and internal control standards set forth under the FCPA. Failure to comply with the FCPA and other laws can expose us and/or individual employees to potentially severe criminal and civil penalties. Such penalties may have a material adverse effect on our business, financial condition and results of operations.

We devote resources to the development, maintenance, communication and enforcement of our Business Code of Conduct, our anti-bribery compliance policies, our internal control processes and compliance related policies. We strive to conduct timely internal investigations of potential violations and take appropriate action depending upon the outcome of the investigation.

Insurance and Bonding

Our property and equipment is covered in part by insurance and we believe the amount and scope of such insurance is adequate for the risks we face. In addition, we maintain general liability, excess liability and worker's compensation insurance in amounts that we believe are consistent with industry practice.

As is common practice in drilling and infrastructure services business, we are required at times to provide surety bonds as an additional level of security of our performance. We have surety arrangements with more than one surety.

Employees

At January 31, 2018, we had approximately 2,178 employees, approximately 67 of whom were members of collective bargaining units represented by locals affiliated with major labor unions in the U.S. Management believes that its relationship with employees is satisfactory. In all of Layne's operations, an important competitive factor is technical expertise; accordingly, Layne emphasizes the growth and development of its personnel.

In addition, Layne emphasizes strict adherence to all health and safety policies and procedures. This emphasis encompasses developing site-specific safety plans, ensuring regulatory compliance and training employees in regulatory compliance and sound safety practices. Training consists of OSHA and/or Mine Safety and Health Administration ("MSHA") training as required and as applicable. Layne provides this training through certified and/or qualified trainers. In addition to the training, the safety team is also responsible for preparing health and safety site specific plans and provides guidance and site analysis for the health and safety plans prepared by others.

Many of our employees have extensive experience with Layne and our industries and have advanced academic backgrounds in agricultural, chemical, civil, industrial, geological and mechanical engineering, geology and metallurgy. Management believes that our size and reputation allows us to compete effectively for highly qualified professionals.

Item 1A. Risk Factors

Investing in our common stock is subject to risks and uncertainties. You should carefully consider the risks described below with all of the other information contained or incorporated by reference in this annual report on Form 10-K before deciding to invest in our common stock. Many of these risks are beyond our control and are driven by factors that often cannot be predicted. If any of the following risks actually occur, they may materially harm our business and our financial condition and results of operations. In this event, the market price of our common stock could decline and you could lose part or all of your investment.

Risks Relating to Our Business and Industry

Demand for our services is subject to economic conditions and volatility in private industry and municipal and other governmental spending. This could materially and adversely affect our revenues, profits and our financial condition.

During times of uncertain economic conditions, our customers may face budget shortfalls and may reduce or defer capital spending that could decrease the overall demand for our services. In addition, our customers may find it difficult to raise capital in the future. Levels of municipal spending particularly impact Water Resources and Inliner. Reduced tax revenue or user fee in certain regions, or inability to access traditional sources of credit, may limit spending and new development by municipalities or local governmental agencies, which in turn may adversely affect the demand for our services and reduce our revenue.

Many of our customers, especially federal, state and local governmental agencies competitively bid their contracts. In addition, projects with negotiated contracts are also highly competitive. Our customers may also demand lower pricing as a condition of continuing our services. In addition, certain of our customers may be unable to pay us if they are unable to raise capital to fund their business operations, which would have an adverse effect on our revenue and cash flows.

Volatility within the global commodity markets may negatively impact Mineral Services. Mineral exploration is highly speculative and is influenced by a variety of factors, including the prevailing prices for various metals (particularly gold and copper), which often fluctuate widely in response to global supply and demand, international economic trends, currency exchange fluctuations, expectations for inflation, speculative activities and political events.

Volatility in the price of crude oil and natural gas may negatively impact our Water Midstream business. Crude oil and natural gas exploration, development and production is influenced by a variety of factors, including the prevailing prices for crude oil and natural gas, which often fluctuate widely in response to global supply and demand, international economic trends, currency exchange fluctuations and political events. Demand for our Water Midstream services is highly dependent on the level of exploration, development and production of crude oil and natural gas in the geographic areas in which we operate.

Because our operations are impacted by certain seasonality, our results can fluctuate significantly, which could make it difficult to evaluate our business and could cause instability in the market price of our common stock.

Adverse weather conditions, natural disasters, disease, force majeure and other similar events can curtail our operations in various regions in which we operate, resulting in performance delays and increased costs.

Moreover, our domestic activities and related revenue and earnings tend to decrease in the winter months when adverse weather conditions interfere with access to drilling or other infrastructure services sites. Additionally, activities related to our domestic and international operations can decrease due to year end holidays as certain customers stop operations during this time. As a result, our revenue and earnings in the second and third quarters tend to be higher than revenue and earnings in the first and fourth quarters. Accordingly, as a result of the foregoing as well as other factors, our quarterly results should not be considered indicative of results to be expected for any other quarter or for any full fiscal year.

Our failure to meet the schedule or performance requirements of our contracts could harm our reputation, reduce our client base and harm our future operations.

In certain circumstances, we guarantee contract completion by a scheduled acceptance date. Failure to meet any such schedule could result in additional costs and the amount of such additional costs could exceed projected profit margins. These additional costs could include liquidated damages paid under contractual penalty provisions, which can be substantial and can accrue on a daily basis. In addition, our actual costs could exceed our projections. Performance problems for existing and future contracts could increase the anticipated costs of performing those contracts and cause us to suffer damage to our reputation within our industry and our client base, which would harm our future business.

The timing of new contract awards and the performance of those new contracts could result in fluctuations in our operating results and cash flows.

New projects often entail a lengthy and complex design and bidding process. This process can be affected by governmental approvals, budget negotiations, funding approvals, permitting, weather, as well as changing market conditions. The uncertainty of the timing of contract awards as well as the timing of the commencement date of the contract can have an adverse effect on our results of operations and cash flows causing fluctuations from quarter to quarter or year to year. These fluctuations can be significant.

We may not fully realize the anticipated benefits from our restructuring plans.

We continue to implement certain restructuring initiatives that seek to reduce our cost structure and streamline our operations. These restructuring plans have, among other things, resulted in a reduction in workforce, cost containment measures and working capital management initiatives.

Our restructuring plans may not reduce expenses or produce the cost savings we anticipate or in the time frame we expect. Further restructuring activities may also be required in the future beyond what is currently planned, which could enhance the risks associated with these activities.

In addition, our management periodically reviews our businesses and portfolio of assets to identify those businesses and assets that may be underperforming and for which we may consider a sale or other disposition. However, we may not correctly identify businesses or assets that are, or will be, underperforming, and we may not be able to dispose of those businesses and assets on favorable terms in a timely manner, if at all. Our inability to identify and favorably dispose of underperforming businesses and assets may significantly harm our business.

If we are unable to retain skilled workers, or if a work stoppage occurs as a result of disputes relating to collective bargaining agreements, our ability to operate our business could be limited and our revenue could be reduced.

Our ability to remain productive, profitable and competitive depends substantially on our ability to retain and attract skilled workers with expert geological and other engineering knowledge and capabilities. The demand for these workers is high and the supply is limited. An inability to attract and retain trained drillers and other skilled employees could limit our ability to operate our business and reduce our revenue.

As of January 31, 2018, approximately 3% of our workforce was unionized and 3 of our 8 active collective bargaining agreements are scheduled to expire within the next 12 months. To the extent that disputes relating to existing or future collective bargaining agreements arise, a work stoppage could occur. If protracted, a work stoppage could reduce or suspend our operations and reduce our revenue.

Fluctuations in the prices of raw materials could increase our operating costs.

We purchase steel, resin, concrete and fuel for use in connection with our businesses. We also purchase a significant volume of fuel to operate our trucks and equipment. The manufacture of materials used in our sewer rehabilitation business is dependent upon the availability of resin, a petroleum-based product. At present, we do not engage in any type of hedging activities to mitigate the risks of fluctuating market prices for oil, steel, resin, concrete or fuel and increases in the price of these materials may increase our operating costs.

International trade tariffs and restrictions in the steel market may adversely affect our business.

Portions of our business either use significant quantities of imported steel or are dependent on providing products and services to customers that import steel into the United States from the international markets. To the extent that trade tariffs and other restrictions imposed by the United States increase the price of, or limit the amount of, steel imported into the United States, the costs of our raw materials may be adversely affected and/or the demand from our customers for products and services may be diminished, which could adversely affect our revenues and profitability.

If we are not able to demonstrate our technical competence, competitive pricing and reliable performance to potential customers we will lose business to competitors, which would reduce our profit.

We face significant competition and a large part of our business is dependent upon obtaining work through a competitive bidding process. In Water Resources and Inliner, we compete with many smaller firms on a local or regional level, many of whom may have a lower corporate overhead cost than us. We also compete with larger competitors that may be better capitalized than us and may have a lower cost of capital. There are few proprietary technologies or other significant factors which prevent other firms from entering these local or regional markets or from consolidating together into larger companies more comparable in size to our company. Competition also places downward pressure on our contract prices and profit margins. Competition in all of our markets has intensified in the last few years and such heightened competition may continue for the foreseeable future. If we are unable to meet these competitive challenges, we could lose market share to our competitors and experience an overall reduction in our profit. Additional competition could reduce our profit.

If we cannot obtain third-party subcontractors, or if their performance is unsatisfactory, our profit could be reduced.

We rely on third-party subcontractors to provide services on some of our projects. To the extent that we cannot engage subcontractors as planned, our ability to complete a project in a timely fashion or at a profit may be impaired. If the amount we are required to pay for subcontracted services exceeds the amount we have estimated in bidding for fixed-price work, we could experience reduced profits or losses in the performance of these contracts. In addition, if a subcontractor is unable to deliver its services according to the negotiated terms for any reason, including the deterioration of its financial condition, we may be required to purchase the services from another source at a higher price, which could reduce the profit to be realized or result in a loss on a project for which the services were needed. Also, if our subcontractors perform unsatisfactory work, we may become subject to increased warranty costs or product liability or other claims against us.

We may pay our suppliers and subcontractors before receiving payment from our customers for the related services.

We use suppliers to obtain the necessary materials and subcontractors to perform portions of our services and to manage work flow. In some cases, we pay our suppliers and subcontractors before our customers pay us for the related services. We may pay our suppliers and subcontractors for materials purchased and work performed for customers who fail to pay, or delay paying, us for the related work, which could harm our liquidity and results of operations.

We extend trade credit to customers for purchases of our services and in the past we have had and in the future we may have, difficulty collecting receivables from customers that experience financial difficulties.

We grant trade credit, generally without collateral, to our customers, which include mining companies, general contractors, commercial and industrial facility owners, government agencies and industrial companies. Consequently, we are subject to potential credit risk related to changes in business and economic factors in the geographic areas in which our customers are located. If any of our major customers experience financial difficulties, we could experience reduced cash flows and losses in excess of current allowances provided. In addition, material changes in any of our customers' revenues or cash flows could affect our ability to collect amounts due from them.

If we are unable to obtain performance bonds or letters of credit on acceptable terms, our ability to obtain future projects could be negatively impacted.

A portion of our projects require us to procure a bond to secure performance. Our continued ability to obtain surety bonds primarily will depend upon our capitalization, working capital, past performance, management expertise and reputation and certain external factors, including the overall capacity of the surety market. Surety companies consider such factors in relationship to the amount of our backlog and their underwriting standards, which may change from time to time. With a decreasing number of insurance providers in that market, it may be difficult to find sureties who will continue to provide contract-required bonding on acceptable terms and conditions.

We have granted our sureties a security interest in certain assets. The surety companies may in the future request us to provide further collateral or other security. Our ability to satisfy any future requests may require the consent of the lenders under the asset-based credit facility. If the lenders are unwilling to agree to any future requests on terms acceptable to the surety companies, we may be unable to continue to obtain performance bonds on acceptable terms.

On certain projects we may enter into a joint venture agreement with others. Our ability to obtain a bond may also depend on the credit and performance risks of our joint venture partners.

In addition, events that generally affect the insurance and bonding markets may result in bonding becoming more difficult to obtain in the future, being available only at a significantly greater cost or not being available at all. If we are unable to obtain performance bonds on future projects, our results of operations would be materially and adversely affected. The amount of our surety bonds as of January 31, 2018, based on the expected amount of revenues remaining to be recognized on the projects, was $148.3 million; $48.4 million relates to surety bonds on contracts which were assumed by the purchaser of our former Heavy Civil business which we do not expect to be released until the jobs are completed.

We also occasionally utilize a letter of credit instead of a performance bond. Almost all of the letters of credit are issued under the asset-based credit facility. Our ability to continue to obtain new letters of credit under the asset-based credit facility is limited to the lesser of (a) $75.0 million and (b) the amount of Excess Availability (as defined in the asset-based credit facility agreement) under the asset-based credit facility and is subject to limitations on the issuance of letters of credit if the expiry date of the proposed letter of credit extends beyond the five business days prior to the maturity date of the asset-based credit facility. Our inability to obtain bonding or letters of credit on favorable terms and at reasonable prices or at all would increase operating costs and inhibit the ability to execute or pursue new projects, which could have a material adverse effect on our business, financial condition and results of operations.

We may experience cost overruns on our fixed-price contracts, which could reduce our profitability and we may suffer additional losses.

A significant number of our contracts contain fixed prices and generally assign responsibility for cost overruns to us. Under such contracts, prices are established in part on cost and scheduling estimates, which are based on a number of assumptions, many of which are beyond our control. These assumptions include job-site conditions (both surface and sub-surface), future economic conditions, prices and availability of materials, labor and other requirements. Estimates are revised based upon changing conditions and new developments that are continuous and characteristic of the drilling and infrastructure services. In addition, the time required to complete a drilling or infrastructure project may be greater than originally anticipated. We may not be able to obtain compensation for additional work performed or expenses incurred as a result of changes or inaccuracies in these estimates and underlying assumptions.

We have experienced inaccurate estimates, or changes in other circumstances, such as unanticipated technical problems, difficulties obtaining permits or approvals, changes in local laws or labor conditions, ambiguities in specifications, supply shortages, weather delays, unanticipated sub-surface site conditions, accidents, equipment failures, inefficiencies, cost of raw materials, or our suppliers' or subcontractors' inability to perform, which could result in substantial losses. As a result, cost and gross margin may vary from those originally estimated making the project less profitable than originally estimated, or possibly not profitable at all and, depending upon the size of the project, variations from estimated contract performance could significantly affect our operating results.

Our use of the percentage of completion method of accounting involves significant estimates and management judgment, changes of which could result in volatility in our results of operations.

Our Inliner segment primarily uses the percentage of completion method for its contracts, while our Water Resources segment uses the percentage of completion method for its larger, more complex contracts. Under the percentage of completion method, revenue is recognized based upon the ratio of actual costs incurred to total estimated costs at completion. Contract price and cost estimates are reviewed periodically as work progresses and adjustments proportionate to the percentage of completion are reflected in contract revenue, costs and profits in the reporting period when such estimates are revised. Total estimates may be affected by:

- changes in expected costs of materials, labor, productivity or scheduling;
- changes in external factors outside of our control, such as weather, sub-surface site conditions or customer requirements; and
- change orders, which are a normal and recurring part of our business and can increase or decrease the scope of work and therefore the revenue and the cost of a job.

The above items can change the estimates on a contract, including those arising from contract penalty provisions and final contract settlements and can result in revisions to costs and income. Revisions in estimates are recognized in the period in which they are determined. This could result in the reduction or reversal of previously recorded revenues and profits. Change orders often change the scope and cost of a contract. Change orders can also have the short-term effect of reducing the percentage of completion on a contract and the revenues and profits that otherwise would be recognized. We also factor in all other information that we possess with respect to the change order to determine whether the change order should be recognized at all and, if recognition is appropriate, what dollar amount of the change order should be recognized. Due to factors that we may not anticipate at the time of recognition, however, revenues ultimately received on these change orders could be less than revenues that we recognized in a prior reporting period or periods, which could require us in subsequent reporting periods to reduce revenues and profit previously recognized.

Our contracts may require us to perform extra, or change order work, which can result in disputes or claims and adversely affect our working capital, profits and cash flows.

Our contracts generally require us to perform extra, or change order, work as directed by the customer even if the customer has not agreed in advance on the scope or price of the work to be performed. This process may result in disputes or claims over whether the work performed is beyond the scope of work directed by the customer and/or exceeds the price the customer is willing to pay for the work performed. To the extent we do not recover our costs for this work or there are delays in the recovery of these costs, our cash flows and working capital could be adversely impacted.

We may not fully realize the revenue value reported in our backlog due to cancellations or reductions in scope.

As of January 31, 2018, our backlog of uncompleted drilling and infrastructure services was approximately $178.6 million. The revenue projected in our backlog may not be realized or, if realized, may not result in profits. Projects reflected in our contract backlog may be affected by project cancellations, scope adjustments, time extensions or other changes. Such changes may adversely affect the revenue and profit we ultimately realize on these projects.

Our actual results could differ if the estimates and assumptions that we use to prepare our financial statements are inaccurate.

To prepare financial statements in conformity with GAAP, we are required to make estimates and assumptions, as of the date of the financial statements, which affect the reported values of assets, liabilities, revenue, expenses and disclosures of contingent assets and liabilities. Areas in which we must make significant estimates include:

- contract costs and profit and application of percentage of completion accounting and revenue recognition of contract claims;
- provisions for income taxes and related valuation allowances;
- recoverability of other tangible and intangible assets and their related estimated lives; and
- assumptions for litigation, claims and other reserves.

If these estimates or assumptions are inaccurate, our actual results could differ materially from currently recorded amounts.

If we do not attract and retain qualified managers and executives, our business could be materially and adversely affected.

We are very dependent on the skills and motivation of our employees, managers and executives to define and implement our corporate strategies and operational plans. We maintain and rely on a small executive team to manage our business. We may not be successful in retaining or attracting qualified replacements should any personnel leave. The loss of members of our executive team and inability to retain and attract suitable replacements could materially and adversely affect our business.

Because we are a multinational company conducting a complex business in several markets in North America and South America, we are subject to legal and operational risks related to staffing and management, as well as a broad array of local legal and regulatory requirements.

Operating outside of the U.S. creates difficulties associated with staffing and managing our international operations, as well as complying with local legal and regulatory requirements. The laws and regulations in the markets in which we operate are subject to rapid change. Although we have local staff in countries in which we deem it appropriate, we cannot ensure that we will be operating in full compliance with all applicable laws or regulations to which we may be subject, including customs and clearing, tax, immigration, employment, worker health and safety and environmental. We also cannot ensure that these laws will not be modified in ways that may adversely affect our business.

A portion of our earnings is generated from our foreign operations and those of our affiliates. Political and economic risks in those countries could reduce or eliminate the earnings and cash flow due to dividends we derive from those operations.

Our earnings are significantly impacted by the results of our operations in foreign countries. Our foreign operations are subject to certain risks beyond our control, including the following:

- political, social and economic instability;
- war and civil disturbances;
- bribery and corruption;
- the taking of property through nationalization or expropriation without fair compensation;
- changes in government laws, regulations and policies;
- tariffs, taxes and other trade barriers;
- barriers to timely movement or transfer of equipment between countries; and
- exchange controls and limitations on remittance of dividends or other payments to us by our foreign subsidiaries and affiliates.

In particular, changes in laws or regulations or in the interpretation of existing laws or regulations, whether caused by a change in government or otherwise, could materially adversely affect our business, growth, financial condition or results of operations. For example, while there are currently no limitations on the repatriation of profits from the countries in which we have subsidiaries, several countries do impose withholding taxes on dividends or fund transfers. Foreign funds transfer restrictions, taxes or limitations may be imposed or increased in the future with regard to repatriation of earnings and investments from countries in which we operate. If foreign funds transfer restrictions, taxes or limitations are imposed, our ability to receive dividends or other payments from affected subsidiaries could be reduced, resulting in an adverse material effect.

In addition, corporate, contract, property, insolvency, competition, securities and other laws and regulations in Mexico and South America have been and continue to be, substantially revised. Therefore, the interpretation and procedural safeguards of the new legal and regulatory systems are in the process of being developed and defined and existing laws and regulations may be applied inconsistently. Also, in some circumstances, it may not be possible to obtain the legal remedies provided for under these laws and regulations in a reasonably timely manner, if at all.

We perform work at mining operations in countries which have experienced political and economic instability in the past, or may experience similar instability in the future. The mining industry is subject to regulation by the countries in which we have operations relating to matters such as environmental protection, controls and restrictions on production and, potentially, nationalization, expropriation or cancellation of contract rights, as well as restrictions on conducting business in such countries. In addition, in our foreign operations we face operating difficulties, including political instability, workforce instability, harsh environmental conditions and remote locations. We do not maintain political risk insurance. Adverse events beyond our control in the areas of our foreign operations could reduce the earnings derived from our foreign operations to the extent that contractual provisions and bilateral agreements between countries may not be sufficient to guard our interests.

Our operations in foreign countries expose us to devaluations and fluctuations in currency exchange rates.

We operate a portion of our business in countries outside the U.S. The majority of our costs in those locations are transacted in local currencies. Although we generally contract with our customers in U.S. dollars, some of our contracts are in other currencies. We do not currently engage in foreign currency hedging transactions. As exchange rates among the U.S. dollar and other currencies fluctuate, the translation effect of these fluctuations may have a material adverse effect on our results of operations or financial condition as reported in U.S. dollars. Exchange rate policies have not always allowed for the free conversion of currencies at the market rate. Future fluctuations in the value of the U.S. dollar could have an adverse effect on our results. In addition, some of the countries in which we operate have foreign currency restrictions that may prohibit or limit our ability to convert local currencies into U.S. dollars and/or transfer U.S. dollars from such countries to the U.S., which restrictions could affect our liquidity or our ability to use such funds in other countries.

We conduct business in international markets with complex and evolving tax rules, including value-added tax rules, which subject us to international tax compliance risks.

While we obtain advice from legal and tax advisors as necessary to help assure compliance with tax and regulatory matters, most tax jurisdictions that we operate in have complex and subjective rules regarding the valuation of intercompany services, cross-border payments between affiliated companies and the related effects on income tax, value-added tax (“VAT”), transfer tax and share registration tax. Our foreign subsidiaries frequently undergo VAT reviews and from time to time undergo comprehensive tax reviews and may be required to make additional tax payments should the review result in different interpretations, allocations or valuations of our products or services. Certain countries may, from time to time, make changes to their existing tax structure which might affect our operations. These countries may, with little or no notice, implement additional taxes in the form of severance taxes, windfall profits taxes, production taxes and tariffs, which could negatively impact our results in our segments that perform services in those countries. We earn a portion of our operating income from outside of the U.S. and any repatriation of funds currently held in foreign jurisdictions may result in additional tax expense.

Uncertainties in the interpretation and application of the Tax Cuts and Jobs Act of 2017 could materially affect our tax disclosures and our effective tax rate in the future when we return to profitability.

The Tax Cuts and Jobs Act of 2017 ("The Act") was enacted on December 22, 2017, and it significantly affected U.S. tax law by, among other things, changing how the U.S. imposes income tax on multinational corporations. The Act contains several key tax provisions that affect us, including a one-time mandatory transition tax on accumulated foreign earnings and a reduction of the corporate income tax rate to 21% effective January 1, 2018, among others.

We are required to recognize the effect of the tax law changes in the period of enactment, including determining the transition tax, re-measuring our U.S. deferred tax assets and liabilities and reassessing the net realizability of our deferred tax assets and liabilities. Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act (“SAB 118”) allows us to record provisional amounts during a measurement period not to extend beyond one year of the enactment date. We have recorded provisional estimates in our financial statements with respect to certain income tax effects of The Act for which the accounting is incomplete, but a reasonable estimate was able to be determined. We will continue to perform additional analysis on the application of The Act, taking into account any additional regulatory guidance that is issued by the applicable taxing authorities, which may result in adjustments to our previously reported provisional estimates. In accordance with the SEC's guidance, we will recognize any adjustments to our previously reported provisional estimates in the relevant future periods, which could materially affect our tax obligations and our effective tax rate. See Note 10 to the Consolidated Financial Statements.

In addition, The Act requires complex computations not previously provided in U.S. tax law, and the application of accounting guidance for such items is currently uncertain in some respects. Further, compliance with The Act and the accounting for such provisions require accumulation of information not previously required or regularly produced. The U.S. Department of Treasury has broad authority to issue regulations and interpretative guidance that may significantly impact how the law is applied and thus impact our results of operations in the period issued.

Professional liability, product liability, warranty and other claims against us could reduce our revenue.

Any accidents, design defect or system failures in excess of insurance limits at locations that we engineer or construct or where our products are installed or where we perform services could result in significant professional liability, product liability, warranty and other claims against us. Further, the drilling and infrastructure services projects we perform expose us to additional risks, including cost overruns, equipment failures, personal injuries, property damage, shortages of materials and labor, work stoppages, labor disputes, weather problems and unforeseen engineering, architectural, environmental and geological problems. In addition, once our drilling and infrastructure services are complete, we may face claims with respect to the work performed. If we incur these claims, we could incur substantial losses of revenue or additional costs. See Note 15, "Contingencies" to our Consolidated Financial Statements for a further discussion.

Our business is subject to numerous operating hazards, logistical limitations and force majeure events that could significantly reduce our liquidity, suspend our operations and reduce our revenue and future business.

Our drilling and infrastructure services activities involve operating hazards that can result in personal injury or loss of life, damage or destruction of property and equipment, damage to the surrounding areas, release of hazardous substances or wastes and other harm to the environment. To the extent that the insurance protection we maintain is insufficient or ineffective against claims resulting from the operating hazards to which our business is subject, our liquidity could be significantly reduced.

In addition, our operations are subject to delays in obtaining equipment and supplies and the availability of transportation for the purpose of mobilizing rigs and other equipment, particularly where rigs or mines are located in remote areas with limited infrastructure support. Our business operations are also subject to force majeure events such as adverse weather conditions, natural disasters and mine accidents or closings. If our drill site or infrastructure services operations were interrupted or suspended as a result of any such events, we could incur substantial losses of revenue and future business.

Our failure to comply with the regulations of the U.S. Occupational Safety and Health Administration, the U.S. Mine Safety and Health Administration, the U.S. Department of Transportation and other state and local agencies that oversee transportation and safety compliance could reduce our revenue, profitability and liquidity.

OSHA, MSHA and other comparable state and foreign laws establish certain employer responsibilities, including maintenance of a workplace free of recognized hazards likely to cause death or serious injury, compliance with standards promulgated by the applicable regulatory authorities and various recordkeeping, disclosure and procedural requirements. Various standards, including standards for notices of hazards and safety in excavation and demolition work may apply to our operations. We have incurred and will continue to incur, capital and operating expenditures and other costs in the ordinary course of business in complying with OSHA, MSHA and other state, local and foreign laws and regulations and could incur penalties and fines in the future, including in extreme cases, criminal sanctions.

While we have invested, and will continue to invest, substantial resources in worker health and safety programs, the industries in which we operate involve a high degree of operational risk and there can be no assurance that we will avoid significant liability exposure. Although we have taken what are believed to be appropriate precautions, we have suffered employee injuries and fatalities in the past and may suffer additional injuries or fatalities in the future. Serious accidents of this nature may subject us to substantial penalties, civil litigation or criminal prosecution. Personal injury claims for damages, including for bodily injury or loss of life, could result in substantial costs and liabilities, which could materially and adversely affect our financial condition, results of operations or cash flows. In addition, if our safety record were to substantially deteriorate, or if we suffered substantial penalties or criminal prosecution for violation of health and safety regulations, customers could cancel existing contracts and not award future business to us, which could materially adversely affect our liquidity, cash flows and results of operations.

We have, from time to time, received notice from the DOT that our motor carrier operations may be monitored and that the failure to improve our safety performance could result in suspension or revocation of vehicle registration privileges. If we were not able to successfully resolve these issues, our ability to service our customers could be damaged, which could lead to a material adverse effect on our results of operations, cash flows and liquidity.

The cost of complying with complex governmental regulations applicable to our business, sanctions resulting from non-compliance or reduced demand resulting from increased regulations could increase our operating costs and reduce our profit.

Our drilling and infrastructure services are subject to various licensing, permitting, approval and reporting requirements imposed by federal, state, local and foreign laws. Our operations are subject to inspection and regulation by various governmental agencies, including the DOT, OSHA and MSHA of the Department of Labor in the U.S., as well as their counterparts in foreign countries. A major risk inherent in drilling and infrastructure services is the need to obtain permits from local authorities. Delays in obtaining permits, the failure to obtain a permit for a project or a permit with unreasonable conditions or costs could limit our ability to effectively provide our services.

In addition, these regulations also affect our mining customers and may influence their determination to conduct mineral exploration and development. Future changes in these laws and regulations, domestically or in foreign countries, could cause our customers to incur additional expenses or result in significant restrictions to their operations and possible expansion plans, which could reduce our profit.

Our water treatment business is impacted by legislation and municipal requirements that set forth discharge parameters, constrain water source availability and set quality and treatment standards. The success of our groundwater treatment services depends on our ability to comply with the stringent standards set forth by the regulations governing the industry and our ability to provide adequate design and infrastructure services solutions cost-effectively.

In most states, one of our employees is required to be a licensed contractor in order for us to bid for, or perform, certain types of infrastructure services related projects. From time to time, we are temporarily unable to bid for, or perform work with respect to, those types of infrastructure services projects in a particular state, because our licensed employee resigns, is terminated, or dies. Depending upon the length of time to qualify another employee as a licensed contractor in the state and the number and size of the affected projects in that state, the loss of the services of an employee that is a licensed contractor could have a material adverse effect on our results of operations.

The SEC rules require disclosure of the use of tin, tantalum, tungsten and gold, known as conflict minerals, in products manufactured by public companies. The SEC rules require that public companies conduct due diligence to determine whether such minerals originated from the Democratic Republic of Congo (DRC) or an adjoining country. We have incurred additional costs associated with complying with these disclosure requirements, including costs to determine the origin of conflict minerals used in our products. In addition, the implementation of these rules could adversely affect the sourcing, supply and pricing of materials used in our products. Also, we may face reputational challenges if the due diligence procedures we implement do not enable us to verify the origins for all conflict minerals. We may also encounter challenges to satisfy customers that may require all of the components of products purchased to be certified as DRC conflict-free because our supply chain is complex. If we are not able to meet customer requirements, customers may choose to disqualify us as a supplier.

Our activities are subject to environmental regulation that could increase our operating costs or suspend our ability to operate our business.

We are required to comply with foreign, federal, state and local laws and regulations regarding health and safety and the protection of the environment, including those governing the generation, storage, use, handling, transportation, discharge, disposal and clean-up of hazardous substances in the ordinary course of our operations. We are also required to obtain and comply with various permits under current environmental laws and regulations and new laws and regulations, or changed interpretations of existing requirements, which may require us to obtain and comply with additional permits and/or subject us to enforcement or penalty proceedings. We may be unable to obtain or comply with, and could be subject to revocation of, permits necessary to conduct our business. The costs of complying with environmental laws, regulations and permits may be substantial and any failure to comply could result in fines, penalties or other sanctions.

Our operations are sometimes conducted in or near ecologically sensitive areas, such as wetlands, which are subject to special protective measures and which may expose us to additional operating costs and liabilities related to restricted operations, for unpermitted or accidental discharges of oil, natural gas, drilling fluids, contaminated water or other substances or for noncompliance with other aspects of applicable laws and regulations. Our operations are subject to various environmental laws and regulations, including those dealing with the handling and disposal of waste products, PCBs, fuel storage and air quality. Certain of our current and historical operations have used hazardous materials and, to the extent that such materials are not properly stored, contained, recycled or disposed of, they could become hazardous waste.

Many of our operations involve the production or disposal of significant quantities of water. We may be subject to regulation that restricts our ability to discharge water in the course of these operations. The costs to dispose of this water may increase if any of the following occur:

- we cannot obtain future permits from applicable regulatory agencies;
- water of lesser quality or requiring additional treatment is produced; or
- new laws and regulations require water to be disposed in a different manner.

The cost to dispose of, or treat that water or otherwise comply with these regulations concerning water disposal may reduce our profitability.

Various foreign, federal, state and local environmental laws and regulations may impose liability on us with respect to conditions at our current or former facilities, sites at which we conduct or have conducted operations or activities or any third-party waste disposal site to which we send hazardous wastes. We may be subject to claims under various environmental laws and regulations, federal and state statutes and/or common law doctrines for toxic torts and other damages, as well as for natural resource damages and the investigation and clean-up of soil, surface water, groundwater and other media under laws such as CERCLA. Such claims may arise, for example, out of current or former conditions at project sites, current or former properties owned or leased by us and contaminated sites that have always been owned or operated by third parties. Liability may be imposed without regard to fault and may be strict, joint and several, such that we may be held responsible for more than our share of any contamination or other damages, or even for the entire share, and may be unable to obtain reimbursement from the parties causing the contamination. The costs of investigation or remediation at these sites may be substantial. Environmental laws are complex, change frequently and have tended to become more stringent over time. Compliance with, and liability under, current and future environmental laws, as well as more vigorous enforcement policies or discovery of previously unknown conditions requiring remediation, could increase our operating costs and reduce our revenue. See Part I, Item 1—Business—Regulation in this Form 10-K for additional information.

If our health insurance, liability insurance or workers' compensation insurance is insufficient to cover losses resulting from claims or hazards, if we are unable to cover our deductible obligations or if we are unable to obtain insurance at reasonable rates, our operating costs could increase and our profit could decline.

Although we maintain insurance protection that we consider economically prudent for major losses, we have high deductible amounts for each claim under our health insurance, workers' compensation insurance and liability insurance. Our current individual claim deductible amount is $200,000 for health insurance, and on a per occurrence basis it is $750,000 for auto liability insurance and $500,000 for workers' compensation insurance. Our general liability insurance is subject to a per claim self-insured retention of $750,000. We cannot assure that we will have adequate funds to cover our deductible obligations or that our insurance will be sufficient or effective under all circumstances or against all claims or hazards to which we may be subject or that we will be able to continue to obtain such insurance protection. In addition, we may not be able to maintain insurance of the types or at levels we deem necessary or adequate or at rates we consider reasonable. A claim or damage resulting from a hazard for which we are not fully insured could increase our operating costs and reduce our profit.

The cost of defending litigation or successful claims against us could reduce our profit or significantly limit our liquidity and impair our operations.

We have been and from time to time may be named as a defendant in legal actions claiming damages in connection with drilling or other infrastructure services projects and other matters. These are typically actions that arise in the normal course of business, including employment-related claims and contractual disputes or claims for personal injury or property damage that occur in connection with drilling or infrastructure site services. To the extent that the cost of defending litigation or successful claims against us is not covered by insurance, our profit could decline, our liquidity could be significantly reduced and our operations could be impaired.

Geoconstruction, one of our discontinued segments, was a subcontractor on the foundation for the Salesforce Tower office building in San Francisco, California in 2013 and 2014. Certain anomalies were discovered in March 2014 in the foundation's structural concrete, which were remediated by the general contractor during 2015. We have participated in discussions with the project owner and the general contractor regarding potential causes of the anomalies. We have assigned our claims under the project's builder's risk insurance policy to the general contractor. During the fiscal year ended January 31, 2016, the owner and the general contractor submitted a claim to the project's builder's risk insurers to cover the cost of remedial work and related damages. The claim was denied by the builder's risk insurers and the owner and the general contractor subsequently filed a legal proceeding against the insurers seeking coverage under the builder's risk insurance policy. Although we are not a party to this legal proceeding, management believes, based on court filings in the legal proceeding, that the owner and the general contractor are asserting a claim for damages against the project's builder's risk insurers of approximately $100 million. Accordingly, no provision has been made in these Consolidated Financial Statements. See Note 15 to our Consolidated Financial Statements for a further discussion of this contingency.

Our ability to use U.S. federal net operating loss carryforwards, foreign tax credit carryforwards, capital loss carryforwards and net unrealized built-in losses could be severely limited in the event of certain share transfers of our common stock.

We currently have a significant U.S. deferred tax asset, before considering valuation allowances, which results from federal net operating loss carryforwards, foreign tax credit carryforwards, capital loss carryforwards and net unrealized built-in losses. While we have recorded a full valuation allowance against the net deferred tax asset, the carryforwards and the future use of these attributes could provide significant future tax savings to us if we are able to use such losses and credits. However, our ability to use these tax benefits may be restricted due to a future ownership change within the meaning of Section 382 of the Internal Revenue Code. An ownership change could occur that would severely limit our ability to use the tax benefits associated with the net operating loss carryforwards, foreign tax credit carryforwards, capital loss carryforwards and net unrealized built-in losses, which may result in a significantly higher tax cost compared to the situation where these tax benefits are preserved.

If we are unable to protect our intellectual property adequately, the value of our patents and trademarks and our ability to operate our business could be harmed.

We rely on a combination of patents, trademarks, trade secrets and similar intellectual property rights to protect the proprietary technology and other intellectual property that are instrumental to our operations. We may not be able to protect our intellectual property adequately and our use of this intellectual property could result in liability for patent or trademark infringement or unfair competition. Further, through acquisitions of third parties, we may acquire intellectual property that is subject to the same risks as the intellectual property we currently own.

We may be required to institute litigation to enforce our patents, trademarks or other intellectual property rights, or to protect our trade secrets from time to time. Such litigation could result in substantial costs and diversion of resources and could reduce our profit or disrupt our business, regardless of whether we are able to successfully enforce our rights.

We may be exposed to liabilities under the Foreign Corrupt Practices Act and any determination that Layne or any of its subsidiaries has violated the Foreign Corrupt Practices Act could have a material adverse effect on our business.

We operate in some countries known to experience corruption. We are committed to doing business in accordance with applicable anti-corruption laws and our code of business conduct and ethics. We are subject, however, to the risk that we, our affiliated entities or their respective officers, directors, employees and agents may take action determined to be in violation of such anti-corruption laws, including the FCPA.

The FCPA and related statutes and regulations provide for potential fines, civil and criminal penalties and equitable remedies, including disgorgement of profits or monetary benefits from such payments, related interest and injunctive relief. These fines and penalties can be significant.

Further, detecting, investigating and resolving these types of matters is expensive and could consume significant time and attention of our senior management. We could also face fines, sanctions and other penalties from authorities in the relevant foreign jurisdictions, including prohibition of our participating in or curtailment of business operations in those jurisdictions and the seizure of rigs or other assets. Our customers in those jurisdictions could seek to impose penalties or take other actions adverse to our interest. We could also face other third-party claims by our directors, officers, employees, affiliates, advisors, attorneys, agents, stockholders, debt holders or other interest holders or constituents. In addition, disclosure of the subject matter of the investigation could adversely affect our reputation and our ability to obtain new business or retain existing business from our current clients and potential clients, to attract and retain employees and to access the capital markets. Future violations of the FCPA may also give rise to an event of default under the agreements governing our debt instruments if such violation were to have a material adverse effect on our business, assets, property, financial condition or prospects or if the amount of any settlement resulted in our failing to satisfy any financial covenants.

Future climate change could adversely affect us.

The prospective impact of potential climate change on our operations and those of our customers remains uncertain. Some scientists have hypothesized that the impacts of climate change could include changes in rainfall patterns, water shortages, snowpack levels, changing sea levels, changing storm patterns and intensities and changing temperature levels and that these changes could be severe. These impacts could vary by geographic location. At the present time, we cannot predict the prospective impact of potential climate change on our results of operations, liquidity or capital resources, or whether any such effects could be material to us.

Deliberate, malicious acts, including terrorism and sabotage, could damage our facilities, disrupt our operations or injure employees, contractors, customers or the public and result in liability to us.

Intentional acts of destruction could hinder our sales or production and disrupt our supply chain. Our facilities could be damaged or destroyed, reducing our operational production capacity and requiring us to repair or replace our facilities at substantial cost. Employees, contractors and the public could suffer substantial physical injury for which we could be liable. Governmental authorities may impose security or other requirements that could make our operations more difficult or costly. The consequences of any such actions could adversely affect our operating results and financial condition.

We are dependent on our information systems.

Information technology systems are an integral part of the efficient functioning of our business as well as the security of our information. Problems with the implementation of new or upgraded systems as our business grows or with maintenance or discontinuance of existing systems could disrupt or reduce the efficiency of our operations.

Security breaches and other disruptions could compromise our information and expose us to liability, which would cause our business and reputation to suffer.

In the ordinary course of our business, we collect and store sensitive data, including intellectual property, our proprietary business information and that of our customers and suppliers and personally identifiable information of our employees, in our facilities and on our networks. The secure processing, maintenance and transmission of this information is critical to our operations. Despite our security measures, our information technology and infrastructure may be vulnerable to attacks by hackers or breached due to employee error, malfeasance or other disruptions. Any such breach could compromise our networks and the information stored there could be accessed, publicly disclosed, lost or stolen. Any such access, disclosure or other loss of information could result in legal claims or proceedings, disrupt our operations, damage our reputation and cause a loss of confidence, which could adversely affect our business.

Claims for indemnification related to the sale of business units and assets may be substantial and have a negative impact on our financial condition.

From time to time, we dispose of business units or assets, including the recent dispositions of our Heavy Civil and Geoconstruction businesses. As part of a sale, we have agreed and may in the future agree to indemnify the purchaser for certain pre-closing liabilities associated with the business unit or assets that are sold and for any breach of the representations and warranties contained in the asset purchase agreement for the transaction. There can be no guarantee that material claims will not arise during the relevant indemnification periods and that we will not have to provide the requisite indemnification. In addition, legal challenges to any potential claim for indemnification could result in increased legal expenses. Also, as is typical in divestiture transactions, some third parties have been, and in the future may be, unwilling to release us from guarantees, performance bonds or other credit support provided prior to the sale of the business unit or assets. As a result, after a divestiture, we may remain secondarily liable for some of the obligations guaranteed, bonded or supported to the extent that the buyer of the business unit or assets fails to perform these obligations.

Risks Related To Our Indebtedness

Our substantial indebtedness could adversely affect our financial health and prevent us from fulfilling our obligations.

We have a significant amount of indebtedness. As of January 31, 2018, we had total indebtedness of approximately $166.0 million. Our substantial indebtedness could have important consequences. For example, it could:

- make it more difficult for us to satisfy our obligations;
- increase our vulnerability to general adverse economic and industry conditions;
- require us to dedicate a substantial portion of our cash flow from operations to payments on our indebtedness, which reduces the availability of our cash flow to fund working capital, capital expenditures, development efforts and other general corporate purposes;
- place us at a competitive disadvantage compared to our competitors that have less debt; and
- limit our ability to borrow additional funds if needed.

In addition, the agreements governing our indebtedness and any future indebtedness we incur may contain restrictive covenants that will limit our ability to engage in activities that may be in our long-term best interests. Our failure to comply with those covenants could result in an event of default that, if not cured or waived, could result in the acceleration of all of our debt. Our growth plans and our ability to make payments of principal or interest on, or to refinance our indebtedness will depend on our future operational performance and our ability to enter into additional debt or equity financings. If we are unable to generate sufficient cash flows in the future to service our debt, we may be required to refinance all or a portion of our existing debt, to sell assets or to obtain additional financing, which we may be unable to do on favorable terms, if at all.

Servicing our debt requires a significant amount of cash and we may not have sufficient cash flow from our business to service our substantial debt.

Our ability to make scheduled payments of the principal of, to pay interest on, or to refinance our indebtedness depends on our future performance which is subject to economic, financial, competitive and other factors beyond our control. Our business may not generate cash flow from operations in the future sufficient to service our debt because of factors beyond our control. If we are unable to generate such cash flow, we may be required to adopt one or more alternatives such as selling assets, restructuring debt or obtaining additional equity capital on terms that may be onerous or highly dilutive. Our ability to refinance our indebtedness will depend on the capital markets and our financial conditions at such time. We may not be able to engage in any of these activities or engage in these activities on desirable terms which could result in a default on our debt obligations.

We may not have sufficient borrowing capacity under our asset-based credit facility to meet our liquidity requirements and a reduction in our borrowing base could result in a portion of our borrowings becoming immediately due.

We may need to borrow on our asset-based credit facility in the future for our liquidity needs. If we are unable to borrow under our asset-based credit facility or otherwise obtain capital as needed to operate our business, our financial performance and position could materially suffer.

Our ability to borrow under our asset-based credit facility depends on, among other things, the amount of the borrowing base as defined in the asset-based credit facility and our available capacity under the asset-based credit facility. Continued operating losses or negative cash flows from our operations may cause Layne to borrow under our asset-based credit facility and reduce the available capacity under the asset-based credit facility. Our borrowing base is primarily comprised of a percentage of the net orderly liquidation value of eligible equipment and the value of certain customer and contract receivables. Our borrowing base is reduced by any reserves that the co-collateral agents under our asset-based credit facility determine to be necessary in good faith and their reasonable business judgment. As of January 31, 2018, total availability under the asset-based credit facility was $100.0 million, with $24.6 million of letters of credit and no borrowings outstanding, resulting in Excess Availability of $75.4 million. The amount of our borrowing base could be materially and adversely affected by decreases in the value of our eligible equipment and/or receivables, a portion of our equipment and/or receivables being deemed ineligible under the terms of our asset-based credit facility or the co-collateral agents imposing additional reserve requirements.

In addition, if our borrowing base is reduced below the amount of letters of credit and borrowings outstanding under our asset-based credit facility, then the excess indebtedness would, absent a waiver or amendment, become immediately due and payable and any outstanding letters of credit could require replacement or cash collateralization. We may not have the resources to make any required repayment or cash collateralization and such repayment obligation or cash collateralization could have a material adverse impact on our liquidity and financial condition.

We may not have sufficient capital resources to repay all of our indebtedness as it matures.

Our debt facilities currently consist of:

- $69.5 million of 4.25% Convertible Notes that are due on November 15, 2018,
- a $100 million senior secured asset-based credit facility that is due on April 14, 2019 (of which $24.6 million of letters of credits have been issued under the facility) and
- $99.9 million of 8.0% Convertible Notes that are due on May 1, 2019.

However, if the 4.25% Convertible Notes have not been redeemed, repurchased, otherwise retired, discharged in accordance with their terms or converted into our common stock, or effectively discharged, in each case on or prior to August 15, 2018 or the scheduled maturity date of the 4.25% Convertible Notes has not been extended to a date that is after October 15, 2019, then the 8.0% Convertible Notes will mature on August 15, 2018.

In addition, the maturity date of the asset-based credit facility will be (a) July 16, 2018 if we have not delivered to the administrative agent for the asset-based credit facility evidence by July 15, 2018 that the 4.25% Convertible Notes have been effectively discharged with the proceeds from the issuance of the 11.0% Unsecured Notes or (b) May 15, 2018 if (i) the issuance of the 11.0% Unsecured Notes is cancelled for any reason or (ii) the proceeds of the 11.0% Unsecured Notes are used for a purpose other than to effectively discharge the 4.25% Convertible Notes in full; provided, that if an event described in clause (i) or (ii) above occurs after May 15, 2018, then the maturity date of the asset-based credit facility will be the date the event occurred.

On March 19, 2018, we entered into a note purchase agreement with two investment funds advised by Corre Partners Management, LLC to purchase $71.0 million of our 11% Unsecured Notes. Corre Partners Management and its affiliated funds, including the purchasers of the 11.0% Unsecured Notes, own a portion of our 4.25% Convertible Notes and 8.00% Convertible Notes. Prior to August 15, 2018, we may elect to issue the 11.0% Unsecured Notes and use the proceeds from the issuance of the 11.0% Unsecured Notes to effectively discharge the 4.25% Convertible Notes, in which case the maturity date of the 8.0% Convertible Notes would remain May 1, 2019. As a result, if the proceeds of the 11.0% Unsecured Notes were to be used to effectively discharge the 4.25% Convertible Notes prior to July 16, 2018, we would need to refinance (1) the asset-based credit facility on or prior to April 14, 2019, (2) to the extent they are not converted into our common stock, the 8.0% Convertible Notes on May 1, 2019 and (3) the 11.0% Unsecured Notes on or prior to October 16, 2019.

Alternatively, if the market price of our common stock prior to August 15, 2018 is above $11.70 per share, we could elect to take no action with respect to the 4.25% Convertible Notes, in which case the maturity date of the 8.0% Convertible Notes would become August 15, 2018. We believe that under those circumstances most, if not all, of the holders of our 8.0% Convertible Notes would convert their notes into our common stock (and any remaining unconverted amounts could be refinanced with available cash or drawings under our asset-based credit facility) and we could issue the 11.0% Unsecured Notes by October 1, 2018 in order to repay the 4.25% Convertible Notes at maturity. In this case, we would seek to extend or refinance our asset-based credit facility.

We may not have sufficient capital resources to repay all of our indebtedness as it becomes due, which could result in a default under all of our indebtedness.

Our indebtedness agreements contain and the terms of any future indebtedness may contain significant operating and financial restrictions. These restrictions may limit our and certain of our subsidiaries' operating flexibility and, in turn, hinder our ability to make payments on our obligations, impair our ability to make capital expenditures and/or increase the cost of obtaining additional financing.

Our asset-based credit facility includes customary conditions to funding, representations and warranties, covenants and events of default. The terms of the indebtedness could have important consequences to shareholders, including the following:

- the ability to obtain necessary financing in the future for working capital, acquisitions, capital expenditures, debt service requirements or other purposes may be limited or financing may be unavailable;
- a portion of cash flow must be dedicated to the payment of interest on the indebtedness and other obligations and will not be available for use in our business;
- the asset-based credit facility contains various operating and financial restrictions which could limit our ability to incur additional indebtedness and liens, fund our foreign operations, make investments and acquisitions, transfer or sell assets, transact with affiliates and require us to cash collateralize some or all of the outstanding letters of credit;
- an event of default under the asset-based credit facility, including a subjective event of default if we have experienced a material adverse change, could result in an acceleration of the obligations under the asset-based credit facility, in the foreclosure on assets subject to liens in favor of the asset-based credit facility lenders and the inability to borrow additional amounts under the asset-based credit facility; and
- acceleration of the indebtedness or payment default under the asset-based credit facility would also be an event of default under the indenture governing our convertible notes (and our 11% Unsecured Notes, if issued).

In addition, under our asset-based credit facility, if Excess Availability is less than the greater of $17.5 million or 17.5% of total availability, in each case for more than one business day, then a "Covenant Compliance Period" will exist until we have Excess Availability for a period of 30 consecutive days equal to or greater than the greater of (a) 17.5 % of the total availability and (b) $17.5 million. During each Covenant Compliance Period, we must maintain a minimum fixed charge coverage ratio of not less than 1.0 to 1.0 and a first lien leverage ratio of not greater than 5.0 to 1.0 for the four fiscal quarter period ended immediately prior to commencement of a Covenant Compliance Period and for every four fiscal quarter period ending during a Covenant Compliance Period. During the fiscal years ended January 31, 2018 and 2017, we were not subject to Covenant Compliance Period(s) under our asset-backed credit facility. If we had been in a Covenant Compliance Period during the three year period ended January 31, 2018, we would not have been in compliance with the minimum fixed charge coverage ratio.

Furthermore, during a covenant Compliance Period or if an Event of Default has occurred and is continuing all of our funds received on a daily basis will be applied to reduce amounts owing under the asset-based credit facility. Although we do not anticipate being in a Covenant Compliance Period during the next twelve months, a Covenant Compliance Period could occur if the borrowing base is decreased for any of the reasons discussed above or if we are required to borrow more funds than is currently anticipated at a time when we do not meet the minimum fixed charge coverage ratio and the first lien leverage ratio.

We cannot assure that waivers will be granted or amendments made to any of the agreements governing our indebtedness if for any reason we are unable to comply with the obligations thereunder or that we will be able to refinance our debt on acceptable terms, or at all, should we seek to do so. See Note 8 to the Consolidated Financial Statements for a more detailed description of our indebtedness.

The conversion of our 4.25% Convertible Notes may adversely affect our financial condition.

After May 15, 2018, holders of the 4.25% Convertible Notes will be entitled to convert such notes at any time at their option. If one or more holders elect to convert their 4.25% Convertible Notes, unless we elect to satisfy our conversion obligation by delivering solely shares of our common stock (other than paying solely cash in lieu of any fractional share), including if we have irrevocably elected full physical settlement upon conversion, we would be required to make cash payments to satisfy all or a portion of our conversion obligations based on the applicable conversion rate, which could adversely affect our liquidity.

We may in certain circumstances elect to settle conversions of our 4.25% Convertible Notes in cash and the accounting method for convertible debt securities that may be settled in cash could have a material effect on our reported financial results.

Pursuant to the terms of our 4.25% Convertible Notes, at our election, we will satisfy our conversion obligation by paying or delivering, as the case may be, cash, shares of our common stock or a combination of cash and shares of our common stock. We refer to these settlement methods as cash settlement, physical settlement and combination settlement, respectively. In May 2008, the Financial Accounting Standards Board, or FASB, issued FASB Staff Position No. APB 14-1, Accounting for Convertible Debt Instruments That May Be Settled in Cash Upon Conversion (Including Partial Cash Settlement), which has subsequently been codified as ASC Topic 470-20, "Debt with Conversion and Other Options". ASC Topic 470-20 requires an entity to separately account for the liability and equity components of convertible debt instruments whose conversion may be settled entirely or partially in cash in a manner that reflects the issuer's economic interest cost for non-convertible debt. During the first quarter of the fiscal year ended January 31, 2015, the liability component of the convertible debt instrument was valued at the fair value of a similar debt instrument that did not have an associated equity component and was reflected as a liability on the balance sheet. The equity component of the convertible debt instrument was included in the additional paid-in capital section of stockholders' equity on the balance sheet and the value of the equity component was treated as original issue discount for purposes of accounting for the debt component. This original issue discount is being amortized to non-cash interest expense over the term of the convertible debt instrument. Accordingly, we record a greater amount of non-cash interest expense in current periods as a result of this amortization. We report lower net income in our financial results because ASC Topic 470-20 requires the interest expense associated with our 4.25% Convertible Notes to include both the current period's amortization of the debt discount and our 4.25% Convertible Notes' coupon interest, which could adversely affect our reported or future financial results, the trading price of our common stock and the trading price of our 4.25% Convertible Notes.

If we elect to settle conversions using physical settlement, then we must include the full number of shares underlying our 4.25% Convertible Notes in the calculation of our diluted earnings per share, regardless of whether the contingent conversion feature of our 4.25% Convertible Notes is triggered. In addition, under certain circumstances, convertible debt instruments whose conversion may be settled entirely or partly in cash (such as our 4.25% Convertible Notes) are currently accounted for using the treasury stock method. Under this method, the shares issuable upon conversion of convertible notes are not included in the calculation of diluted earnings per share unless the conversion value of the convertible notes exceeds their principal amount at the end of the relevant reporting period. If the conversion value exceeds their principal amount, then, for diluted earnings per share purposes, convertible notes are accounted for as if the number of shares of common stock that would be necessary to settle the excess, if we elected to settle the excess in shares, are issued. Accordingly, the treasury stock method could result in more favorable reported diluted earnings per share. If we do not satisfy the criteria required to utilize the treasury stock method, we will be required to determine diluted earnings per share utilizing the "if converted" method, the effect of which is that the shares issuable upon conversion of the notes are included in the calculation of diluted earnings per share assuming the conversion of the notes at the beginning of the reporting period if the impact is dilutive. We cannot be sure that the accounting standards in the future will continue to permit the use of the treasury stock method. Additionally, we cannot be sure that we will satisfy the relevant criteria to utilize the treasury stock method. If we are unable to use the treasury stock method in accounting for the shares, if any, issuable upon conversion of our convertible notes, then our diluted earnings per share could be adversely affected.

Conversion of our 8.0% Convertible Notes could dilute the ownership interests of our shareholders.

Our 8.0% Convertible Notes are convertible, at the option of the holders, into consideration consisting of shares of our common stock (and cash in lieu of fractional shares) until the close of business on the scheduled trading day immediately preceding the maturity date. As of January 31, 2018, the conversion price of the 8.0% Convertible Notes ($11.70 per share) was significantly below the closing price of our common stock on that date ($13.49 per share). To the extent we issue common stock upon conversion of our 8.0% Convertible Notes, that conversion would dilute the ownership interests of our shareholders. If all the 8.0% Convertible Notes were to convert into shares of our common stock, we would issue approximately 8.5 million additional shares representing approximately 30.0% of the outstanding shares of our common stock on that date.

We may not have the ability to raise the funds necessary to repurchase our convertible notes upon a fundamental change, asset sale or casualty or condemnation event, and our debt instruments may prohibit some of these payments.

As discussed in Note 8 to the Consolidated Financial Statements, if a "fundamental change" (as defined in the indentures governing our convertible notes) occurs, holders of our convertible notes may require us to repurchase all or a portion of such notes in cash. Any such cash payment could be significant, and we may not have enough available cash or be able to obtain financing so that we can make payments on our convertible notes when due.

In addition, except in very limited circumstances involving a refinancing of the 8.0% Convertible Notes in a manner permitted by our asset-based credit facility, our asset-based credit facility prohibits us from making or offering to make certain voluntary repurchases of the convertible notes, except that we may repurchase the 8.0% Convertible Notes if certain "payment conditions" are satisfied. This provision may prohibit us from repurchasing the convertible notes at the holders' election following a fundamental change or, with respect to the 8.0% Convertible Notes, certain asset sales and casualty and condemnation events.

If we fail to repurchase our convertible notes when required, we will be in default under the indentures for the convertible notes. In addition, such a failure could also be a default under our asset-based credit facility, which may allow the lenders under that agreement to cause all outstanding amounts under the facility to become immediately due and payable.

Certain provisions in the indentures governing our convertible notes could delay or prevent an otherwise beneficial takeover or takeover attempt of us.

Certain provisions in the indentures governing our convertible notes could make it more difficult or more expensive for a third party to acquire us. For example, if a takeover would constitute a fundamental change (as defined in the indentures governing our convertible notes), holders of our convertible notes will have the right to require us to repurchase their convertible notes in cash. In addition, if a takeover constitutes a make-whole fundamental change, we may be required to increase the conversion rate for holders who convert their convertible notes in connection with such takeover. In either case and in other cases, our obligations under our convertible notes and the indentures could increase the cost of acquiring us or otherwise discourage a third party from acquiring us.

Risks Related To Ownership of Our Common Stock

Provisions in our organizational documents, Delaware law and the indentures governing our convertible notes could prevent or frustrate attempts by stockholders to replace our current management or effect a change of control of Layne.

Our certificate of incorporation, bylaws and the Delaware General Corporation Law contain provisions that could make it more difficult for a third party to acquire us without consent of our board of directors. In addition, under our certificate of incorporation, our board of directors may issue shares of preferred stock and determine the terms of those shares of stock without any further action by our stockholders. Our issuance of preferred stock could make it more difficult for a third party to acquire a majority of our outstanding voting stock and thereby effect a change in the composition of our board of directors. Our certificate of incorporation also provides that our stockholders may not take action by written consent. Our bylaws require advance notice of stockholder proposals and nominations and permit only our board of directors, or authorized committee designated by our board of directors, to call a special stockholder meeting. These provisions may have the effect of preventing or hindering attempts by our stockholders to replace our current management. In addition, Delaware law prohibits us from engaging in a business combination with any holder of 15% or more of our capital stock until the holder has held the stock for three years unless, among other possibilities, our board of directors approves the transaction. Our board may use this provision to prevent changes in our management. Also, under applicable Delaware law, our board of directors may adopt additional anti-takeover measures in the future.

In addition, provisions of Delaware law may also discourage, delay or prevent a third party from acquiring or merging with us or obtaining control of Layne.

If a "fundamental change" (as such terms are defined in the indentures governing our convertible notes) occurs, holders of the convertible notes will have the right, at their option, to require us to repurchase all or a portion of their convertible notes. A "fundamental change" generally occurs when there is a change in control of Layne (acquisition of 50% or more of our voting stock, liquidation or sale of Layne not for stock) or trading of our stock is terminated. In the event of a "make-whole fundamental change" (as is defined in the indentures for the convertible notes), we may also be required to increase the conversion rate applicable to the convertible notes surrendered for conversion in connection with such make-whole fundamental change. A "make-whole fundamental change" is generally a sale of Layne not for stock in another publicly traded company. In addition, the indentures for the convertible notes prohibit us from engaging in certain mergers or acquisitions unless, among other things, the surviving entity assumes our obligations under the convertible notes.

The market price of our common stock could be reduced by future issuances or sales of our common stock.

Sales by us or our shareholders of a substantial number of shares of our common stock in the public market, or the perception that these sales might occur, could cause the market price of our common stock to decline or could impair our ability to raise capital through a future sale of, or pay for acquisitions using, our equity securities.

In addition to outstanding shares eligible for future sale, as of January 31, 2018, 2.0 million shares of our common stock were issuable, subject to vesting requirement, under currently outstanding stock options and restricted stock units granted to officers, directors and employees and an additional 0.7 million shares are available to be granted under our stock option and employee incentive plans.

We are restricted from paying dividends.

We have not paid any cash dividends on our common stock since our initial public offering in 1992 and we do not anticipate paying any cash dividends in the foreseeable future. In addition, our current credit arrangements restrict our ability to pay cash dividends.

Our share price has been volatile and could decline, resulting in a substantial or complete loss of your investment. Because the trading of our common stock is characterized by low trading volume, it could be difficult for you to sell the shares of our common stock that you hold.

The stock markets, including the NASDAQ Global Select Market, on which we list our common stock, have experienced significant price and volume fluctuations. As a result, the market price of our common stock could be similarly volatile and you may experience a decrease in the value of the shares of our common stock that you may hold, including a decrease unrelated to our operating performance or prospects. In addition, the trading of our common stock has historically been characterized by relatively low trading volume and the volatility of our stock price could be exacerbated by such low trading volumes. The market price of our common stock could be subject to significant fluctuations in response to various factors or events, including among other things:

- our operating performance and the performance of other similar companies;
- actual or anticipated differences in our operating results;
- changes in our revenue or earnings estimates or recommendations by securities analysts;
- publication of research reports about us or our industry by securities analysts;
- additions and departures of key personnel;
- strategic decisions by us or our competitors, such as acquisitions, divestments, spin-offs, joint ventures, strategic investments or changes in business strategy;
- the passage of legislation or other regulatory developments that adversely affect us or our industry;
- speculation in the press or investment community;
- actions by institutional stockholders;
- changes in accounting principles;
- terrorist acts; and
- general market conditions, including factors unrelated to our performance.

These factors may lower the trading price of our common stock, regardless of our actual operating performance and could prevent you from selling your common stock at or above the price that you paid for the common stock. In addition, the stock markets, from time to time, experience extreme price and volume fluctuations that may be unrelated or disproportionate to the operating performance of companies. These broad fluctuations may lower the market price of our common stock.

Risks Relating to Pending Merger with Granite Construction (see Item 7, Overview - Subsequent Event)

Information concerning additional risk factors related to the pending merger with Granite Construction Incorporated ("Granite") is available in the preliminary proxy statement/prospectus included in the Registration Statement on Form S-4 that Granite filed with the SEC on March 13, 2018, in connection with the pending stock merger.

Layne's business relationships may be subject to disruption due to uncertainty associated with the merger.

Parties with which Layne does business may experience uncertainty associated with the proposed merger, including with respect to current or future business relationships with Layne or the combined company. Layne's business relationships may be subject to disruption as customers, distributors, suppliers, vendors and others may attempt to negotiate changes in existing business relationships or consider entering into business relationships with parties other than Layne or the combined company. These disruptions could have an adverse effect on the businesses, financial condition, or results of operations of Layne and/or the combined company. The risk, and adverse effect, of such disruptions could be exacerbated by a delay in consummating the merger or termination of the merger agreement.

The merger may be consummated on different terms from those contained in the merger agreement.

Prior to the consummation of the merger, the parties may, by their mutual agreement, amend or alter the terms of the merger agreement, including with respect to, among other things, the consideration to be received by Layne stockholders, or any covenants or agreements with respect to the parties' respective operations during the pendency thereof, provided, however, that after approval by Layne stockholders, no amendment may be made without further stockholder approval which, by law or in accordance with the rules of Nasdaq, requires further approval by such stockholders. Any such amendments or alterations may have negative consequences to Layne stockholders including, among other things, reducing the cash available for Granite's or Layne's operations or to meet respective obligations or restricting or limiting assets or operations of either of Granite or Layne. Under certain circumstances, Layne stockholders may be permitted or required to adopt any such amendments, which could delay consummation of the Merger and subject Layne and Granite to additional expense.

Layne must obtain approval of its stockholders to consummate the Merger, which, if delayed or not obtained, may jeopardize or delay the consummation of the Merger.

The Merger is conditioned on the adoption of the merger agreement by the affirmative vote of the holders of a majority of the issued and outstanding shares of Layne Common Stock entitled to vote thereon. If Layne stockholders do not adopt the merger agreement, then Layne and Granite cannot consummate the Merger.

The merger agreement contains provisions that limit Layne's ability to pursue alternatives to the merger, which could discourage a potential acquirer of Layne from making an alternative transaction proposal or could result in a competing proposal being at a lower price than it might otherwise be and, in certain circumstances, could require Layne to pay Granite a significant termination fee.

The merger agreement contains "no shop" provisions that, subject to limited exceptions, require that Layne may not (a) solicit, initiate, cause or knowingly facilitate or encourage the submission of any inquiries, proposals or offers or any other efforts or attempts that constitute or may reasonably be expected to lead to any acquisition proposal (generally, a proposal to acquire 20% or more of the common stock or assets of Layne), or engage in any discussions or negotiations with respect thereto or otherwise cooperate with or assist or participate in, or knowingly facilitate or encourage, any such inquiries, proposals, discussions or negotiations, or resolve to or publicly propose to take any of the foregoing actions, (b) approve or recommend, or resolve to or publicly propose to approve or recommend, any acquisition proposal or enter into any merger agreement, agreement-in-principle, letter of intent, share purchase agreement, asset purchase agreement, share exchange agreement, option agreement or other similar agreement relating to an acquisition proposal or enter into any letter of intent, agreement or agreement-in-principle requiring Layne to abandon, terminate or fail to consummate the Merger or (c) (1) withdraw, modify or qualify in a manner adverse to Granite the recommendation of the Layne Board or the approval or declaration of advisability by the Layne Board of the merger agreement and the transactions contemplated thereby (including the Merger) or (2) approve or recommend, or resolve to or publicly propose to approve or recommend, any acquisition proposal.

The merger agreement also provides that Layne will be required to pay a termination fee of $16.0 million to Granite upon termination of the merger agreement under certain circumstances. These provisions might discourage a potential competing acquiror that might have an interest in acquiring all or a significant part of Layne from considering or proposing an acquisition even if it were prepared to pay consideration with a higher per share market price than that proposed in the Merger, or might result in a potential competing acquiror proposing to pay a lower per share price to acquire Layne than it might otherwise have proposed to pay.

Item 1B. Unresolved Staff Comments

We have no unresolved comments from the Securities and Exchange Commission staff.

Item 2. Properties

Our primary facilities are summarized in the table below:

Location	Segment	Owned/Leased	Square Footage	Purpose
The Woodlands, Texas	Corporate	Leased(1)	51,152	Corporate headquarters
Redlands, California	Water Resources	Owned	74,645	Field office
Stuttgart, Arkansas	Water Resources	Owned	35,696	Field office
Aurora, Illinois	Water Resources	Owned	24,500	Field office
Chandler, Arizona	Water Resources and Mineral Services	Owned	83,610	Field office
Orleans, Indiana	Inliner	Owned(2)	111,880	Field office
Paoli, Indiana	Inliner	Owned	115,000	Manufacturing facility
Baytown, Texas	Inliner	Owned	50,000	Field office
Sanford, Florida	Inliner	Owned	46,481	Manufacturing facility
Hermosillo, Mexico	Mineral Services	Owned	66,392	Field office

(1) The term of the lease expires in 2025 and has two, five-year extensions. We have subleased approximately 19,000 square feet of our corporate facilities under a sublease agreement that expires in 2025.

(2) We have leased approximately 50% of our Orleans office building to the purchaser of our Heavy Civil business under a lease agreement that expires in 2022.

Item 3. Legal Proceedings

We are, from time to time, a party to legal or regulatory proceedings arising in the ordinary course of our business. The discussion in Note 15 to the Consolidated Financial Statements included elsewhere in this Form 10-K is incorporated herein by reference. Currently, there are no other legal or regulatory proceedings that management believes, either individually or in the aggregate, would have a material adverse effect upon our consolidated financial statements. In accordance with GAAP, we record a liability when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. These liabilities are reviewed at least quarterly and adjusted to reflect the impacts of negotiations, settlements, rulings, advice of legal counsel and other information and events pertaining to a particular case or proceeding.

Item 4. Mine Safety Disclosures

The operations Layne performs on mine sites are subject to regulation by the Federal Mine Safety and Health Administration under the Federal Mine Safety and Health Act of 1977. Information concerning mine safety violations or other regulatory matters required by Section 1503(a) of the Dodd-Frank Act and Item 104 of Regulation S-K is included in Exhibit 95 to this Form 10-K.

PART II

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

Our common stock is traded on the NASDAQ Global Select Market under the symbol LAYN. The following table sets forth the range of high and low sales prices of our stock by quarter for the fiscal years ended January 31, 2018 and 2017, as reported by the NASDAQ Global Select Market.

Fiscal Year 2018	High	Low
First Quarter	$ 10.79	$ 7.53
Second Quarter	10.70	6.98
Third Quarter	13.64	9.52
Fourth Quarter	13.83	10.39

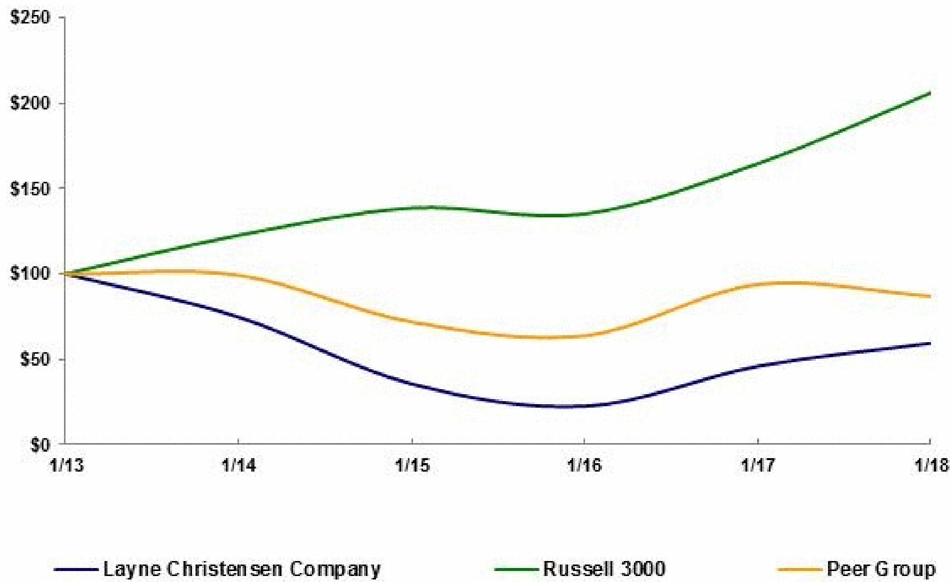
Fiscal Year 2017	High	Low
First Quarter	$ 9.22	$ 4.90
Second Quarter	9.32	6.50
Third Quarter	9.56	7.15
Fourth Quarter	11.42	8.17

At March 26, 2018, there were 162 owners of record of our common stock.

We have not paid any cash dividends on our common stock. Moreover, our Board of Directors does not anticipate paying any cash dividends in the foreseeable future. Future dividend policy will depend on a number of factors including our future earnings, capital requirements, financial condition and prospects and such other factors as the Board of Directors may deem relevant, as well as restrictions under our indebtedness agreements. Our indebtedness agreements currently contain restrictions on our ability to pay cash dividends.

The following graph provides a comparison of our five-year, cumulative total shareholder return from January 31, 2013 through January 31, 2018 to the return of the Russell 3000 and a custom peer group selected by Layne. The peer group includes Aegion Corp, Boart Longyear Ltd, Foraco International Sa, Forage Orbit Garant Inc, Major Drilling Group International Inc, Matrix Service Co, Primoris Services Corp and Tutor Perini Corp. The comparisons shown in the graph are based on historical data. The stock price performance shown in the graph is not necessarily indicative of, nor is it intended to forecast, the potential future performance of Layne's common stock. Information used in the graph was obtained from Russell Investment Group, a source believed to be reliable, but we are not responsible for any errors or omission in such information. Nuverra Environmental Solutions, Inc., which was included in the peer group in the Form 10-K for the fiscal year ended January 31, 2017, is not included in the peer group for purposes of this performance graph. We elected to remove Nuverra Environmental Solutions, Inc. from the peer group as a result of its filing for bankruptcy in 2017.

The following performance graph and related text are being furnished to and not filed with the SEC and will not be deemed to be "soliciting material" or subject to Regulation 14A or 14C under the Exchange Act or to the liabilities of Section 18 of the Exchange Act and will not be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Exchange Act, except to the extent we specifically incorporate such information by reference into such filing.



*$100 invested on 1/31/13 in stock or index, including reinvestment of dividends.
Fiscal year ending January 31.

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Item 6.Selected Financial Data

The following selected historical financial information as of and for each of the five fiscal years ended January 31, 2018, has been derived from our audited Consolidated Financial Statements. All periods presented below reflect the effects of operations discontinued during each of the years in the table below.

The information below should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" under Item 7 and the Consolidated Financial Statements and notes thereto under Item 8 included elsewhere in this Form 10-K.

As of and Years Ended January 31,	2018(1)	2017	2016(5)	2015(6)	2014(7)
Income Statement Data (in thousands, except per share data):					
Revenues	$ 475,517	$ 464,783	$ 518,105	$ 522,057	$ 513,551
Cost of revenues (exclusive of depreciation, amortization and impairment charges shown below)	(374,761)	(382,101)	(419,867)	(411,077)	(403,343)
Selling, general and administrative expenses (exclusive of depreciation, amortization and impairment charges shown below)	(74,428)	(76,586)	(89,176)	(97,339)	(103,462)
Depreciation and amortization	(26,701)	(25,302)	(30,092)	(37,619)	(41,738)
Gain on sale of fixed assets	3,741	3,886	507	659	3,946
Impairment charges(2)	—	—	(4,598)	—	—
Equity in earnings (losses) of affiliates	3,431	2,655	(612)	(2,002)	(2,974)
Restructuring costs	(4,903)	(16,924)	(9,189)	(2,644)	—
Gain on extinguishment of debt (3)	—	—	4,236	—	—
Interest expense	(17,120)	(16,883)	(18,011)	(13,707)	(7,132)
Other (expense) income , net	(15)	843	1,082	(1,266)	631
Loss from continuing operations before income taxes	(15,239)	(45,629)	(47,615)	(42,938)	(40,521)
Income tax (expense) benefit (4)	10,375	(1,420)	(737)	3,945	(56,884)
Net loss from continuing operations	(4,864)	(47,049)	(48,352)	(38,993)	(97,405)
Net (loss) income from discontinued operations	(22,447)	(5,187)	3,547	(70,334)	(30,646)
Net loss	(27,311)	(52,236)	(44,805)	(109,327)	(128,051)
Net loss (income) attributable to noncontrolling interest	—	—	28	(824)	(588)
Net loss attributable to Layne Christensen Company	$ (27,311)	$ (52,236)	$ (44,777)	$ (110,151)	$ (128,639)
(Loss) income per share information attributable to Layne Christensen Company shareholders:					
Loss per share from continuing operations - basic and diluted	$ (0.24)	$ (2.38)	$ (2.45)	$ (2.03)	$ (5.00)
(Loss) income per share from discontinued operations - basic and diluted	(1.13)	(0.26)	0.18	(3.58)	(1.56)
Loss per share - basic and diluted	$ (1.37)	$ (2.64)	$ (2.27)	$ (5.61)	$ (6.56)
Balance Sheet Data (in thousands):					
Working capital, excluding current maturities of debt	$ 62,584	$ 105,554	$ 131,368	$ 104,974	$ 121,458
Total assets	370,189	436,151	488,657	541,942	642,499
Current maturities of long-term debt(8)	67,293	9	88	142	128
Total long-term debt, excluding current maturities	98,769	162,346	158,986	128,566	102,999
Total Layne Christensen Company shareholders' equity	57,505	82,220	128,658	181,215	289,464

(1) During the fiscal year ended January 31, 2018, we sold our Heavy Civil business. We have accounted for it as a discontinued operation for all periods presented.

(2) See Note 4 to the Consolidated Financial Statements for a discussion of impairment charges recorded during the fiscal year ended January 31, 2016.

(3) During the fiscal year ended January 31, 2016, we recognized a gain on extinguishment of debt of $4.2 million in connection with the partial redemption of the 4.25% Convertible Notes in exchange for 8.0% Convertible Notes.

(4) Our income tax benefit for the fiscal year ended January 31, 2018 included an $8.8 million reversal of accrued foreign taxes recorded in prior years. A $73.4 million valuation allowance on deferred tax assets was recorded during the fiscal year ended January 31, 2014. Of the $73.4 million valuation allowance, $54.4 million related to deferred tax assets established in a prior year and $19.0 million related to deferred tax assets established in the current year.

(5) During the fiscal year ended January 31, 2016, we sold our Geoconstruction business. We have accounted for it as a discontinued operation for all periods presented.
(6) During the fiscal year ended January 31, 2015, we sold Costa Fortuna and Tecniwell, both previously reported in the Geoconstruction operating segment. We have accounted for these businesses as discontinued operations for all periods presented.
(7) During the fiscal year ended January 31, 2014, we accounted for our SolmeteX operation, which was sold on July 31, 2013, as a discontinued operation.
(8) Primarily represents the 4.25% Convertible Notes with a maturity date of November 15, 2018.

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

The following discussion and analysis of financial condition and results of operations should be read in conjunction with our consolidated financial statements and notes thereto under Item 8.

Cautionary Language Regarding Forward-Looking Statements

This Form 10-K may contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Exchange Act of 1934. Such statements may include, but are not limited to, statements of plans and objectives, statements of future economic performance and statements of assumptions underlying such statements and statements of management's intentions, hopes, beliefs, expectations or predictions of the future. Forward-looking statements can often be identified by the use of forward-looking terminology, such as "should," "intended," "continue," "believe," "may," "hope," "anticipate," "goal," "forecast," "plan," "estimate" and similar words or phrases that convey the uncertainty of future events or outcomes. Such statements are based on current expectations and are subject to certain risks, uncertainties and assumptions, including but not limited to: estimates and assumptions regarding our strategic direction and business strategy, the timely and effective execution of turnaround strategy for Water Resources, the continuing recovery in the mining industry, prevailing prices for various commodities, the timing and extent of future oil and gas drilling and production in the Delaware Basin, longer term weather patterns, unanticipated slowdowns in our major markets, the availability of credit, the risks and uncertainties normally incident to our drilling and infrastructure services industries, the impact of competition, the availability of equity or debt capital needed for our business, including the refinancing of our existing indebtedness as it matures, worldwide economic and political conditions and foreign currency fluctuations that may affect our results of operations. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially and adversely from those anticipated, estimated or projected. Many of the factors that will impact our risk factors are beyond our ability to control or predict. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially and adversely from those anticipated, estimated or projected. These forward-looking statements are made as of the date of this filing and we assume no obligation to update such forward-looking statements or to update the reasons why actual results could differ materially from those anticipated in such forward-looking statements.

Overview

We are a global water management, infrastructure services and drilling company, providing responsible solutions to the world of essential natural resources – water minerals and energy. We offer innovative, sustainable products and services with an enduring commitment to safety, excellence and integrity. We primarily operate in North America and Brazil. Our customers include government agencies, investor-owned utilities, industrial companies, global mining companies, consulting engineering firms, oil and gas companies, power companies and agribusinesses. We have ownership interest in certain foreign affiliates operating in Latin America.

We manage and report our operations through three segments: Water Resources, Inliner and Mineral Services. Our operations are cyclical and subject to seasonality. Drilling and infrastructure services activities and revenues tend to decrease during the months of November through January.

Key Fiscal Year 2018 Events

During the first quarter of the fiscal year ended January 31, 2018, we sold our Heavy Civil business. The operating results of the Heavy Civil business are presented as discontinued operations and, as such, have been excluded from continuing operations and segment results for all periods presented. See Note 16 to the Consolidated Financial Statements for further discussion. The sale of Heavy Civil business closed on April 30, 2017.

During the fiscal year ended January 31, 2018, we made significant progress in developing and expanding our new Water Midstream business reported in our Water Resources segment. During the year, we completed our initial water pipeline infrastructure system serving energy producers in the Delaware Basin in West Texas, which we refer to as the Hermosa Pipeline. Our new Water Midstream business is anchored by nearly 1,000 acres of Company-owned, water-producing land near Pecos, TX and consists of a high capacity 22-inch diameter pipeline of more than 26 miles in length, 750,000 barrels of storage through two lined, in-ground storage ponds near the water wells and associated pump stations. We have the ability to deliver water at multiple points along the pipeline route. The system has production and delivery capacity of 175,000 barrels per day of non-potable water, with capacity to support further anticipated expansion from both additional water sources and delivery points. The capital investment for the Hermosa Pipeline system and the extension, including land and right of way costs, is approximately $22.0 million.

Additionally, during the fiscal year ended January 31, 2018, we entered into a long-term agreement with the Texas General Land Office (“GLO”) that provides Layne with the exclusive right to develop GLO non-potable water resources for oil and gas drilling and completion activities on approximately 88,000 acres interspersed across Reeves and Culberson counties in the Delaware Basin oil and gas producing region of Texas.

Consolidated Results of Operations Comparison of Fiscal Year 2018 to Fiscal Year 2017

Consolidated Results

Revenues increased $10.7 million, or 2.3%, to $475.5 million, for the fiscal year ended January 31, 2018 compared to $464.8 million for the fiscal year ended January 31, 2017. The increase in revenues was primarily due to increased drilling activity in Mineral Services in the western U.S. and Mexico and increased activity levels in Inliner. This increase was partially offset by Water Resources’ reduced drilling primarily in the western and mid-western U.S. stemming from increased precipitation in the region and lower levels of collector well activity.

Cost of revenues (exclusive of depreciation, amortization) decreased $7.3 million, to $374.8 million (78.8% of revenues) for the fiscal year ended January 31, 2018 compared to $382.1 million (82.2% of revenues) for the fiscal year ended January 31, 2017. Cost of revenues as a percentage of revenues for the fiscal year ended January 31, 2018 decreased from the prior year primarily as a result of Water Resources’ completion of certain loss projects in the prior year and improved margins in Mineral Services due to an increase in market activity.

Selling, general and administrative expenses decreased $2.2 million, or 2.8%, to $74.4 million for the fiscal year ended January 31, 2018 compared to $76.6 million for the fiscal year ended January 31, 2017. The prior year included a $2.2 million value added tax recovery in Mineral Services. Excluding the tax recovery in the prior year, selling, general and administrative expenses decreased $4.4 million reflecting lower costs at Inliner and Water Resources with the primary reduction reflected in unallocated corporate overhead costs of $3.2 million, which included lower legal and professional fees and compensation related expenses partially offset by an increase in incentive compensation expense related to improved operating performance.

Depreciation and amortization increased $1.4 million, or 5.5%, to $26.7 million, for the fiscal year ended January 31, 2018 compared to $25.3 million for the fiscal year ended January 31, 2017. The increase is primarily due to higher capital expenditures over the past year.

Restructuring costs of $4.9 million for the fiscal year ended January 31, 2018 compared to $16.9 million for the fiscal year ended January 31, 2017. Restructuring costs primarily related to finalizing tax issues and exit costs in Africa and Australia and costs associated with our Water Resources Business Performance Initiative initiated in the fiscal year ended January 31, 2017.

Income tax (benefit) expense from continuing operations of ($10.4) million was recorded for the fiscal year ended January 31, 2018 compared to $1.4 million for the fiscal year ended January 31, 2017. We currently record no tax benefit on domestic deferred tax assets and certain foreign deferred tax assets. The effective tax rate for the fiscal year ended January 31, 2018 was 68.1% compared to (3.1%) for the fiscal year ended January 31, 2017.

Our income tax benefit for the fiscal year ended January 31, 2018 included an $8.8 million tax benefit recorded on the reversal of accrued foreign taxes recorded in prior years. During the fourth quarter, a foreign jurisdiction issued a tax ruling confirming an exemption on certain income from taxation which resulted in a reversal of the prior tax accrual. As a result of the reduction in foreign taxes, we also reduced our domestic foreign tax credit carryforward by $5.3 million; however, the reduction in the carryforward resulted in no impact on tax expense since we had a full valuation allowance recorded on our net domestic deferred tax asset. Additionally during the fourth quarter, we recorded a $2.6 million deferred tax benefit as the net effect of the tax law changes included in the Tax Cuts and Jobs Act of 2017 enacted on December 22, 2017 after taking into account related adjustments to our valuation

allowance. The remaining $1.1 million in tax expense was primarily related to foreign withholding taxes on dividends and tax expense recorded by our Mexican subsidiary.

The differences between the effective tax rates and the statutory tax rate for fiscal years ended January 31, 2018 (exclusive of items noted above) and January 31, 2017 resulted primarily from valuation allowances recorded during each period on current year losses.

Net loss from discontinued operations of $22.4 million was recorded for the fiscal year ended January 31, 2018 compared to net loss from discontinued operations of $5.2 million for the fiscal year ended January 31, 2017. Discontinued operations in the current year included the loss on sale of our Heavy Civil business of $19.0 million.

Segment Operating Results

Water Resources

	Fiscal Years Ended January 31,	
(in thousands)	**2018**	2017
Revenues	$ 172,406	$ 204,577
Adjusted EBITDA	5,284	(2,410)
Adjusted EBITDA as a percentage of revenues	3.1%	(1.2) %

Revenues for Water Resources decreased $32.2 million, or 15.7%, to $172.4 million, for the fiscal year ended January 31, 2018 compared to $204.6 million for the fiscal year ended January 31, 2017. The decline in revenues was primarily due to decrease in agricultural drilling projects related to increased precipitation in the western and mid-western U.S. over the course of the past two years.

Adjusted EBITDA increased $7.7 million, or 319.3%, to $5.3 million, for the fiscal year ended January 31, 2018 compared to ($2.4) million for the fiscal year ended January 31, 2017. The increase in Adjusted EBITDA primarily reflects better performance on projects and less project execution issues.

Inliner

	Fiscal Years Ended January 31,	
(in thousands)	**2018**	2017
Revenues	$ 205,873	$ 196,845
Adjusted EBITDA	32,688	32,036
Adjusted EBITDA as a percentage of revenues	15.9%	16.3%

Revenues for Inliner increased $9.0 million, or 4.6%, to $205.9 million, for the fiscal year ended January 31, 2018 compared to $196.8 million for the fiscal year ended January 31, 2017. Revenues were higher compared to the prior year period due overall increased in business primarily in the Midwest and an increase in large diameter pipe installation.

Adjusted EBITDA increased $0.7 million, or 2.0%, to $32.7 million, for the fiscal year ended January 31, 2018 compared to $32.0 million for the fiscal year ended January 31, 2017. The increase in Adjusted EBITDA was driven primarily by the revenue increase compared to the prior year.

Mineral Services

	Fiscal Years Ended January 31,	
(in thousands)	**2018**	2017
Revenues	$ 97,238	$ 63,777
Adjusted EBITDA	17,358	8,635
Adjusted EBITDA as a percentage of revenues	17.9%	13.5%

Revenues for Mineral Services increased $33.5 million, or 52.5%, to $97.2 million, for the fiscal year ended January 31, 2018 compared to $63.8 million for the fiscal year ended January 31, 2017. Revenues increased from the prior year period due to increased market activity in the western U.S. and Mexico.

Adjusted EBITDA increased $8.7 million, or 101.0%, to $17.4 million for the fiscal year ended January 31, 2018 compared to $8.6 million for the fiscal year ended January 31, 2017. The increase in Adjusted EBITDA was primarily due to increased activity and profitability in the western U.S. and Mexico compared to the prior year period.

Unallocated Corporate Expenses

Unallocated corporate expenses primarily consist of general and administrative functions performed on a company-wide basis and benefiting all operating segments. These costs include expenses related to accounting, financial reporting, internal audit, treasury, legal, tax compliance, executive management and board of directors.

Unallocated corporate expenses reflected in our Adjusted EBITDA were $20.3 million for the fiscal year ended January 31, 2018 compared to $23.8 million for the fiscal year ended January 31, 2017. The improvement was primarily due to reductions in legal, professional and consulting fees partially offset by an increase in incentive compensation expense due to our improved performance.

Comparison of Fiscal Year 2017 to Fiscal Year 2016

Consolidated Results

Revenues decreased $53.3 million, or 10.3%, to $464.8 million, for the fiscal year ended January 31, 2017 compared to $518.1 million for the fiscal year ended January 31, 2016. The decrease in revenues was primarily due to declines in Mineral Services reflecting the exit from operations in Africa and Australia and weak market conditions during the first half of the year, and decreased drilling activity levels in the western U.S. in Water Resources due to significant precipitation levels in the region.

Cost of revenues (exclusive of depreciation, amortization and impairment charges) decreased $37.8 million, to $382.1 million (82.2% of revenues) for the fiscal year ended January 31, 2017 compared to $419.9 million (81.0% of revenues) for the fiscal year ended January 31, 2016. Cost of revenues as a percentage of revenues for the fiscal year ended January 31, 2017 increased from the prior year, primarily due to a $7.9 million write down of inventory in the prior year combined with improved margins in Inliner. Inliner's margins increased primarily due to the product mix of contracts combined with increased crew efficiency during the fiscal year ended January 31, 2017.

Selling, general and administrative expenses decreased $12.6 million, or 14.1%, to $76.6 million for the fiscal year ended January 31, 2017 compared to $89.2 million for the fiscal year ended January 31, 2016. The decrease was primarily due to reduced Corporate overhead costs, including reductions in legal and professional fees and compensation expenses.

Depreciation and amortization decreased $4.8 million, or 15.9%, to $25.3 million, for the fiscal year ended January 31, 2017 compared to $30.1 million for the fiscal year ended January 31, 2016. The decrease represents reductions in capital expenditures and the disposal or write down of assets. These decreases were partially offset by increased depreciation related to additional capital expenditures in Inliner to expand crews and manufacturing capabilities.

Equity in earnings (losses) of affiliates improved to earnings of $2.7 million for the fiscal year ended January 31, 2017 compared to a loss of $0.6 million for the fiscal year ended January 31, 2016, primarily due to increased margins from our affiliates in Chile.

Restructuring costs of $16.9 million were recorded for the fiscal year ended January 31, 2017 compared to $9.2 million for the fiscal year ended January 31, 2016. Restructuring costs for the fiscal year ended January 31, 2017 primarily related to the closure of our Australian and African entities resulting in the impairment of our assets held for sale. In calculating the impairment, the carrying amount of the assets included the cumulative currency translation adjustment related to our Australian and African entities. Also included, are the restructuring costs associated with our Water Resources Business Performance Initiative, as discussed in Note 18 to the Consolidated Financial Statements. For the fiscal year ended January 31, 2016, restructuring costs related to $3.9 million in asset write-downs, combined with $5.3 million of severance and other costs, as part of our exit from Africa and Australia.

Interest expense decreased $1.1 million, or 6.3%, to $16.9 million for the fiscal year ended January 31, 2017 compared to $18.0 million for the fiscal year ended January 31, 2016. The decrease in interest expense was mainly due to a $1.0 million write-off of

unamortized deferred financing fees as a result of the reduction in the borrowing base available under the asset-based credit facility during the third quarter of the fiscal year ended January 31, 2016.

Income tax expense from continuing operations of $1.4 million was recorded for the fiscal year ended January 31, 2017 compared to $0.7 million for the fiscal year ended January 31, 2016. We recorded no tax benefit on domestic deferred tax assets and certain foreign deferred tax assets. The effective tax rate for the fiscal year ended January 31, 2017 was (3.1%) compared to (1.5%) for the fiscal year ended January 31, 2016. The differences between the effective tax rates and the statutory tax rate resulted primarily from valuation allowances recorded during each period on current year losses.

Net loss from discontinued operations of $5.2 million for the fiscal year ended January 31, 2017, primarily related to a loss from operations of our Heavy Civil operations. Net income from discontinued operations of $3.5 million for the fiscal year ended January 31, 2016, primarily related to the gain on the sale of our Geoconstruction business.

Segment Operating Results

Water Resources

	Fiscal Years Ended January 31,	
(in thousands)	2017	2016
Revenues	$ 204,577	$ 239,897
Adjusted EBITDA	(2,410)	23,870
Adjusted EBITDA as a percentage of revenues	(1.2) %	10.0%

Revenues for Water Resources decreased $35.3 million, or 14.7%, to $204.6 million, for the fiscal year ended January 31, 2017 compared to $239.9 million for the fiscal year ended January 31, 2016. The decline in revenues was primarily due to reduced activity in agricultural drilling projects in the western U.S. stemming largely from increased precipitation during the fiscal year ended January 31, 2017 and lower pump and well-related equipment sales.

Adjusted EBITDA decreased $26.3 million to ($2.4) million, for the fiscal year ended January 31, 2017 compared to $23.9 million for the fiscal year ended January 31, 2016. The decrease in Adjusted EBITDA was primarily due to reduced drilling activity described above, higher maintenance costs on equipment and higher costs and margin degradation on several large water well and injection well drilling projects.

Inliner

	Fiscal Years Ended January 31,	
(in thousands)	2017	2016
Revenues	$ 196,845	$ 193,704
Adjusted EBITDA	32,036	27,949
Adjusted EBITDA as a percentage of revenues	16.3%	14.4%

Revenues for Inliner increased $3.1 million, or 1.6%, to $196.8 million, for the fiscal year ended January 31, 2017 compared to $193.7 million for the fiscal year ended January 31, 2016. Revenues increased due in part to the increase in the number of crews, from 34 at the start of fiscal year ended January 31, 2016 to 38 crews at the end of fiscal year ended January 31, 2017. Increased activity and a favorable product mix of a higher volume of larger diameter pipe projects also contributed to the increase in revenues.

Adjusted EBITDA increased $4.1 million, or 14.6%, to $32.0 million, for the fiscal year ended January 31, 2017 compared to $27.9 million for the fiscal year ended January 31, 2016. The increase in Adjusted EBITDA represents improved results across most operating regions as compared to the prior year. The increase in Adjusted EBITDA as a percentage of revenues was attributable to a higher volume of large diameter pipe installations combined with increased crew efficiency.

Mineral Services

(in thousands)	Fiscal Years Ended January 31, 2017	2016
Revenues	$ 63,777	$ 86,390
Adjusted EBITDA	8,635	1,878
Adjusted EBITDA as a percentage of revenues	13.5%	2.2%

Revenues for Mineral Services decreased $22.6 million, or 26.2%, to $63.8 million, for the fiscal year ended January 31, 2017 compared to $86.4 million for the fiscal year ended January 31, 2016. Revenues declined primarily due to our exit from our operations in Africa and Australia during the fiscal year ended January 31, 2016, which contributed to approximately $12.4 million in revenue decline for the fiscal year ended January 31, 2017, compared to the prior year. Lower activity levels in the United States and Mexico during the first half of the fiscal year ended January 31, 2017, also contributed to the decline in revenues.

Adjusted EBITDA increased $6.7 million, or 359.8%, to $8.6 million for the fiscal year ended January 31, 2017 compared to $1.9 million for the fiscal year ended January 31, 2016. The increase in Adjusted EBITDA was due to a $2.2 million value added tax recovery during the current year, $1.1 million increased dividends received from our Latin American affiliates and increased margins in Brazil and Mexico.

Unallocated Corporate Expenses

Unallocated corporate expenses reflected in our Adjusted EBITDA were $23.8 million for the fiscal year ended January 31, 2017 compared to $29.3 million for the fiscal year ended January 31, 2016. The improvement was primarily due to reductions in legal and professional fees and compensation expenses related to reduced headcount.

Inflation

Management does not believe the operations for the periods discussed have been significantly adversely affected by inflation or changing prices from its suppliers.

Liquidity and Capital Resources

Our primary source of liquidity is cash flow generated from operations, with the ability to supplement cash flow with borrowings under our credit facilities or issuances of debt. Our cash flow is affected by prices of raw materials, demand for our services, weather and seasonal conditions, operational risks, volatility in commodity prices, industry and economic conditions and conditions in the global markets.

As of January 31, 2018, our total liquidity was $107.5 million, consisting of Excess Availability under our asset-based credit facility and total cash and cash equivalents. Our cash and cash equivalents as of January 31, 2018, were $32.0 million compared to $69.0 million as of January 31, 2017. The decrease in cash primarily reflects investments in our operations through capital expenditures during the year, primarily in our Water Midstream business. Cash and cash equivalents held by foreign subsidiaries as of January 31, 2018 were $5.8 million compared to $8.2 million as of January 31, 2017. No amounts held by foreign subsidiaries at January 31, 2018 were subject to repatriation restrictions. If cash held at our foreign subsidiaries is repatriated to the U.S., it may be subject to withholding taxes in the jurisdiction where the subsidiary is incorporated. The remittance will not be subject to additional U.S. taxation. As we continue to wind down our subsidiaries in Africa and Australia, we expect that any remaining residual cash will be treated as repayment of intercompany loans.

Our working capital was ($4.7) million as of January 31, 2018 and $105.5 million as of January 31, 2017. Adjusted Working Capital (working capital excluding cash and cash equivalents of $32.0 million and $69.0 million at January 31, 2018 and 2017, respectively, and working capital from discontinued operations at January 31, 2017 of $19.6 million), decreased $53.6 million to ($36.7) million as of January 31, 2018 from $16.9 million as of January 31, 2017, primarily due to our 4.25% Convertible Notes becoming current and cash used in investing activities for capital expenditures during the fiscal year ended January 31, 2018. See Key Fiscal Year 2018 Events above for more discussion.

Cash Flows

For the fiscal year ended January 31, 2018, the cash provided by operating activities primarily reflected our net loss, adjusted for non-cash items and changes in components of our working capital. Fluctuations in working capital are normal in our business. Working capital is impacted by the size of our projects, timing of project start dates and completion dates and the achievement of billing milestones on backlog as we complete certain phases of the project.

Cash provided by operating activities was $7.0 million for the fiscal year ended January 31, 2018 compared to $13.8 million for the fiscal year ended January 31, 2017. The primary impact is the change in working capital items with cash provided of $18.2 million in the prior year compared to a use of cash of $13.6 million in the current year. This change was driven by accounts receivable and costs and estimated earnings in excess of billings on uncompleted contracts activity levels. The change in accounts receivable compared to the prior year was heavily weighted in Mineral Services. Partially offsetting our use of cash for working capital was a lower net loss, excluding non-cash items of $27.7 million, due to lower unallocated corporate expenses combined with improved earnings in Inliner and Mineral Services.

Cash provided by (used in) operating activities was $13.8 million for the fiscal year ended January 31, 2017 compared ($1.8) million to the prior year. This increase was primarily due to higher cash inflows from changes in customer receivables and costs and estimated earnings in excess of billings on uncompleted contracts of $35.8 million due to improved working capital management combined with lower activity levels and the completion of projects. These increases were partially offset by a higher use of cash on accounts payable and accrued expenses of ($6.2) million primarily from timing with our vendors combined with a higher net loss, excluding non-cash items, of ($15.2) million compared to the prior year.

Cash (used in) provided by investing activities was ($42.4) million, ($11.9) million and $23.2 million for the fiscal years ended January 31, 2018, 2017 and 2016, respectively. Cash used in investing activities for the fiscal years ended January 31, 2018, 2017 and 2016 consisted primarily of capital expenditures partially offset by the sale of fixed assets. We are selectively investing capital, while continuing to dispose of underutilized assets. As discussed in Key Fiscal Year 2018 Events above, during the fiscal year ended January 31, 2018 we completed our initial water pipeline infrastructure system in our Water Midstream business. We had additional capital expenditures implementing an accounting system upgrade. These uses were partially offset by the proceeds from the sale of our Heavy Civil business of $3.5 million, also discussed in Key Fiscal Year 2018 Events above. Cash used in investing activities for the fiscal year ended January 31, 2016 also includes proceeds from the sale of our Geoconstruction business of $42.3 million.

Cash flows (used in) provided by financing activities were ($0.2) million, ($0.1) million and $21.9 million for the fiscal years ended January 31, 2018, 2017 and 2016, respectively. Cash provided by financing activities for the fiscal year ended January 31, 2016 primarily relates to proceeds from the issuance of 8.0% Convertible Notes, partially offset by net payments on our asset-based credit facility.

Financing Agreements

Below is a summary of certain provisions of our credit facility and debt instruments. For more information about our indebtedness, see Note 8 to the Consolidated Financial Statements in this Form 10-K.

4.25% Convertible Senior Notes due 2018. We have outstanding $69.5 million in aggregate principal amount of our 4.25% Convertible Notes as of January 31, 2018. The 4.25% Convertible Notes bear interest payable semi-annually in arrears in cash on May 15 and November 15 of each year. See “11.0% Unsecured Notes” below. The 4.25% Convertible Notes mature on November 15, 2018, unless earlier repurchased, redeemed or converted. The 4.25% Convertible Notes are contingently convertible, at the option of the holders, into consideration consisting of, at our election, cash, shares of our common stock or a combination of cash and shares of our common stock (and cash in lieu of fractional shares) until the close of business on the scheduled trading day immediately preceding May 15, 2018.

The initial conversion rate was 43.6072 shares of our common stock per $1,000 principal amount of 4.25% Convertible Notes (which is equivalent to an initial conversion price of approximately $22.93 per share of our common stock). The conversion rate will be subject to adjustment upon the occurrence of certain events. In addition, we may be obligated to increase the conversion rate for any conversion that occurs in connection with a “fundamental change” (as defined in our 4.25% Convertible Notes Indenture).

On and after November 15, 2016 and prior to the maturity date, we may redeem all, but not less than all, of the 4.25% Convertible Notes for cash if the sale price of our common stock equals or exceeds 130% of the applicable calculated conversion price for a specified time period ending on the trading day immediately prior to the date we deliver notice of the redemption. The redemption price will equal 100% of the principal amount of the 4.25% Convertible Notes to be redeemed, plus any accrued and unpaid interest to, but excluding, the redemption date. In addition, upon the occurrence of a fundamental change, holders of the 4.25%

Convertible Notes will have the right, at their option, to require us to repurchase their 4.25% Convertible Notes in cash at a price equal to 100% of the principal amount of the 4.25% Convertible Notes to be repurchased, plus accrued and unpaid interest to, but excluding, the fundamental change repurchase date.

The pending merger with Granite is not a fundamental change under the indenture governing the 4.25% Convertible Notes. In the merger agreement, Granite agreed that any conversions of the 4.25% Convertible Notes after the closing of the merger would be settled solely in cash.

8.0% Senior Secured Second Lien Convertible Notes. We have outstanding $99.9 million in aggregate principal amount of our 8.0% Convertible Notes as of January 31, 2018. The 8.0% Convertible Notes bear interest at a rate of 8.0% per annum, payable semi-annually in arrears on May 1 and November 1 of each year. The 8.0% Convertible Notes will mature on May 1, 2019; provided, however, that, unless all of the 4.25% Convertible Notes (or any permitted refinancing indebtedness in respect thereof) have been redeemed, repurchased, otherwise retired, discharged in accordance with their terms or converted into our common stock, or have been effectively discharged, in each case on or prior to August 15, 2018 or the scheduled maturity date of the 4.25% Convertible Notes (or any permitted refinancing indebtedness incurred in respect thereof) is extended to a date that is after October 15, 2019, the 8.0% Convertible Notes will mature on August 15, 2018. See "11.0% Unsecured Notes" below.

The 8.0% Convertible Notes are convertible, at the option of the holders, into consideration consisting of shares of our common stock (and cash in lieu of fractional shares) until the close of business on the scheduled trading day immediately preceding the maturity date. No holder will have the right to convert any 8.0% Convertible Notes into shares of common stock to the extent that the conversion would cause that holder to beneficially own more than 9.9% of the shares of our common stock then outstanding after giving effect to the proposed conversion.

The initial conversion rate was 85.4701 shares of our common stock per $1,000 principal amount of 8.0% Convertible Notes (equivalent to an initial conversion price of approximately $11.70 per share of our common stock). The conversion rate is subject to adjustment upon the occurrence of certain events. In addition, we may be obligated to increase the conversion rate for any conversion that occurs in connection with a “fundamental change” (as defined in our 8.0% Convertible Notes Indenture) or our call of the 8.0% Convertible Notes for redemption.

At any time prior to the maturity date, we may redeem for cash all, but not less than all, of the 8.0% Convertible Notes; provided, however, that we may not redeem the 8.0% Convertible Notes on a redemption date that is outside an Open Redemption Period (as defined in the 8.0% Convertible Notes Indenture) unless the last reported sale price of our common stock equals or exceeds 140% of the conversion price of the 8.0% Convertible Notes in effect on each of at least 20 trading days during the 30 consecutive trading day period ending on and including, the trading day immediately preceding the date on which we deliver the redemption notice.

In addition, upon the occurrence of a “fundamental change”, holders of the 8.0% Convertible Notes will have the right, at their option, to require us to repurchase their 8.0% Convertible Notes in cash at a price equal to 100% of the principal amount of the 8.0% Convertible Notes to be repurchased, plus accrued and unpaid interest to, but excluding, the fundamental change repurchase date.

The pending merger with Granite is not a fundamental change under the indenture governing the 8.00% Convertible Notes. If the merger with Granite is consummated, any future conversions of the 8.0% Convertible Notes would be settled solely in shares of common stock of Granite (other than cash in lieu of any fractional shares).

Asset-based revolving credit facility. As of January 31, 2018, availability under our asset-based credit facility was $100.0 million, with outstanding letters of credit amounting to $24.6 million and no borrowing outstanding, leaving Excess Availability of approximately $75.4 million.

The asset-based credit facility is guaranteed by our direct and indirectly wholly-owned domestic subsidiaries, subject to certain exceptions described in the asset-based credit facility. The obligations under the asset-based credit facility are secured by a lien on substantially all of our assets and the assets of the guarantor subsidiaries, subject to certain exceptions described in the asset-based credit facility, including a pledge of up to 65.0% of the equity interest of our first tier foreign subsidiaries.

If Excess Availability is less than the greater of 17.5% of Total Availability or $17.5 million for more than one business day, then a “Covenant Compliance Period” (as defined in the asset-based credit facility agreement) will exist until Excess Availability has been equal to or greater than the greater of 17.5% of the Total Availability or $17.5 million for a period of 30 consecutive days. We must maintain a minimum fixed charge coverage ratio of not less than 1.0 to 1.0 and a maximum first lien leverage ratio of not greater than 5.0 to 1.0 for the four fiscal quarters ended immediately preceding any Covenant Compliance Period and for any four fiscal quarter period ending during a Covenant Compliance Period. We were not subject to a Covenant Compliance Period during the three

fiscal years ended January 31, 2018. If we had been in a Covenant Compliance Period during the three year period ended January 31, 2018, we would not have been in compliance with the minimum fixed charge coverage ratio

On March 30, 2018, our asset-based credit facility agreement was amended to revise the acceleration provision included in the definition of Maturity Date to be July 16, 2018 if we have not delivered to the administrative agent for the asset-based credit facility evidence by July 15, 2018 that the 4.25% Convertible Notes have been effectively discharged with the proceeds from the issuance of the 11.0% Unsecured Notes or (b) May 15, 2018 if (i) the issuance of the 11.0% Unsecured Notes is cancelled for any reason or (ii) the proceeds of the 11.0% Unsecured Notes are used for a purpose other than to effectively discharge the 4.25% Convertible Notes in full; provided, that if an event described in clause (i) or (ii) above occurs after May 15, 2018, then the maturity date of the asset-based credit facility will be the date the event occurred

The asset-based credit facility also contains a subjective acceleration clause that can be triggered if the lenders determine that we have experienced a material adverse change. If triggered by the lenders, this clause would create an Event of Default which in turn would permit the lenders to accelerate repayment of outstanding obligations.

In general, during a Covenant Compliance or if an Event of Default has occurred and is continuing, all of our funds received on a daily basis will be applied to reduce amounts owing under the asset-based credit facility. Based on current projections, we do not anticipate being in a Covenant Compliance Period during the next twelve months.

11% Unsecured Notes. On March 19, 2018, we entered into a note purchase agreement with two investments funds advised by Corre Partners Management, LLC to purchase $ 71.0 million of our 11% Unsecured Notes. Corre Partners Management and its affiliated funds, including the purchasers of the 11.0% Unsecured Notes, own a portion of our 4.25% Convertible Notes and 8.00% Convertible Notes. Under the note purchase agreement, the purchasers have committed to purchase $71.0 million of our 11% Unsecured Notes due October 16, 2019 (the "11.0% Unsecured Notes") at a purchase price equal to 100% of the principal amount of the 11.0% Unsecured Notes. The closing of the purchase and sale of the 11.0% Unsecured Notes will be the earlier to occur of (i) October 1, 2018 and (ii) the fifth business day after delivery of a funding notice by us to the purchasers. As a result, if the proceeds of the 11.0% Unsecured Notes were to be used to effectively discharge the 4.25% Convertible Notes prior to July 16, 2018, we would need to refinance (1) the asset-based credit facility on or prior to April 14, 2019, (2) to the extent they are not converted into our common stock, the 8.0% Convertible Notes on May 1, 2019 and (3) the 11.0% Unsecured Notes on or prior to October 16, 2019. The commitment of the purchasers to purchase the 11.0% Unsecured Notes terminates upon the earliest to occur of: (i) a change of control (including the closing of the pending merger with Granite) and (ii) delivery to the purchasers of a notice of termination by us.

We may at our option prepay the 11.0% Unsecured Notes in whole or in part at any time. The 11.0% Unsecured Notes are subject to a mandatory prepayment upon the closing of a change of control. The 11.0% Unsecured Notes are subject to an Early Payment Event Fee if the 11.0% Unsecured Notes are repaid less than 90 days after the 11.0% Unsecured Notes are issued. The amount of the Early Payment Event Fee will be equal to the excess, if any, of (x) 90 days of accrued interest on the principal amount repaid, over (y) the amount of interest accrued and paid or payable with respect to the principal amount repaid from the date of issuance to and including the date of the repayment.

There are no covenants applicable to us under the note purchase agreement so long as: (i) the 11.0% Unsecured Notes have not been issued, (ii) any of the 8.00% Convertible Notes are outstanding and (iii) none of the provisions of the indenture governing the 8.00% Convertible Notes have been amended or waived. After the 11.0% Unsecured Notes have been issued, we will be subject to certain covenants, including, delivery of financial statements and other reports, compliance with material contracts and applicable laws, and maintenance of corporate existence, insurance and properties. In addition, after the earliest date that (i) none of the 8.00% Convertible Notes are outstanding or (ii) all or any of the provisions of the indenture governing the 8.00% Convertible Notes are no longer in effect or have been amended or waived, we will be subject to negative covenants related to indebtedness, liens, sale and leaseback transactions, asset sales, dividends and restricted payments, transactions with affiliates, and maximum ratio of funded indebtedness to EBITDA.

Potential Refinancing of Convertible Notes. Prior to August 15, 2018, we may elect to issue the 11.0% Unsecured Notes and use the proceeds from the issuance of the 11.0% Unsecured Notes to effectively discharge the 4.25% Convertible Notes, in which case the maturity date of the 8.0% Convertible Notes would remain May 1, 2019. As a result, if the proceeds of the 11.0% Unsecured Notes were to be used to effectively discharge the 4.25% Convertible Notes prior to July 16, 2018, we would need to refinance (1) the asset-based credit facility on or prior to April 14, 2019, (2) to the extent they are not converted into our common stock, the 8.0% Convertible Notes on May 1, 2019 and (3) the 11.0% Unsecured Notes on or prior to October 16, 2019.

Alternatively, if the market price of our common stock prior to August 15, 2018 is above $11.70 per share, we could elect to take no action with respect to the 4.25% Convertible Notes, in which case the maturity date of the 8.0% Convertible Notes would become August 15, 2018. We believe that under those circumstances most, if not all, of the holders of our 8.0% Convertible Notes would convert their notes into our common stock (and any remaining unconverted amounts could be refinanced with available cash or drawings under our asset-based credit facility) and we could issue the 11.0% Unsecured Notes by October 1, 2018 in order to repay

the 4.25% Convertible Notes at maturity. In this case, we would seek to extend or refinance our asset-based credit facility prior to July 16, 2018.

Contractual Obligations and Commercial Commitments

Contractual obligations and commercial commitments as of January 31, 2018, are summarized as follows:

	Payments/Expiration by Period				
(in thousands)	Total	Less than 1 Year	1-3 Years	3-5 Years	More than 5 Years
Contractual obligations and other commercial commitments:					
4.25% Convertible Notes (including interest)	$ 67,247	$ 67,247	$ —	$ —	$ —
8.0% Convertible Notes (including interest)	98,769		98,769	—	—
Operating leases	9,131	2,649	3,694	2,788	—
Capitalized leases (including interest)	45	45	—	—	—
Supplemental retirement benefits	5,395	339	678	677	3,701
Income tax uncertainties, current	2,710	2,710	—	—	—
Total contractual obligations	$ 183,297	$ 72,990	$ 103,141	$ 3,465	$ 3,701
Letters of credit	24,587	24,587	—	—	—
Total contractual obligations and commercial commitments	$ 207,884	$ 97,577	$ 103,141	$ 3,465	$ 3,701

We expect to meet our cash contractual obligations in the ordinary course of operations and that the letters of credit will be renewed in connection with our annual insurance renewal process.

The 4.25% Convertible Notes bear interest at a rate of 4.25% per year, payable semi-annually in arrears in cash on May 15 and November 15 of each year. The 4.25% Convertible Notes will mature on November 15, 2018 unless earlier repurchased, redeemed or converted (under the terms of the 4.25% Convertible Notes Indenture).

The 8.0% Convertible Notes bear interest at a rate of 8.0% per annum, payable semi-annually in arrears on May 1 and November 1 of each year. The 8.0% Convertible Notes will mature on May 1, 2019, subject to certain provisions in the 8.0% Convertible Notes Indenture.

See "—Financing Agreements—Potential Refinancing of Convertible Notes" above

Capitalized leases are obligations for certain equipment.

We have income tax uncertainties in the amount of $15.5 million at January 31, 2018, that are classified as non-current on the balance sheet as resolution of these matters is expected to take more than a year. The ultimate timing of resolution of these items is uncertain and accordingly the amounts have not been included in the table above.

We have surety bonds to secure performance of our projects, amounting to $148.3 million as of January 31, 2018, $48.4 million related to surety bonds on contracts which were assumed by the purchasers of our Heavy Civil business. The amount is not included in the table above as information on the timing of the resolution of the amounts is not available. See Note 8 to Consolidated Financial Statements for further discussion.

Additional obligations in the ordinary course of operations are also incurred. These obligations, including but not limited to income tax payments, are expected to be met in the normal course of operations.

Off-Balance Sheet Arrangements

We have no off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that is material to investors.

Critical Accounting Policies and Estimates

Management's Discussion and Analysis of Financial Condition and Results of Operations discuss the consolidated financial statements, which have been prepared in accordance with GAAP. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period.

Our accounting policies are more fully described in Note 1 to the Consolidated Financial Statements, located in Item 8 of this Form 10-K. We believe that the following accounting policies represent management's more critical policies. Critical accounting policies, practices and estimates are a subset of significant accounting policies that are considered most important to the description of our financial condition and results and that require management's most difficult, subjective, or complex judgments, often as a result of the need to make estimates about the effects of matters that are inherently uncertain.

Revenue Recognition – The significant estimates with regard to these consolidated financial statements relate to the estimation of total forecasted drilling and infrastructure services contract revenues, costs and profits in accordance with the criteria established in ASC Topic 605-35 "Construction-type and Production-type Contracts".

Based on experience and our current processes we produce materially reliable estimates of total contract revenue and cost during any accounting period. However, many factors can and do change during a contract performance period which can result in a change to contract profitability from one financial reporting period to another. Some of the factors that can change the estimate of total contract revenue and cost include differing site conditions (to the extent that contract remedies are unavailable), the availability of skilled contract labor, the performance of major material suppliers, the performance of major subcontractors, unusual weather conditions and unexpected changes in material costs. These factors may result in revisions to costs and income and are recognized in the period in which the revisions to costs and revenues become known. Provisions for estimated losses on uncompleted drilling and infrastructure services contracts are made in the period in which they become known. Large changes in cost estimates on larger, more complex drilling and infrastructure services projects can have a material impact on the consolidated financial statements and are reflected in the results of operations when they become known; smaller contracts or smaller changes in estimates usually do not have a material impact on the consolidated financial statements.

The nature of accounting for contracts is such that refinements of the estimating process for changing conditions and new developments are continuous and characteristic of the process. Prior to the execution of a contract, any related costs are expensed during the period incurred. Generally during the early stages of a contract, cost estimates relating to purchases of materials and subcontractors can be subject to revisions. As a contract moves into the most productive phase of execution, change orders, project cost estimate revisions and claims are frequently the sources for changes in estimates. During the contract's final phase, remaining estimated costs to complete or provisions for claims will be closed out and adjusted based on actual costs incurred. The impact on operating margin in a reporting period and future periods from a change in estimate will depend on the stage of contract completion. Generally, if the contract is at an early stage of completion, the current period impact is smaller than if the same change in estimate is made to the contract at a later stage of completion.

Revenues are recognized on large, long-term drilling and infrastructure services contracts meeting the criteria of ASC Topic 605-35 using the percentage of completion method based upon the ratio of costs incurred to total estimated costs at completion. Most of our contracts which utilize the percentage of completion method of revenue recognition have terms of six months to four years. Contract price and cost estimates are reviewed periodically as work progresses and adjustments proportionate to the percentage of completion are reflected in contract revenues in the reporting period when such estimate revisions become known. When the estimate on a contract indicates a loss, the entire loss is recorded during the accounting period in which it becomes known. In the ordinary course of business, management prepares updated estimates of the total forecasted revenue, cost and profit or loss for each contract. The cumulative effects of these updated estimates are reflected in the period in which they become known. The financial impact of any revisions to an individual contract is a function of the amount of the revision and the percentage of completion of the contract itself. An amount up to the costs that have been incurred involving unapproved change orders and claims is included in the total estimated revenue when the realization is probable. The amount of unapproved change orders and claim revenues is included in our Consolidated Balance Sheets as part of costs and estimated earnings in excess of billings. Any profit as a result of change orders or claims is recorded in the period in which the change order or claim is resolved.

Management focuses on evaluating the performance of contracts individually. In the ordinary course of business and at a minimum on a quarterly basis, based on changes in facts, such as an approved scope change or a change in estimate, projected total contract revenue, cost and profit or loss for each of our contracts is updated. Normal recurring changes in estimates include, but are not limited to:

- changes in estimated scope as a result of unapproved or unpriced customer change orders;
- changes in estimated productivity assumptions based on experience to date;
- changes in estimated materials costs based on experience to date;
- changes in estimated subcontractor costs based on subcontractor experience; and
- changes in the timing of scheduled work that may impact future costs.

When determining the likelihood of recovering unapproved change orders and claims, we consider the history and experience of similar projects and apply judgment to estimate the amount of eventual recovery. Settlement of events such as these can take several years depending on how easily the claim is able to be resolved with the customer or whether arbitration or litigation is necessary to reach settlement. As new facts become known, an adjustment to the estimated recovery is made and reflected in the period in which it becomes known.

The cumulative effect of revisions in estimates of the total revenues and costs, including unapproved change orders and claims, during the course of the work is reflected in the accounting period in which the facts that caused the revisions become known. The financial impact of these revisions to any one contract is a function of both the amount of the revision and the percentage of completion of the contract.

There were no material change orders during the fiscal years ended January 31, 2018, 2017 and 2016. There were no material contract penalties, claims, settlements or changes in contract estimates during the fiscal years ended January 31, 2018, 2017 and 2016. No amounts were netted in revenue during the fiscal years ended January 31, 2018, 2017 and 2016.

We have provided for all estimated costs to complete on all of the ongoing contracts. However, it is possible that current estimates could change due to unforeseen events, which could result in adjustments to overall contract costs. Variances from estimated contract performance could result in material adjustments to operating results for any fiscal quarter or year. For all contracts, if a current estimate of total contract cost indicates a loss, the projected loss is recognized in full when such losses become known. During the fiscal years ended January 31, 2018, 2017 and 2016, approximately $6.3 million, $9.8 million and $2.9 million in losses on open contracts were recorded, respectively. The current provision for loss contracts was $0.7 million and $1.9 million as of January 31, 2018 and 2017, respectively. Further, as of January 31, 2018, there were no contracts, individually, that could be reasonably estimated to be in a material loss position in the future.

Costs and estimated earnings in excess of billings represents the excess of contract costs and contract revenue recognized to date on the percentage of completion accounting method over contract billings to date. Costs and estimated earnings in excess of billings occur when:

- costs related to unapproved change orders or claims are incurred, or
- a portion of the revenue recorded cannot be billed currently due to the billing terms in the contract.

As allowed by ASC Topic 605-35, revenue is recognized on smaller, short-term drilling and infrastructure services contracts using the completed contract method. Our contracts which utilize the completed contract method of revenue recognition have contract terms of twelve months or less. We consider contracts such as these completed upon acceptance by the customer.

Contracts for mineral drilling services within Mineral Services are billable based on the quantity of drilling performed. Revenues are recognized in terms of the value of total work performed to date on the basis of actual footage or meterage drilled.

The percentage of our revenues recognized by percentage of completion, mineral drilling services and completed contract to total revenues for each of the fiscal years as presented in the Consolidated Statements of Operations are:

Approximate Percentage of Total Revenue	January 31, 2018	January 31, 2017	January 31, 2016
Percentage of Completion	62 %	67 %	72 %
Mineral Drilling Services	21	14	11
Completed Contract	17	19	17
Total Revenue	100 %	100 %	100 %

Impairment of Other Long-lived Assets and Equity Method Investments – We review the carrying value of other long-lived assets and equity method investments whenever events or changes in circumstances indicate that such carrying values may not be recoverable.

Other Long-Lived Assets

Long-lived assets, including amortizable intangible assets are reviewed for recoverability whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Factors management considers important which could trigger an impairment review include but are not limited to the following:

- significant underperformance of our assets;
- significant changes in the use of the assets; and
- significant negative industry or economic trends.

An impairment loss is recognized when the carrying amount of a long-lived asset is not recoverable and exceeds its fair value. The carrying amount of a long-lived asset is not recoverable if it exceeds the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset. An impairment loss shall be measured as the amount by which the carrying amount of a long-lived asset exceeds its fair value, which is generally calculated using a combination of market, comparable transaction, third party quoted prices or asset appraisals and discounted cash flow approaches.

During the fiscal year ended January 31, 2016, as a result of our decision to exit our operations in Africa and Australia, we performed an assessment of property and equipment located in these locations. Based on our assessment, property and equipment in Africa and Australia with carrying value of $10.4 million was adjusted to reflect its estimated fair value of $6.5 million, resulting in a charge of approximately $3.9 million recorded as part of restructuring costs in the Consolidated Statement of Operations during the fiscal year ended January 31, 2016. Additionally, during the fiscal year ended January 31, 2017, we reviewed the recoverability of those assets held for sale in Australia and recorded an additional charge of $12.9 million as part of restructuring costs in the Consolidated Statement of Operations to adjust the carrying values of the assets held for sale to estimated fair values less costs to sell. In calculating the impairment, the carrying amount of the assets included the cumulative currency translation adjustment related to our Australian and African entities. The fair value of the assets was determined based on available third-party quoted prices and appraisals of assets.

During the fiscal year ended January 31, 2018, we reviewed the recoverability of the asset values of our long-lived assets in our Water Resources segment. Based on our analysis, the sum of the undiscounted cash flows expected from the use and eventual disposal of the assets at the end of their useful life exceeded the carrying value of the assets in the respective segments and no indication of impairment was identified.

Prior to the segment realignment in the third quarter of the fiscal year ended January 31, 2016, we reviewed the recoverability of the asset values of our long-lived assets in the Energy Services segment as of July 31, 2015. Using the undiscounted cash flow model, we concluded that the carrying value of the assets in the Energy Services was not fully recoverable as of July 31, 2015. We performed an assessment of the fair value of the assets of Energy Services based on orderly liquidation value of the property and equipment. This assessment resulted in the recording of an impairment charge of approximately $4.6 million, which is shown as impairment charges in the Consolidated Statements of Operations for the fiscal year ended January 31, 2016.

Equity Method Investments

We evaluate our equity method investments for impairment at least annually or when events or changes in circumstances indicate there is a loss in value of the investment that is other than a temporary decline. We performed a qualitative assessment to determine the existence of events and circumstances that would lead to a determination that a triggering event occurred that would indicate a loss in value of the investment. If such a conclusion is reached, then we would be required to perform a quantitative impairment assessment over the value of our investments. However if the assessment leads to a determination that the fair value of the investments is greater than the carrying amount, no further assessments are required. With the improving market condition for the minerals market, strong earnings and continued payment of dividends by our equity affiliates, we determined no triggering event had occurred that would indicate a loss in the value of our equity method investments as of January 31, 2018. The investment in affiliates balance as of January 31, 2018 was $53.3 million.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

The principal market risks to which Layne is exposed are interest rate risk on variable rate debt and foreign exchange rate risk that could give rise to translation and transaction gains and losses.

Interest Rate Risk

We centrally manage our debt portfolio considering overall financing strategies and tax consequences. A description of the debt is included in Note 8 to the Consolidated Financial Statements in this Form 10-K. As of January 31, 2018 an instantaneous change in interest rates of one percentage point would impact the annual interest expense by approximately $1.7 million.

Foreign Currency Risk

Operating in international markets involves exposure to possible volatile movements in currency exchange rates. Our primary international operations are in Mexico, Canada and Brazil. The operations are described in Notes 1 and 5 to the Consolidated Financial Statements. Our affiliates also operate in Latin America (see Note 5 to the Consolidated Financial Statements). The majority of the contracts in Mexico are U.S. dollar-based, providing a natural reduction in exposure to currency fluctuations. As a result, we have historically not hedged our foreign currency exchange risk. As of January 31, 2018, we do not have any outstanding foreign currency option contracts.

As foreign currency exchange rates change, translation of the income statements of the international operations into U.S. dollars may affect year-to-year comparability of operating results. We estimate that a ten percent change in foreign exchange rates would impact income (loss) before income taxes by approximately $0.1 million, $0.3 million and $0.9 million for the fiscal years ended January 31, 2018, 2017 and 2016, respectively. This quantitative measure has inherent limitations, as it does not take into account any governmental actions, changes in customer purchasing patterns or changes in our financing and operating strategies.

Item 8. Financial Statements and Supplementary Data

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

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of
Layne Christensen Company

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Layne Christensen Company and subsidiaries (the "Company") as of January 31, 2018 and 2017, and the related consolidated statements of operations, comprehensive loss, equity, and cash flows for each of the three years in the period ended January 31, 2018 and the related notes and financial statement schedule listed in the Index at Item 8 (collectively referred to as the "financial statements"). In our opinion, such financial statements present fairly, in all material respects, the financial position of Layne Christensen Company and subsidiaries as of January 31, 2018 and 2017, and the results of their operations and their cash flows for each of the three years in the period ended January 31, 2018, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of January 31, 2018 based on the criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated April 10, 2018 expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

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

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

/s/ DELOITTE & TOUCHE LLP

Houston, Texas
April 10, 2018

We have served as the Company's auditor since at least 1990; however, the specific date has not been determined.

LAYNE CHRISTENSEN COMPANY AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

(in thousands)	January 31, 2018	January 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	$ 32,041	$ 69,000
Customer receivables, less allowance of $2,084 and $3,198, respectively	59,558	57,252
Costs and estimated earnings in excess of billings on uncompleted contracts	44,987	48,623
Inventories	20,020	18,697
Other	11,915	16,751
Current assets of discontinued operations	—	40,160
Total current assets	168,521	250,483
Property and equipment, net	120,604	96,985
Other assets:		
Investment in affiliates	53,325	55,290
Goodwill	8,915	8,915
Other intangible assets, net	3,844	1,779
Restricted deposits - long-term	6,572	5,055
Other	8,408	11,514
Other assets of discontinued operations	—	6,130
Total other assets	81,064	88,683
Total assets	$ 370,189	$ 436,151
LIABILITIES AND EQUITY		
Current liabilities:		
Current maturities of long-term debt	$ 67,293	$ 9
Accounts payable	42,330	41,146
Billings in excess of costs and estimated earnings on uncompleted contracts	10,563	19,160
Other current liabilities	53,044	64,043
Current liabilities of discontinued operations	—	20,580
Total current liabilities	173,230	144,938
Noncurrent liabilities:		
Long-term debt	98,769	162,346
Self-insurance reserve	11,464	15,647
Deferred income taxes	769	4,199
Other	28,404	26,753
Total noncurrent liabilities	139,406	208,945
Commitments and contingencies		
Equity:		
Common stock, par value $.01 per share, 60,000 shares authorized, 19,917 and 19,805 shares issued and outstanding, respectively	199	198
Capital in excess of par value	372,049	369,160
Accumulated deficit	(296,131)	(268,820)
Accumulated other comprehensive loss	(18,612)	(18,318)
Total Layne Christensen equity	57,505	82,220
Noncontrolling interests	48	48
Total equity	57,553	82,268
Total liabilities and equity	$ 370,189	$ 436,151

See Notes to Consolidated Financial Statements.

LAYNE CHRISTENSEN COMPANY AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS

(in thousands, except per share data)	Years Ended January 31, 2018	2017	2016
Revenues	$ 475,517	$ 464,783	$ 518,105
Cost of revenues (exclusive of depreciation, amortization and impairment charges shown below)	(374,761)	(382,101)	(419,867)
Selling, general and administrative expenses (exclusive of depreciation, amortization and impairment charges shown below)	(74,428)	(76,586)	(89,176)
Depreciation and amortization	(26,701)	(25,302)	(30,092)
Gain on sale of fixed assets	3,741	3,886	507
Impairment charges	—	—	(4,598)
Equity in earnings (losses) of affiliates	3,431	2,655	(612)
Restructuring costs	(4,903)	(16,924)	(9,189)
Gain on extinguishment of debt	—	—	4,236
Interest expense	(17,120)	(16,883)	(18,011)
Other (expense) income, net	(15)	843	1,082
Loss from continuing operations before income taxes	(15,239)	(45,629)	(47,615)
Income tax benefit (expense)	10,375	(1,420)	(737)
Net loss from continuing operations	(4,864)	(47,049)	(48,352)
Net (loss) income from discontinued operations	(22,447)	(5,187)	3,547
Net loss	(27,311)	(52,236)	(44,805)
Net loss attributable to noncontrolling interests	—	—	28
Net loss attributable to Layne Christensen Company	$ (27,311)	$ (52,236)	$ (44,777)
Loss per share information attributable to Layne Christensen Company shareholders:			
Loss per share from continuing operations - basic and diluted	$ (0.24)	$ (2.38)	$ (2.45)
(Loss) income per share from discontinued operations - basic and diluted	(1.13)	(0.26)	0.18
Loss per share - basic and diluted	$ (1.37)	$ (2.64)	$ (2.27)
Weighted average shares outstanding - basic and dilutive	19,858	19,786	19,730

See Notes to Consolidated Financial Statements.

LAYNE CHRISTENSEN COMPANY AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

	Years Ended January 31,		
(in thousands)	2018	2017	2016
Net loss	$ (27,311)	$ (52,236)	$ (44,805)
Other comprehensive (loss) income:			
Change in cumulative foreign currency translation adjustment (net of taxes of $0 for all years presented)	(294)	2,257	(3,348)
Other comprehensive (loss) income:	(294)	2,257	(3,348)
Comprehensive loss	(27,605)	(49,979)	(48,153)
Comprehensive income attributable to noncontrolling interests (all attributable to net income)	—	—	28
Comprehensive loss attributable to Layne Christensen Company	$ (27,605)	$ (49,979)	$ (48,125)

See Notes to Consolidated Financial Statements.

LAYNE CHRISTENSEN COMPANY AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF EQUITY

(in thousands, except share data)	Common Stock Shares	Common Stock Amount	Capital In Excess of Par Value	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total Layne Christensen Equity	Noncontrolling Interests	Total
Balance February 1, 2015	19,633,315	$ 196	$ 370,053	$ (171,807)	$ (17,227)	$ 181,215	$ 444	$ 181,659
Net loss	—	—	—	(44,777)	—	(44,777)	(28)	(44,805)
Other comprehensive loss	—	—	—	—	(3,348)	(3,348)	—	(3,348)
Issuance of nonvested restricted shares	24,085	1	(1)	—	—	—	—	—
Issuance of stock for vested restricted stock units	182,563	2	(2)	—	—	—	—	—
Shares purchased and subsequently cancelled	(50,862)	(1)	(344)	—	—	(345)	—	(345)
Extinguishment of convertible notes	—	—	(8,006)	—	—	(8,006)	—	(8,006)
Sale of noncontrolling interest	—	—	—	—	—	—	(368)	(368)
Equity-based compensation	—	—	3,919	—	—	3,919	—	3,919
Balance, January 31, 2016	19,789,101	198	365,619	(216,584)	(20,575)	128,658	48	128,706
Net loss	—	—	—	(52,236)	—	(52,236)	—	(52,236)
Other comprehensive income	—	—	—	—	2,257	2,257	—	2,257
Issuance of nonvested restricted shares	13,495	—	—	—	—	—	—	—
Issuance of stock for vested restricted stock units	2,264	—	—	—	—	—	—	—
Shares purchased and subsequently cancelled	(334)	—	(3)	—	—	(3)	—	(3)
Equity-based compensation	—	—	3,544	—	—	3,544	—	3,544
Balance January 31, 2017	19,804,526	198	369,160	(268,820)	(18,318)	82,220	48	82,268
Net loss	—	—	—	(27,311)	—	(27,311)	—	(27,311)
Other comprehensive loss	—	—	—	—	(294)	(294)	—	(294)
Issuance of stock for vested restricted stock units	128,042	1	(1)	—	—	—	—	—
Shares purchased and subsequently cancelled	(40,525)	—	(406)	—	—	(406)	—	(406)
Issuance of stock upon exercise of options	25,000	—	206	—	—	206	—	206
Equity-based compensation	—	—	3,090	—	—	3,090	—	3,090
Balance January 31, 2018	19,917,043	$ 199	$ 372,049	$ (296,131)	$ (18,612)	$ 57,505	$ 48	$ 57,553

See Notes to Consolidated Financial Statements.

LAYNE CHRISTENSEN COMPANY AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Years Ended January 31,		
(in thousands)	2018	2017	2016
Cash flows from operating activities:			
Net loss	$ (27,311)	$ (52,236)	$ (44,805)
Adjustments to reconcile net loss to cash flows from operations:			
Depreciation and amortization	26,988	26,911	35,925
Impairment charges	—	—	4,598
Bad debt expense	1,716	1,900	5,090
Loss (gain) on sale of discontinued operations	19,025	—	(7,803)
Write-off of note receivable relating to discontinued operations	—	—	3,180
Deferred income taxes	(3,405)	(646)	(7,237)
Equity-based compensation	3,090	3,544	3,919
Amortization of discount and deferred financing costs	4,524	4,217	5,143
Gain on extinguishment of debt	—	—	(4,236)
Equity in earnings of affiliates	(3,431)	(2,655)	(492)
Dividends received from affiliates	5,304	4,941	4,568
Restructuring activities	—	12,878	5,115
Write-down of inventory	—	—	7,905
Gain on sale of fixed assets	(3,740)	(4,151)	(996)
Changes in assets and liabilities:			
Customer receivables	(372)	19,113	2,071
Costs and estimated earnings in excess of billings on uncompleted contracts	2,606	17,382	(1,348)
Inventories	(1,338)	1,306	382
Other current assets	5,859	(1,585)	8,879
Accounts payable and accrued expenses	(13,563)	(16,507)	(10,305)
Billings in excess of costs and estimated earnings on uncompleted contracts	(6,785)	(1,468)	(9,952)
Other, net	(2,157)	831	(1,387)
Cash provided by (used in) operating activities	7,010	13,775	(1,786)
Cash flows from investing activities:			
Capital expenditures	(49,876)	(21,818)	(25,668)
Proceeds from sale of fixed assets	3,988	9,962	6,505
Proceeds from sale of business, net of cash divested	3,468	—	42,348
Investment in foreign affiliate	(25)	—	—
Cash (used in) provided by investing activities	(42,445)	(11,856)	23,185
Cash flows from financing activities:			
Repayments under revolving loan facilities	—	—	(22,039)
Proceeds from issuance of long term convertible notes	—	—	49,950
Payment of debt issuance costs	—	(9)	(5,486)
Principal payments under capital lease obligation	(30)	(65)	(154)
Issuance of stock upon exercise of options	206	—	—
Purchases and retirement of Company shares	(406)	(3)	(345)
Cash (used in) provided by financing activities	(230)	(77)	21,926
Effects of exchange rate changes on cash	223	(1,074)	(75)
Net (decrease) increase in cash, cash equivalents and restricted deposits	(35,442)	768	43,250
Cash, cash equivalents and restricted deposits at beginning of year	74,055	73,287	30,037
Cash, cash equivalents and restricted deposits at end of year	$ 38,613	$ 74,055	$ 73,287

See Notes to Consolidated Financial Statements.

Notes to Consolidated Financial Statements

(1) Summary of Significant Accounting Policies

Description of Business – Layne Christensen Company and its subsidiaries (together, "Layne," the "Company," "we," "our," or "us") is a global water management, drilling and infrastructure services and drilling company, providing responsible solutions to the world of essential natural resources – water, minerals and energy. We offer innovative, sustainable products and services with an enduring commitment to safety, excellence and integrity. We primarily operate in North America, Brazil and through our affiliates in Latin America. Our customers include government agencies, investor-owned utilities, industrial companies, global mining companies, consulting engineering firms, oil and gas companies, power companies and agribusinesses. We have an ownership interest in certain foreign affiliates operating in Latin America (see Note 5 to the Consolidated Financial Statements).

Fiscal Year – Our fiscal year end is January 31. References to fiscal years, or "FY," are to the twelve months then ended January 31 of that year.

Principles of Consolidation – The Consolidated Financial Statements include our accounts and the accounts of all of our subsidiaries where we exercise control. For investments in subsidiaries that are not wholly-owned, but where we exercise control, the equity held by the minority owners and their portions of net income (loss) are reflected as noncontrolling interests. All intercompany accounts and transactions have been eliminated in consolidation. In the Notes to Consolidated Financial Statements, all dollar and share amounts in tabulations are in thousands of dollars and shares, respectively, unless otherwise indicated.

Investment in Affiliated Companies – Investments in affiliates (20% to 50% owned) in which we have the ability to exercise significant influence, but do not hold a controlling interest over operating and financial policies, are accounted for by the equity method. We performed a qualitative assessment to determine the existence of events and circumstances that would lead to a determination that a triggering event occurred that would indicate a loss in value of the investment. If such a conclusion is reached, then we would be required to perform a quantitative impairment assessment over the value of our investments. However if the assessment leads to a determination that the fair value of the investments is greater than the carrying amount, no further assessments are required. During the fiscal year ended January 31, 2017, we performed a quantitative assessment. As of January 31, 2018, we performed a qualitative assessment and concluded no triggering events had occurred that would indicate a loss in value. Accordingly, no impairment charge was recorded in either year. Distributions from our equity method investees are accounted for using the cumulative earnings approach on our Consolidated Statement of Cash Flows. Distributions received are considered returns on investment and classified as cash inflows from operating activities, unless the investor's cumulative distribution received less distributions received in prior periods that were determined to be returns of investment exceed cumulative equity in earnings recognized by the investor. When such an excess occurs, the current-period distribution up to this excess is considered a return on investment and classified as cash inflows from operating activities.

Presentation – As discussed further in Note 16 to the Consolidated Financial Statements, during the first quarter of FY2018, we completed the sale of substantially all of the assets of our Heavy Civil businesses and during the third quarter of fiscal year ended January 31, 2016, we completed the sale of our Geoconstruction business segment. The results of operations related to the Heavy Civil and Geoconstruction business, have been classified as discontinued operations for all periods presented. Unless noted otherwise, discussion in these Notes to Consolidated Financial Statements pertain to continuing operations.

Business Segments – We report our financial results under three reporting segments consisting of Water Resources, Inliner and Mineral Services. We report corporate expenses under the title "Unallocated Corporate." Unallocated corporate expenses primarily consist of general and administrative functions performed on a company-wide basis and benefiting all segments. These costs include expenses related to accounting, financial reporting, internal audit, treasury, legal, tax compliance, executive management and board of directors.

Use of and Changes in Estimates – The preparation of Consolidated Financial Statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Estimates and assumptions about future events and their effects cannot be perceived with certainty and accordingly, these estimates may change as new events occur, as more experience is acquired, as additional information is obtained and as our operating environment changes. While we believe that the estimates and assumptions used in the preparation of the Consolidated Financial Statements are appropriate, actual results could differ from those estimates.

Foreign Currency Transactions and Translation – In accordance with ASC Topic 830, "Foreign Currency Matters," gains and losses resulting from foreign currency transactions are included in the Consolidated Statements of Operations. Assets and liabilities of non-U.S. subsidiaries whose functional currency is the local currency are translated into U.S. dollars at exchange rates prevailing at the balance sheet date. The net foreign currency exchange differences resulting from these translations are reported in accumulated other comprehensive loss. Revenues and expenses are translated at average foreign currency exchange rates during the year.

The cash flows and financing activities of our operations in Mexico are primarily denominated in U.S. dollars. Accordingly, these operations use the U.S. dollar as their functional currency. Monetary assets and liabilities are remeasured at period end. Foreign currency transactions are measured at the current exchange rate and nonmonetary items are measured at historical foreign currency exchange rates with exchange rate differences reported in the Consolidated Statement of Operations.

Net foreign currency transaction losses were $0.2 million, $0.2 million and $0.1 million for the fiscal years ended January 31, 2018, 2017 and 2016, respectively, and are recorded in other (expense) income, net in the accompanying Consolidated Statements of Operations.

Revenue Recognition – Revenues are recognized on large, long-term drilling and infrastructure services contracts meeting the criteria of ASC Topic 605-35 using the percentage of completion method based upon the ratio of costs incurred to total estimated costs at completion. Contract price and cost estimates are reviewed periodically as work progresses and adjustments proportionate to the percentage of completion are reflected in contract revenues in the reporting period when such estimates are revised. The nature of accounting for these contracts using the percentage of completion method is such that refinements of the estimating process for changing conditions and new developments may occur and are characteristic of the process. Many factors can and do change during a contract performance period which can result in a change to contract profitability including differing site conditions (to the extent that contract remedies are unavailable), the availability of skilled contract labor, the performance of major material suppliers, the performance of major subcontractors, unusual weather conditions and unexpected changes in material costs. These factors may result in revisions to costs and income and are recognized in the period in which the revisions become known. Provisions for estimated losses on uncompleted drilling and infrastructure services contracts are made in the period in which such losses become known. When the estimate on a contract indicates a loss, the entire loss is recorded during the accounting period in which the facts that caused the revision become known. Management evaluates the performance of contracts on an individual basis. In the ordinary course of business, but at least quarterly, we prepare updated estimates of cost and profit or loss for each contract. The cumulative effect of revisions in estimates of the total forecasted revenue and costs, including unapproved change orders and claims, during the course of the contract is reflected in the accounting period in which the facts that caused the revision become known. Large changes in cost estimates on larger, more complex drilling and infrastructure services projects can have a material impact on our financial statements and are reflected in results of operations when they become known. During the fiscal years ended January 31, 2018, 2017 and 2016, approximately $6.3 million, $9.8 million and $2.9 million in losses on open contracts were recorded, respectively.

We record revenue on contracts relating to unapproved change orders and claims by including in revenue an amount less than or equal to the amount of the costs incurred by us to date for contract price adjustments that we seek to collect from customers for delays, errors in specifications or designs, change orders in dispute or unapproved as to scope or price, or other unanticipated additional costs, in each case when recovery of the costs is considered probable. The amount of unapproved change orders and claims revenues are included in our Consolidated Balance Sheets as part of costs and estimated earnings in excess of billings on uncompleted contracts. See Note 2 to the Consolidated Financial Statements. When determining the likelihood of eventual recovery, we consider such factors as our experience on similar projects and our experience with the customer. As new facts become known, an adjustment to the estimated recovery is made and reflected in the current period.

As allowed by ASC Topic 605-35, revenue is recognized on smaller, short-term drilling and infrastructure services contracts using the completed contract method. Provisions for estimated losses on uncompleted drilling and infrastructure services contracts are made in the period in which such losses become known and reported in cost of revenues in the Consolidated Statements of Operations. We determine when short-term contracts are completed based on acceptance by the customer.

Revenues for drilling contracts within Mineral Services are primarily recognized in terms of the value of total work performed to date on the basis of actual footage drilled, meterage drilled or services performed.

Revenues for direct sales of equipment and other ancillary products not provided in conjunction with the performance of drilling and infrastructure services contracts are recognized at the date of delivery to and acceptance by, the customer. Provisions for estimated warranty obligations are made in the period in which the sales occur.

Our revenues are presented net of taxes imposed on revenue-producing transactions with our customers, such as, but not limited to, sales, use, value-added and some excise taxes.

Inventories – In February 2017, we adopted Accounting Standards Update ("ASU") 2015-11 "Inventory – Simplifying the Measurement of Inventory" issued by the Financial Accounting Standards Board (the "FASB") on July 22, 2015, on a prospective basis. As such, our January 31, 2017 inventories are valued at the lower of cost or net realizable value and our inventories at January 31, 2017 are valued at the lower of cost or market. Implementation did not result in a material difference in our reported inventory values. Cost of U.S. inventories and the majority of foreign operations are determined using the average cost method. Inventories consist primarily of supplies and raw materials. Supplies of $17.7 million and $16.4 million and raw materials of $2.3 million and $2.3 million were included in inventories, net of reserves of $0.8 million and $0.9 million, in the Consolidated Balance Sheets as of January 31, 2018 and 2017, respectively.

As discussed in Note 18 to the Consolidated Financial Statements, as part of our restructuring activities in Africa and Australia, we recorded a write-down of inventory during fiscal year ended January 31, 2016 amounting to $7.9 million, which is included as part of cost of revenues in the Consolidated Statement of Operations.

Property and Equipment – Property and equipment (including major renewals and improvements) are recorded at cost less accumulated depreciation. Depreciation is provided using the straight-line method. The useful lives used for the items within each property classification are as follows:

Classification	Years
Buildings	15 - 35
Machinery, equipment and pipeline	3 - 25

Property and equipment are reviewed for impairment whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Recoverability is evaluated by comparing the carrying value of the assets to the undiscounted associated cash flows. When this comparison indicates that the carrying value of the asset is greater than the undiscounted cash flows, a loss is recognized for the difference between the carrying value and estimated fair value. Fair value is determined based either on market quotes or appropriate valuation techniques.

See Note 4 to the Consolidated Financial Statements for a discussion of fixed asset impairments recognized during the fiscal year ended January 31, 2016.

As discussed in Note 18 to the Consolidated Financial Statements, during the fiscal year ended January 31, 2016, we implemented a plan to exit our operations in Africa and Australia. As a result of the decision, we determined that it was more likely than not that certain fixed assets will be sold or otherwise disposed of before the end of their estimated useful lives. We recorded charges of approximately $12.9 million and $3.9 million during the fiscal years ended January 31, 2017 and 2016, respectively, to adjust the carrying values of property and equipment in Africa and Australia to estimated fair values, based upon valuation information that includes available third-party quoted prices and appraisals of assets. In calculating the impairment for fiscal year ended January 31, 2017, the carrying amount of the assets included the cumulative currency translation adjustment related to our African and Australian entities. The charges are shown as part of restructuring costs in the Consolidated Statement of Operations.

We reflect property as assets held for sale when management, having the authority to approve the action, commits to a plan to sell the asset, the sale is probable within one year and the asset is available for immediate sale in its present condition. We also consider whether an active program to locate a buyer has been initiated, whether the asset is marketed actively for sale at a price that is reasonable in relation to its current fair value and whether actions required to complete the plan indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn. Upon designation as asset held for sale, we record the carrying value of each asset at the lower of its carrying value or its estimated fair value, less estimated costs to sell and cease recording depreciation.

Discontinued Operations –We adopted Accounting Standards Update 2014-08, "Reporting Discontinued Operations and Disclosures of Disposals of Components of an Entity," on February 1, 2015. Under the guidance, a discontinued operation is defined as a disposal of a component or group of components that is disposed of or is classified as held for sale and represents a strategic shift that has or will have a major effect on an entity's operations and financial results. See Note 16 to the Consolidated Financial Statements for a discussion of our discontinued operations.

Goodwill –In accordance with ASC Topic 350-20, “Intangibles-Goodwill and Other”, we are required to test for the impairment of goodwill on at least an annual basis. We conduct this evaluation annually as of December 31 or more frequently if events or changes in circumstances indicate that goodwill might be impaired. Our reporting units are based on our organizational and reporting structure and are the same as our three reportable segments. Corporate and other assets and liabilities are allocated to the reporting units to the extent that they relate to the operations of those reporting units in determining their carrying amount. We have the option of first performing a qualitative assessment to determine the existence of events and circumstances that would lead to a determination that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If such a conclusion is reached, then we would be required to perform a quantitative impairment assessment of goodwill. However, if the assessment leads to a determination that it is more likely than not that the fair value of a reporting unit is greater than its carrying amount, no further assessments are required. As of December 31, 2017 and 2016, we performed a qualitative assessment for our annual goodwill impairment test and determined that it was more likely than not that the fair value of Inliner, the only reporting unit with goodwill, would exceed its carrying value.

As of January 31, 2018 and 2017, we had $8.9 million of goodwill on the Consolidated Balance Sheets. The goodwill is all attributable to the Inliner reporting segment. Goodwill expected to be tax deductible was $0.9 million as of January 31, 2018 and 2017.

Intangible Assets – Other intangible assets with finite lives primarily consist of tradenames, patents and right-of-ways. Intangible assets are being amortized using the straight-line method over their estimated useful lives, which range from ten to thirty-five years.

Finite-lived intangible assets are reviewed for recoverability whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable.

Cash, Cash Equivalents and Restricted Deposits – We consider investments with an original maturity of three months or less when purchased to be cash equivalents. Our cash equivalents are subject to potential credit risk. Our cash management and investment policies restrict investments to investment grade, highly liquid securities. The carrying value of cash and cash equivalents approximates fair value. Restricted deposits consist of escrow funds related to a certain disposition and judicial deposits associated with tax related legal proceedings in Brazil.

Our statement of cash flows explains the change in the total of cash, cash equivalents and restricted deposits. The following table provides a reconciliation of cash, cash equivalents, and restricted deposits reported within the Consolidated Balance Sheet that sum to the total of the same such amounts in the Consolidated Statements of Cash Flows at January 31, 2018, 2017 and 2016.

	Years Ended January 31,		
(in thousands)	2018	2017	2016
Beginning of the period			
Cash and cash equivalents	$ 69,000	$ 65,569	$ 21,661
Restricted deposits	5,055	7,718	8,376
Total cash, cash equivalents and restricted deposits, beginning of period	74,055	73,287	30,037
End of the period			
Cash and cash equivalents	32,041	69,000	65,569
Restricted deposits	6,572	5,055	7,718
Total cash, cash equivalents and restricted deposits, end of period	38,613	74,055	73,287
Net (decrease) increase in cash, cash equivalents and restricted deposits	$ (35,442)	$ 768	$ 43,250

Allowance for Uncollectible Accounts Receivable – We make ongoing estimates relating to the collectability of our accounts receivable and maintain an allowance for estimated losses resulting from the inability of our customers to make required payments. In determining the amount of the allowance, we make judgments about the creditworthiness of customers based on ongoing credit evaluations and also consider a review of accounts receivable aging, industry trends, customer financial strength, credit standing and payment history to assess the probability of collection. Bad debt expense, which is recorded as part of Selling, General and Administrative Expenses in the Consolidated Statement of Operations, amounted to $(0.2) million, $0.7 million and ($0.4) million for the fiscal years ended January 31, 2018, 2017 and 2016, respectively.

We do not establish an allowance for credit losses on long-term contract unbilled receivables. Adjustments to unbilled receivables related to credit quality, if they occur, are accounted for as a reduction of revenue.

Concentration of Credit Risk – We grant credit to our customers, which may include concentrations in state and local governments. Although this concentration could affect our overall exposure to credit risk, we believe that our portfolio of accounts receivable is sufficiently diversified, thus spreading the credit risk. To manage this risk, we perform periodic credit evaluations of our customers' financial condition, including monitoring our customers' payment history and current credit worthiness. We do not generally require collateral in support of our trade receivables, but may require payment in advance or security in the form of a letter of credit or bank guarantee. During the fiscal years ended January 31, 2018, 2017 and 2016, no individual customer accounted for more than 10% of our consolidated revenues.

Accrued Insurance – We maintain insurance programs where we are responsible for the amount of each claim up to a self-insured limit. Estimates are recorded for health and welfare, workers' compensation, property and casualty insurance costs that are associated with these programs. These costs are estimated based in part on actuarially determined projections of future payments under these programs and include amounts incurred but not reported. Should a greater amount of claims occur compared to what was estimated or costs of the medical profession increase beyond what was anticipated, accruals recorded may not be sufficient and additional costs to the Consolidated Financial Statements could be required.

Costs estimated to be incurred in the future for employee health and welfare benefits, workers' compensation, property and casualty insurance programs resulting from claims which have been incurred are accrued currently. Under the terms of the agreement with the various insurance carriers administering these claims, we are not required to remit the total retained risk amounts until the claims are actually paid by the insurance companies.

Fair Value of Financial Instruments – The carrying amounts of financial instruments, including cash and cash equivalents, customer receivables and accounts payable, approximated fair value at January 31, 2018 and 2017, because of the relatively short maturity of those instruments. See Note 14 to the Consolidated Financial Statements for fair value disclosures.

Litigation and Other Contingencies – We are involved in litigation incidental to our business, the disposition of which is not expected to have a material effect on our business, financial position, results of operations or cash flows. In addition, some of our contracts contain provisions that require payment of liquidated damages if we are responsible for the failure to meet specified contractual milestone dates and the applicable customer asserts a claim under these provisions. These contracts define the conditions under which our customers may make claims against Layne for liquidated damages. In many cases in which we have historically had potential exposure for liquidated damages, such damages ultimately were not asserted by our customers. It is possible, however, that future results of operations for any particular quarterly or annual period could be materially affected by changes in our assumptions related to these proceedings. If the assessment of a contingency indicates that it is probable that a material loss has been incurred and the amount of the liability can be estimated, then the estimated liability is accrued in our Consolidated Financial Statements. If the assessment indicates that a potentially material loss contingency is not probable but is reasonably possible, or is probable but cannot be estimated, then the nature of the contingent liability and an estimate of the range of possible losses, if determinable and material, is disclosed. These provisions are reviewed at least quarterly and adjusted to reflect the impacts of negotiations, settlements, rulings, advice of legal counsel and other information and events pertaining to a particular case.

Supplemental Cash Flow Information –The amounts paid or refunded for income taxes, interest and non-cash investing and financing activities were as follows:

	Years Ended January 31,		
(in thousands)	2018	2017	2016
Income taxes paid	$ 1,312	$ 1,555	$ 1,947
Income tax refunds	(4,627)	(596)	(4,251)
Interest paid	12,442	12,331	11,065
Noncash investing and financing activities:			
Exchange of 4.25% Convertible Notes for 8.0% Convertible Notes	—	—	55,500
Contingent consideration on sale of discontinued operations	—	—	4,244
Accrued capital additions	1,466	1,427	1,186

Income Taxes – Income taxes are provided using the asset and liability method, in which deferred taxes are recognized on the difference between the financial statement carrying amounts and tax bases of existing assets and liabilities. Deferred tax assets are reviewed for recoverability and valuation allowances are provided as necessary. Provision for U.S. income taxes on undistributed earnings of foreign subsidiaries and affiliates is made only on those amounts in excess of funds considered to be invested indefinitely. In general, we record income tax expense during interim periods based on our best estimate of the full year's effective tax rate. However, income tax expense relating to adjustments to Layne's liabilities for uncertainty in income tax positions for prior reporting periods are accounted for discretely in the interim period in which it occurs. Income tax expense relating to adjustments for current year uncertain tax positions is accounted for as a component of the adjusted annualized effective tax rate.

In assessing the need for a valuation allowance, we consider both positive and negative evidence related to the likelihood of realization of the deferred tax assets. The weight given to the positive and negative evidence is commensurate with the extent to which the evidence may be objectively verified. Accounting guidance states that a cumulative loss in recent years is a significant piece of negative evidence that is difficult to overcome in determining that a valuation allowance is not needed against deferred tax assets. As such, it is generally difficult for positive evidence regarding projected future taxable income exclusive of reversing taxable temporary differences to outweigh objective negative evidence of recent financial reporting losses. In preparing future taxable income projections, we consider the periods in which future reversals of existing taxable and deductible temporary differences are likely to occur, future taxable income, taxable income available in prior carryback years and the availability of tax-planning strategies when determining the ability to realize recorded deferred tax assets.

Our estimate of uncertainty in income taxes is based on the framework established in the accounting for income taxes guidance. We recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. For tax positions that meet this recognition threshold, we apply judgment, taking into account applicable tax laws and experience in managing tax audits, to determine the amount of tax benefits to recognize in the financial statements. For each position, the difference between the benefit realized on our tax return and the benefit reflected in the financial statements is recorded as a liability in the Consolidated Balance Sheets. This liability is updated at each financial statement date to reflect the impacts of audit settlements and other resolution of audit issues, expiration of statutes of limitation, developments in tax law and ongoing discussions with taxing authorities.

Income (Loss) Per Share – Income (loss) per share is computed by dividing net earnings available to common shareholders by the weighted average number of common shares outstanding during the period. For periods in which we recognize losses, the calculation of diluted loss per share is the same as the calculation of basic loss per share. For periods in which we recognize net income, diluted earnings per common share is computed in the same way as basic earnings per common share except that the denominator is increased to include the number of additional common shares that would be outstanding if all potential common shares had been issued that were dilutive. Options to purchase common stock and nonvested shares are included based on the treasury stock method for dilutive earnings per share except when their effect is antidilutive. The 4.25% Convertible Notes and the 8.0% Convertible Notes (as defined in Note 8 to the Consolidated Financial Statements) are included in the calculation of diluted loss per share if their inclusion is dilutive under the if-converted method. Options to purchase 659,086, 750,044 and 839,175 shares have been excluded from weighted average shares for the fiscal years ended January 31, 2018, 2017 and 2016, respectively, as their effect was antidilutive. A total of 1,957,803, 1,871,640 and 1,407,170 non-vested shares have been excluded from weighted average shares for the fiscal years ended January 31, 2018, 2017 and 2016, respectively, as their effect was antidilutive.

Equity-Based Compensation – We recognize the cost of all equity-based instruments in the Consolidated Financial Statements based on the calculated fair value of the award. The fair value of equity-based compensation granted in the form of stock options is determined using a lattice valuation model. In addition, we granted certain market-based awards during the years ended January 31, 2018, 2017 and 2016, which were valued using the Monte Carlo simulation model. See Note 13 to the Consolidated Financial Statements.

Unearned compensation expense associated with the issuance of awards is amortized on a straight-line basis as the restrictions on the stock expire, subject to achievement of certain contingencies.

New Accounting Pronouncements -

The FASB issued ASU 2014-09, "Revenue from Contracts with Customers" on May 28, 2014 and issued the related Update 2016-20 "Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers" in December, 2016 with the same effective dates as ASU 2014-09. On August 12, 2015, the FASB issued ASU 2015-14, which defers the adoption of ASU 2014-09 to annual reporting periods beginning after December 15, 2017, including interim reporting periods within that reporting period. The collective guidance in these ASUs defines the steps to recognize revenue for entities that have contracts with customers as well as requiring significantly expanded disclosures regarding the qualitative and quantitative information of the nature, amount,

timing, and uncertainty of revenue and cash flows arising from such contracts. We will adopt the new guidance beginning on February 1, 2018 using the full retrospective method that will result in retrospective application. During the first quarter of the fiscal year ended 2019, we will record a cumulative adjustment to retained earnings for the retrospective application as provided for in the guidance. Expanded disclosures as required under the new guidance will be included in the notes to the consolidated financial statements in each of the quarterly reports on Form 10-Q and in our annual report on Form 10-K for the year ending January 31, 2019. The primary impact of the guidance on our financial statements is the elimination of the completed contract method of recognizing revenues, mostly prevalent in our Water Resources segment, and the elimination of segmentation treatment related to certain customer contracts in our Inliner segment. We have updated our accounting policies and internal controls, and implemented changes to our business processes and information systems to support the new revenue recognition and disclosure requirements. Based on our assessment of the impact of adoption, we estimate a net cumulative reduction of our retained earnings of less than $1.0 million.

In February 2016, the FASB issued ASU No. 2016-02, “Leases,” which establishes a right-of-use (“ROU”) model that requires a lessee to record a ROU asset and a lease liability on the balance sheet for all leases with terms longer than twelve months. In January 2018, the FASB issued ASU No. 2018-01 Leases (Topic 842): Land Easement Practical Expedient for Transition to Topic 842. Leases will be classified as either finance or operating, with classification affecting the pattern of expense recognition in the income statement. This ASU is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Early adoption is permitted. ASU 2016-02 requires modified retrospective adoption for all leases existing at, or entered into after, the date of initial application, with an option to use certain transition relief. We are preparing to implement changes to our accounting policies and controls, business processes and information systems to support the new accounting and disclosure requirements, which is effective for us beginning on February 1, 2019. We are currently evaluating the significance of adoption of this ASU and currently, based on our limited number of leases, we do not believe the effect will be material on our financial statements.

In January 2017, the FASB issued ASU 2017-04, “Intangibles—Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment”, under the amendments in this update, an entity should perform its annual, or interim, goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. An entity should recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit’s fair value; however, the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. Additionally, an entity should consider income tax effects from any tax deductible goodwill on the carrying amount of the reporting unit when measuring the goodwill impairment loss, if applicable. As a public business, adoption of the amendments in this update are required, prospectively, for the annual or any interim goodwill impairment tests in fiscal years beginning after December 15, 2019 with early adoption permitted for testing dates after January 1, 2017. We anticipate adopting this ASU beginning on February 1, 2020 and do not believe the adoption will have a material impact on our financial statements.

In November 2016, the FASB issued ASU 2016-18, “Statement of Cash Flows: Restricted Cash,” which provides guidance about the presentation of changes in restricted cash and restricted cash equivalents on the statement of cash flows. We early adopted the ASU on January 31, 2018 by applying a retrospective transition method to each period presented. The adoption of this ASU involved removing restricted deposits from cash provided by operating investments to reconcile net income to cash, cash equivalents and restricted deposits for each year presented in the Consolidated Statement of Cash Flows. It did not have a material impact on our financial statements.

In August 2016, the FASB issued ASU 2016-15, “Statement of Cash Flows: Classification of Certain Cash Receipts and Cash Payments.” This ASU provides guidance and clarification in regards to the classification of eight types of receipts and payments in the statement of cash flows, including debt repayment or extinguishment costs, settlement of zero-coupon bonds, proceeds from the settlement of insurance claims, distributions received from equity method investees and cash receipts from beneficial interest in securitization transactions. We formally adopted the ASU on January 31, 2018. Our Latin American affiliates issue dividends which we account for using the cumulative earnings approach, so no accounting transition was necessary. See “Investment in Affiliated Companies” above.

(2) Costs and Estimated Earnings on Uncompleted Contracts

Costs and estimated earnings on uncompleted contracts consisted of the following:

(in thousands)	As of January 31, 2018	As of January 31, 2017
Cost incurred on uncompleted contracts	$ 496,324	$ 658,553
Estimated earnings	204,124	213,142
	700,448	871,695
Less: Billing to date	666,024	842,232
Total	$ 34,424	$ 29,463
Included in accompanying balance sheets under the following captions:		
Costs and estimated earnings in excess of billing on uncompleted contracts	$ 44,987	$ 48,623
Billings in excess of costs and estimated earnings on uncompleted contracts	(10,563)	(19,160)
Total	$ 34,424	$ 29,463

We bill our customers based on specific contract terms. Substantially all billed amounts are collectible within one year. As of January 31, 2018 and 2017, our costs and estimated earnings in excess of billings on uncompleted contracts included unbilled contract retainage amounts of $16.0 million and $19.1 million, respectively.

(3) Property and Equipment

Property and equipment consisted of the following:

(in thousands)	January 31, 2018	January 31, 2017
Land	$ 11,156	$ 10,037
Buildings and improvements	31,530	30,835
Machinery, equipment and pipeline	356,132	323,280
Property and equipment, at cost	398,818	364,152
Less - Accumulated depreciation	(278,214)	(267,167)
Property and equipment, net	$ 120,604	$ 96,985

Depreciation expense was $26.1 million, $24.9 million and $29.6 million for the fiscal years ended January 31, 2018, 2017 and 2016, respectively.

(4) Impairment Charges

Prior to the segment realignment in the third quarter of the fiscal year ended January 31, 2016, we reviewed the recoverability of the asset values of our long-lived assets in the Energy Services segment during the second quarter of the fiscal year ended January 31, 2016. Using the undiscounted cash flow model, we concluded that the carrying value of the assets in Energy Services was not fully recoverable as of July 31, 2015. We performed an assessment of the fair value of the assets of Energy Services based on orderly liquidation value of the property and equipment, which was considered as Level 2 fair value measurement. This assessment resulted in the recording of an impairment charge of approximately $4.6 million during the second quarter of the fiscal year ended January 31, 2016.

(5) Investments in Affiliates

We have investments in affiliates that are engaged in mineral drilling services and the manufacture and supply of drilling equipment, parts and supplies. Investment in affiliates may include other drilling and infrastructure services related joint ventures from time to time. Our equity method investments are part of our Mineral Services segment.

A summary of material, jointly-owned affiliates, as well as their primary operating subsidiaries if applicable and the percentages directly or indirectly owned by Layne are as follows as of January 31, 2018:

	Percentage Owned Directly	Percentage Owned Indirectly
Boyles Bros Servicios Tecnicos Geologicos S.A. (Panama)	50.00%	
Boytec, S.A. (Panama)		50.00%
Boytec Sondajes de Mexico, S.A. de C.V. (Mexico)		50.00
Sondajes Colombia, S.A. (Columbia)		50.00
Mining Drilling Fluids (Panama)		25.00
Plantel Industrial S.A. (Chile)		50.00
Christensen Chile, S.A. (Chile)	50.00	
Christensen Commercial, S.A. (Chile)	50.00	
Geotec Boyles Bros., S.A. (Chile)	50.00	
Centro Internacional de Formacion S.A. (Chile)		50.00
Geoestrella S.A. (Chile)		25.00
Diamantina Christensen Trading (Panama)	42.69	
Christensen Commercial, S.A. (Peru)	35.38	
Geotec, S.A. (Peru)	35.38	
Boyles Bros. Diamantina, S.A. (Peru)	29.49	
Mining Drilling Fluids S.A. (Chile)	25.00	

Financial information for the affiliates is reported with a one-month lag in the reporting period. The impact of the lag on our investment and results of operations are not significant. Summarized financial information of the affiliates is as follows:

	As of and Years Ended January 31,		
(in thousands)	2018	2017	2016
Balance sheet data:			
Current assets	$ 92,882	$ 87,116	$ 89,943
Noncurrent assets	79,761	77,624	83,132
Current liabilities	35,201	27,270	27,538
Noncurrent liabilities	12,815	11,288	13,393
Income statement data:			
Revenues	143,698	123,846	135,602
Gross profit	25,710	21,259	17,944
Operating income (loss)	9,778	6,621	3,424
Net income (loss)	8,083	5,697	(989)

We had no significant transactions or balances with our affiliates as of January 31, 2018, 2017 and 2016 and for the fiscal years then ended.

Our equity in undistributed earnings of the affiliates totaled $48.7 million, $50.7 million and $52.8 million as of January 31, 2018, 2017 and 2016, respectively and an additional $4.6 million of investment in affiliates was recorded as equity method goodwill for certain of the investments at the time of acquisition.

(6) Other Intangible Assets

Other intangible assets consisted of the following as of January 31:

(in thousands)	2018			2017		
	Gross Carrying Amount	Accumulated Amortization	Weighted Average Amortization Period in Years	Gross Carrying Amount	Accumulated Amortization	Weighted Average Amortization Period in Years
Amortizable intangible assets:						
Tradenames	$ 5,120	$ (4,210)	15	$ 5,120	$ (3,869)	15
Patents	905	(680)	12	905	(635)	12
Right-of-ways	2,663	(162)	13	—	—	
Other	500	(292)	10	500	(242)	10
Total intangible assets	$ 9,188	$ (5,344)		$ 6,525	$ (4,746)	

Total amortization expense for other intangible assets was $0.6 million, $0.4 million and $0.5 million for the fiscal years ended January 31, 2018, 2017 and 2016, respectively. Amortization expense for the subsequent five fiscal years is estimated as follows:

Estimated amortization for the next 5 years (in thousands)	Amount
Fiscal Year 2019	$ 636
Fiscal Year 2020	636
Fiscal Year 2021	522
Fiscal Year 2022	293
Fiscal Year 2023	221
Thereafter	1,536
Total	$ 3,844

(7) Other Balance Sheet Information

The table below presents comparative detailed information about other current assets:

(in thousands)	January 31, 2018	January 31, 2017
Other current assets:		
Income taxes receivable	$ 430	$ 5,524
Assets held for sale	6,038	4,735
Prepaid insurance	1,214	1,801
Other	4,233	4,691
Total	$ 11,915	$ 16,751

The table below presents comparative detailed information about other non-current assets:

(in thousands)	January 31, 2018	January 31, 2017
Other non-current assets:		
Contingent consideration receivable	4,244	4,244
Deferred income taxes	220	242
Deferred financing fees, net	987	1,833
Other	2,957	5,195
Total	$ 8,408	$ 11,514

The table below presents comparative detailed information about other current liabilities:

(in thousands)		January 31, 2018		January 31, 2017
Other current liabilities:				
Reserve for assets held for sale(1)		12,431		12,431
Accrued compensation		16,242		13,364
Accrued insurance		9,616		12,206
Income taxes payable		324		9,088
Other accrued expenses		14,431		16,954
Total	$	53,044	$	64,043

(1) Reserve for assets held for sale represents the impairment of assets held for sale in Australia and Africa. In calculating the impairment, the carrying amount of the assets included the cumulative currency translation adjustment related to our Australian and African entities.

(8) Indebtedness

Debt outstanding as of January 31, 2018 and 2017 was as follows:

(in thousands)		January 31, 2018		January 31, 2017
4.25% Convertible Notes	$	67,248	$	64,387
8.0% Convertible Notes		98,769		97,952
Capitalized lease obligations		45		17
Less amounts representing interest		—		(1)
Total debt		166,062		162,355
Less current maturities of long-term debt(1)		(67,293)		(9)
Total long-term debt	$	98,769	$	162,346

(1) Primarily represents the 4.25% Convertible Notes with a maturity date of November 15, 2018.

As of January 31, 2018, debt outstanding will mature as follows:

(in thousands)		4.25% Convertible Notes		8.0% Convertible Notes		Asset-based credit facility		Capitalized lease obligations		Total
Fiscal Year 2019	$	67,248	$	—	$	—	$	45	$	67,293
Fiscal Year 2020		—		98,769		—		—		98,769
Total	$	67,248	$	98,769	$	—	$	45	$	166,062

Asset-based Revolving Credit Facility

We have a $100.0 million senior secured asset-based credit facility, that expires on April 14, 2019, of which up to an aggregate principal amount of $75.0 million is available in the form of letters of credit and up to an aggregate principal amount of $15.0 million is available for short-term swingline borrowings.

The maturity date for the asset-based credit facility is April 15, 2019. However, the maturity date will accelerate to May 15, 2018 if each of the following has not yet occurred on or before such date: (i) either (a) all of the 8.0% Convertible Notes (or Permitted Refinancing Indebtedness (as defined in the asset-based credit facility agreement) in respect thereof) are converted or (b) the maturity date of the 8.0% Convertible Notes (or Permitted Refinancing Indebtedness in respect thereof) is extended to a date which is after October 15, 2019 and (ii) either (a) all of the 4.25% Convertible Notes (or Permitted Refinancing Indebtedness in respect thereof) are converted, (b) the maturity date for the 4.25% Convertible Notes (or Permitted Refinancing Indebtedness in respect thereof) is extended to a date which is after October 15, 2019, or (c) the 4.25% Convertible Notes are effectively discharged. The 4.25% Convertible Notes will be effectively discharged after, among other things, we have irrevocably deposited with the trustee of the 4.25% Convertible Notes cash in an amount sufficient to pay any remaining interest and principal payments due on any then remaining unconverted 4.25% Convertible Notes, with irrevocable instructions to the trustee to make such payments to the holders of the 4.25% Convertible Notes as they become due.

The asset-based credit facility is guaranteed by assets of our direct and indirect wholly owned domestic subsidiaries, subject to certain exceptions described in the asset-based credit facility. The obligations under the asset-based credit facility are secured by a lien on substantially all of our assets and the assets of the subsidiary guarantors, subject to certain exceptions described in the asset-based credit facility, including a pledge of up to 65% of the equity interests of our first tier foreign subsidiaries.

Availability under the asset-based credit facility is currently the lesser of (i) $100.0 million or (ii) the borrowing base (as defined in the asset-based credit facility agreement).

Availability under the asset-based credit facility as of January 31, 2018, was approximately $100.0 million, as the borrowing base exceeded total commitments. Approximately $24.6 million of letters of credit were issued under the asset-based credit facility and no borrowings were outstanding as of January 31, 2018, resulting in Excess Availability (described below) of $75.4 million.

Advances under the asset-based credit facility are subject to certain conditions precedent, including the accuracy of certain representations and warranties and the absence of any default or event of default. Future advances may be used for general corporate and working capital purposes and to pay fees and expenses associated with the asset-based credit facility.

Pursuant to the asset-based credit facility agreement, the revolving loans will bear interest at either:

- the alternate base rate plus the applicable margin. The alternate base rate is equal to the highest of (a) the base rate, (b) the sum of the Federal Funds Open rate plus 0.5% and (c) the sum of the Daily LIBOR rate plus 1%, or
- the LIBOR rate (as defined in the asset-based credit facility agreement) for the interest period in effect for such borrowing plus the applicable margin.

The asset-based credit facility contains various restrictions and covenants, including restrictions on dispositions of certain assets, incurrence of indebtedness, investments, distributions, capital expenditures, acquisitions and prepayment of certain indebtedness. In general, provided that we maintain a certain level of Excess Availability, we will not be restricted from incurring additional unsecured indebtedness or making investments, distributions, capital expenditures or acquisitions.

In compliance with the terms of our asset-based credit facility, we obtained an asset sale consent from our lenders on January 25, 2017 in connection with the sale of our Heavy Civil business segment.

If Excess Availability is less than the greater of 17.5% of Total Availability or $17.5 million for more than one business day, then a "Covenant Compliance Period" (as defined in the asset-based credit facility agreement) will exist until Excess Availability has been equal to or greater than the greater of 17.5% of the Total Availability or $17.5 million for a period of 30 consecutive days. We must maintain a minimum fixed charge coverage ratio of not less than 1.0 to 1.0 and a maximum first lien leverage ratio of not greater than 5.0 to 1.0 for the four fiscal quarters ended immediately preceding any Covenant Compliance Period and for any four fiscal quarter period ending during a Covenant Compliance Period. We would not have been in compliance with the fixed charge coverage ratio had we been in a Covenant Compliance Period as of the fiscal years ended January 31, 2018 and 2017.

During the fiscal year ended January 31, 2016, we had two consecutive four-quarter periods with a fixed charge coverage ratio of not less than 1.0 to 1.0 and therefore, we are no longer required to maintain a cumulative minimum cash flow (as defined in the asset-based credit facility agreement) of not less than negative $45.0 million and a minimum cash flow of not less than negative $25.0 million during any twelve consecutive month period.

The asset-based credit facility also contains a subjective acceleration clause that can be triggered if the lenders determine that we have experienced a material adverse change. If triggered by the lenders, this clause would create an Event of Default (as defined in the asset-based credit facility agreement), which in turn would permit the lenders to accelerate repayment of outstanding obligations.

The balance sheet classification of borrowings under the asset-based credit facility has been determined in accordance with ASC Topic 470-10-45, "Balance Sheet Classification of Borrowings Outstanding under Revolving Credit Agreements that Include both a Subjective Acceleration Clause and a Lock-Box Arrangement." Accordingly, borrowings will be classified as a long-term liability in the accompanying Consolidated Balance Sheet.

In general, during a Covenant Compliance Period or if an Event of Default has occurred and is continuing, all of Layne's funds received on a daily basis will be applied to reduce amounts owing under the asset-based credit facility. Based on current projections Layne does not anticipate being in a Covenant Compliance Period during the next twelve months. Also, because Excess Availability currently is and is expected to be for the next twelve months, sufficient not to trigger a Covenant Compliance Period, we are and anticipate being in compliance with the applicable debt covenants associated with the asset-based credit facility for the next twelve months.

Defaults under the asset-based credit facility include (but are not limited to) the following:

- non-payment of principal, interest, fees and other amounts under the asset-based credit facility
- failure to comply with any of the negative covenants, certain of the specified affirmative covenants or other covenants under the asset-based credit facility
- failure to pay certain indebtedness when due
- specified events of bankruptcy and insolvency
- one or more judgments of $5.0 million not covered by insurance and not paid within a specified period.
- a change in control as defined in the asset-based credit facility.

On March 30, 2018, our asset-based credit facility agreement was amended to revise the acceleration provision included in the definition of Maturity Date to be July 16, 2018 if we have not delivered to the administrative agent for the asset-based credit facility evidence by July 15, 2018 that the 4.25% Convertible Notes have been effectively discharged with the proceeds from the issuance of the 11.0% Unsecured Notes or (b) May 15, 2018 if (i) the issuance of the 11.0% Unsecured Notes is cancelled for any reason or (ii) the proceeds of the 11.0% Unsecured Notes are used for a purpose other than to effectively discharge the 4.25% Convertible Notes in full; provided, that if an event described in clause (i) or (ii) above occurs after May 15, 2018, then the maturity date of the asset-based credit facility will be the date the event occurred.

4.25% Convertible Senior Notes

On November 12, 2013, we completed the issuance and sale of $110.0 million aggregate principal amount of 4.25% Convertible Notes due 2018 (the "4.25% Convertible Notes"), in accordance with the terms of the purchase agreement (the "Purchase Agreement") entered into with Jefferies LLC (the "Initial Purchaser"). On December 5, 2013, the Initial Purchaser exercised its option to purchase an additional $15.0 million aggregate principal amount of 4.25% Convertible Notes as part of the Purchase Agreement. The 4.25% Convertible Notes were issued pursuant to an Indenture, dated November 12, 2013 (the "4.25% Convertible Notes Indenture"), between Layne and U.S. Bank National Association, as trustee. The 4.25% Convertible Notes are senior, unsecured obligations of Layne. The 4.25% Convertible Notes are convertible, at the option of the holders, into consideration consisting of, at our election, cash, shares of our common stock, or a combination of cash and shares of our common stock (and cash in lieu of fractional shares) until the close of business on the scheduled trading day immediately preceding May 15, 2018. However, before May 15, 2018, the 4.25% Convertible Notes will not be convertible except in certain circumstances provided in the 4.25% Convertible Notes Indenture.

The 4.25% Convertible Notes bear interest at a rate of 4.25% per year, payable semi-annually in arrears in cash on May 15 and November 15 of each year, beginning on May 15, 2014. The 4.25% Convertible Notes will mature on November 15, 2018, unless earlier repurchased, redeemed or converted. See "Potential Refinancing of Convertible Notes" below.

The initial conversion rate was 43.6072 shares of our common stock per $1,000 principal amount of 4.25% Convertible Notes (which is equivalent to an initial conversion price of approximately $22.93 per share of our common stock). The conversion rate will be subject to adjustment upon the occurrence of certain events. In addition, we may be obligated to increase the conversion rate for any conversion that occurs in connection with certain corporate events, including our call of the 4.25% Convertible Notes for redemption.

On and after November 15, 2016 and prior to the maturity date, pursuant to the 4.25% Convertible Note Indenture, we may redeem all, but not less than all, of the 4.25% Convertible Notes for cash if the sale price of our common stock equals or exceeds 130% of the applicable conversion price for a specified time period ending on the trading day immediately prior to the date we deliver notice of the redemption. The redemption price will equal 100% of the principal amount of the 4.25% Convertible Notes to be redeemed, plus any accrued and unpaid interest to, but excluding, the redemption date. In addition, upon the occurrence of a fundamental change (as defined in the 4.25% Convertible Notes Indenture), holders of the 4.25% Convertible Notes will have the right, at their option, to require us to repurchase their 4.25% Convertible Notes in cash at a price equal to 100% of the principal amount of the 4.25% Convertible Notes to be repurchased, plus accrued and unpaid interest to, but excluding, the fundamental change repurchase date.

If any amount payable on a 4.25% Convertible Note (including principal, interest, a fundamental change repurchase or a redemption) is not paid by us when it is due and payable, such amount will accrue interest at a rate equal to 5.25% per annum from such payment date until paid.

The pending merger with Granite is not a fundamental change under the indenture governing the 4.25% Convertible Notes. In the merger agreement, Granite agreed that any conversions of the 4.25% Convertible Notes after the closing of the merger would be settled solely in cash.

In accordance with ASC Topic 470-20, “Debt with Conversion and Other Options,” we separately account for the liability and equity conversion components of the 4.25% Convertible Notes. The principal amount of the liability component of the 4.25% Convertible Notes was $106.0 million as of the date of issuance based on the present value of our cash flows using a discount rate of 8.0%, our approximate borrowing rate at the date of the issuance for a similar debt instrument without the conversion feature. The carrying value of the equity conversion component was $19.0 million. A portion of the Initial Purchaser’s discount and commission and the offering costs totaling $0.8 million and deferred taxes totaling $7.1 million were allocated to the equity conversion component. The liability component will be accreted to the principal amount of the 4.25% Convertible Notes using the effective interest method over five years.

In accordance with guidance in ASC Topic 470-20 and ASC Topic 815-15, “Embedded Derivatives,” we determined that the embedded conversion components and other embedded derivatives of the 4.25% Convertible Notes do not require bifurcation and separate accounting.

On March 2, 2015, we exchanged approximately $55.5 million aggregate principal amount of our 4.25% Convertible Notes for approximately $49.9 million aggregate principal amount of our 8.0% Convertible Notes (described further below). In accordance with the derecognition guidance for convertible instruments in an exchange transaction under ASC Topic 470-20, the fair value of the 8.0% Convertible Notes (“the exchange consideration”) and the transaction costs incurred were allocated between the liability and equity components of the 4.25% Convertible Notes. Of the $49.9 million exchange consideration, $42.1 million, which represents the fair value of the 4.25% Convertible Notes immediately prior to its derecognition, was allocated to the extinguishment of the liability component. Transaction costs of $0.9 million were also allocated to the liability component. As a result, we recognized a gain on extinguishment of debt of $4.2 million during the first quarter of the fiscal year ended January 31, 2016. The remaining $7.8 million of the exchange consideration and $0.2 million of transaction costs were allocated to the reacquisition of the equity component and recognized as a reduction of stockholders’ equity.

The following table presents the carrying value of the 4.25% Convertible Notes:

(in thousands)	January 31, 2018	January 31, 2017
Carrying amount of the equity conversion component	$ (3,106)	$ 3,106
Principal amount of the 4.25% Convertible Notes	$ 69,500	$ 69,500
Unamortized deferred financing fees	(476)	(1,033)
Unamortized debt discount (1)	(1,776)	(4,080)
Net carrying amount	$ 67,248	$ 64,387

(1) As of January 31, 2018, the remaining period over which the unamortized debt discount will be amortized is nine months using an effective interest rate of 9%.

8.0 % Senior Secured Second Lien Convertible Notes

On March 2, 2015, we completed the offering of approximately $100.0 million aggregate principal amount of 8.0% Senior Secured Second Lien Convertible Notes ("8.0% Convertible Notes"). The 8.0% Convertible Notes were offered at par to certain investors that held approximately $55.5 million of our 4.25% Convertible Notes due 2018 pursuant to terms in which the investors agreed to (i) exchange the 4.25% Convertible Notes owned by them for approximately $49.9 million of the 8.0% Convertible Notes and (ii) purchase approximately $49.9 million aggregate principal amount of 8.0% Convertible Notes at a cash price equal to the principal amount thereof. The amount of accrued interest on the 4.25% Convertible Notes delivered by the investors in the exchange was credited to the cash purchase price payable by the investors in the purchase.

The sale of the 8.0% Convertible Notes generated net cash proceeds of approximately $45.0 million after deducting discounts and commissions, estimated offering expenses and accrued interest on the 4.25% Convertible Notes being exchanged. We used the net cash proceeds to repay the then outstanding balance on the asset-based credit facility of $18.2 million with the remainder of the proceeds held for general working capital purposes.

The 8.0% Convertible Notes were issued pursuant to an Indenture, dated as of March 2, 2015 (the "8.0% Convertible Notes Indenture"), among Layne, the guarantor parties thereto and U.S. Bank National Association, as trustee and collateral agent. The 8.0% Convertible Notes are senior, secured obligations of Layne, with interest payable on May 1 and November 1 of each year, beginning May 1, 2015, at a rate of 8.0% per annum. The 8.0% Convertible Notes will mature on May 1, 2019; provided, however, that, unless all of the 4.25% Convertible Notes (or any permitted refinancing indebtedness in respect thereof) have been redeemed, repurchased, otherwise retired, discharged in accordance with their terms or converted into our common stock, or have been effectively discharged, in each case on or prior to August 15, 2018 or the scheduled maturity date of the 4.25% Convertible Notes (or any permitted refinancing indebtedness incurred in respect thereof) is extended to a date that is after October 15, 2019, the 8.0% Convertible Notes will mature on August 15, 2018. See "-Potential Refinancing of Convertible Notes" below.

The 8.0% Convertible Notes are senior, secured obligations and are guaranteed by our subsidiaries that currently are co-borrowers or guarantors under our asset-based credit facility, as well as all of our future wholly-owned U.S. restricted subsidiaries and, in certain cases, certain of our other subsidiaries.

The 8.0% Convertible Notes are secured by a lien on substantially all of our assets and the assets of the subsidiary guarantors, subject to certain exceptions. The liens on the assets securing the 8.0% Convertible Notes are junior in priority to the liens (the "First Priority Liens") on such assets securing our debt (the "First Priority Debt") or that of the subsidiary guarantors under our asset-based credit facility and certain other specified existing or future obligations.

At any time prior to the maturity date, we may redeem for cash all, but not less than all, of the 8.0% Convertible Notes; provided, however, that we may not redeem the 8.0% Convertible Notes on a redemption date that is outside an Open Redemption Period (as defined in the 8.0% Convertible Notes Indenture) unless the last reported sale price of our common stock equals or exceeds 140% of the conversion price of the 8.0% Convertible Notes in effect on each of at least 20 trading days during the 30 consecutive trading day period ending on and including, the trading day immediately preceding the date on which we deliver the redemption notice.

In addition, upon the occurrence of a "fundamental change" (as defined in the 8.0% Convertible Notes Indenture), holders of the 8.0% Convertible Notes will have the right, at their option, to require us to repurchase their 8.0% Convertible Notes in cash at a price equal to 100% of the principal amount of the 8.0% Convertible Notes to be repurchased, plus accrued and unpaid interest to, but excluding, the fundamental change repurchase date.

The 8.0% Convertible Notes Indenture permits us to reinvest the net proceeds from certain "asset sales" (as defined in the 8.0% Convertible Notes Indenture). Any such reinvestments are subject to the criteria and time periods in the 8.0% Convertible Notes Indenture. Any net proceeds from "asset sales" that are not reinvested within the applicable time period constitute "excess proceeds" (as defined in the 8.0% Convertible Notes Indenture). When the aggregate amount of "excess proceeds" exceeds $10.0 million, we must, within 30 days, make an offer to all holders of the 8.0% Convertible Notes and holders of certain other pari passu debt obligations of the Company (together, the "Qualifying Indebtedness") to repurchase the Qualifying Indebtedness up to the maximum amount of the available "excess proceeds." The Qualifying Indebtedness repurchase price will equal 100% of the principal amount plus any accrued and unpaid interest to, but excluding the repurchase date. The holders of the Qualifying Indebtedness may, at their option, elect to accept the repurchase offer. If the aggregate amount of Qualifying Indebtedness tendered for repurchase exceeds the amount of "excess proceeds", the Qualifying Indebtedness tendered will be repurchased on a pro rata basis. We may use any "excess proceeds" remaining as a result of an insufficient amount of Qualifying Indebtedness being tendered for repurchase for any purpose not otherwise prohibited by the 8.0% Convertible Notes Indenture.

The 8.0% Convertible Notes are convertible, at the option of the holders, into consideration consisting of shares of our common stock (and cash in lieu of fractional shares) until the close of business on the scheduled trading day immediately preceding the maturity date. No holder will have the right to convert any 8.0% Convertible Notes into shares of common stock to the extent that the conversion would cause that holder to beneficially own more than 9.9% of the shares of our common stock then outstanding after giving effect to the proposed conversion.

The initial conversion rate was 85.4701 shares of our common stock per $1,000 principal amount of 8.0% Convertible Notes (equivalent to an initial conversion price of approximately $11.70 per share of our common stock). The conversion rate is subject to adjustment upon the occurrence of certain events. In addition, we may be obligated to increase the conversion rate for any conversion that occurs in connection with certain corporate events, including our call of the 8.0% Convertible Notes for redemption.

The 8.0% Convertible Notes Indenture contains covenants that, among other things, restrict our ability and that of our restricted subsidiaries, subject to certain exceptions, to: (1) incur additional indebtedness; (2) create liens; (3) declare or pay dividends on, make distributions with respect to, or purchase or redeem, our equity interests or the equity interests of our restricted subsidiaries, or make certain payments on subordinated or unsecured indebtedness or make certain investments; (4) enter into certain transactions with affiliates; (5) engage in certain asset sales unless specified conditions are satisfied; and (6) designate certain subsidiaries as unrestricted subsidiaries. The 8.0% Convertible Notes Indenture also contains events of default after the occurrence of which the 8.0% Convertible Notes may be accelerated and become immediately due and payable.

If any amount payable on a 8.0% Convertible Note (including principal, interest, a fundamental change repurchase or a redemption) is not paid by us when it is due and payable, such amount will accrue interest at a rate equal to 9.0% per annum from such payment date until paid.

The pending merger with Granite is not a fundamental change under the indenture governing the 8.00% Convertible Notes. If the merger with Granite is consummated, any future conversions of the 8.0% Convertible Notes would be settled solely in shares of common stock of Granite (other than cash in lieu of any fractional shares).

In accordance with guidance in ASC Topic 815-15, we determined that the embedded conversion components and other embedded derivatives of the 8.0% Convertible Notes do not require bifurcation and separate accounting. We accounted for the 8.0% Convertible Notes as debt with conversion features that are not beneficial under ASC Topic 470-20. Accordingly, all the proceeds from the issuance of the 8.0% Convertible Notes are recorded as a liability in our Consolidated Balance Sheets.

The following table presents the carrying value of the 8.0% Convertible Notes:

(in thousands)	January 31, 2018	January 31, 2017
Principal amount of the 8.0% Convertible Notes	$ 99,898	$ 99,898
Unamortized deferred financing fees	(1,129)	(1,946)
Net carrying amount	$ 98,769	$ 97,952

11% Unsecured Notes

On March 19, 2018, we entered into a note purchase agreement with two investments funds advised by Corre Partners Management, LLC to purchase $ 71.0 million of our 11% Unsecured Notes. Corre Partners Management and its affiliated funds, including the purchasers of the 11.0% Unsecured Notes, own a portion of our 4.25% Convertible Notes and 8.00% Convertible Notes. Under the note purchase agreement, the purchasers have committed to purchase $71.0 million of our 11% Unsecured Notes due October 16, 2019 (the "11.0% Unsecured Notes") at a purchase price equal to 100% of the principal amount of the 11.0% Unsecured Notes. The closing of the purchase and sale of the 11.0% Unsecured Notes will be the earlier to occur of (i) October 1, 2018 and (ii) the fifth business day after delivery of a funding notice by us to the purchasers. As a result, if the proceeds of the 11.0% Unsecured Notes were to be used to effectively discharge the 4.25% Convertible Notes prior to July 16, 2018, we would need to refinance (1) the asset-based credit facility on or prior to April 14, 2019, (2) to the extent they are not converted into our common stock, the 8.0% Convertible Notes on May 1, 2019 and (3) the 11.0% Unsecured Notes on or prior to October 16, 2019. The commitment of the purchasers to purchase the 11.0% Unsecured Notes terminates upon the earliest to occur of: (i) a change of control (including the closing of the pending merger with Granite) and (ii) delivery to the purchasers of a notice of termination by us.

We may at our option prepay the 11.0% Unsecured Notes in whole or in part at any time. The 11.0% Unsecured Notes are subject to a mandatory prepayment upon the closing of a change of control. The 11.0% Unsecured Notes are subject to an Early Payment Event Fee if the 11.0% Unsecured Notes are repaid less than 90 days after the 11.0% Unsecured Notes are issued. The amount of the Early Payment Event Fee will be equal to the excess, if any, of (x) 90 days of accrued interest on the principal amount

repaid, over (y) the amount of interest accrued and paid or payable with respect to the principal amount repaid from the date of issuance to and including the date of the repayment.

There are no covenants applicable to us under the Note Purchase Agreement so long as: (i) the 11.0% Unsecured Notes have not been issued, (ii) any of the 8.00% Convertible Notes are outstanding and (iii) none of the provisions of the indenture governing the 8.00% Convertible Notes have been amended or waived. After the 11.0% Unsecured Notes have been issued, we will be subject to certain covenants, including, delivery of financial statements and other reports, compliance with material contracts and applicable laws, and maintenance of corporate existence, insurance and properties. In addition, after the earliest date that (i) none of the 8.00% Convertible Notes are outstanding or (ii) all or any of the provisions of the indenture governing the 8.00% Convertible Notes are no longer in effect or have been amended or waived, we will be subject to negative covenants related to indebtedness, liens, sale and leaseback transactions, asset sales, dividends and restricted payments, transactions with affiliates, and maximum ratio of funded indebtedness to EBITDA.

Potential Refinancing of Convertible Notes

Prior to August 15, 2018, we may elect to issue the 11.0% Unsecured Notes and use the proceeds from the issuance of the 11.0% Unsecured Notes to effectively discharge the 4.25% Convertible Notes, in which case the maturity date of the 8.0% Convertible Notes would remain May 1, 2019. As a result, if the proceeds of the 11.0% Unsecured Notes were to be used to effectively discharge the 4.25% Convertible Notes prior to July 16, 2018, we would need to refinance (1) the asset-based credit facility on or prior to April 14, 2019, (2) to the extent they are not converted into our common stock, the 8.0% Convertible Notes on May 1, 2019 and (3) the 11.0% Unsecured Notes on or prior to October 16, 2019.

Alternatively, if the market price of our common stock prior to August 15, 2018 is above $11.70 per share, we could elect to take no action with respect to the 4.25% Convertible Notes, in which case the maturity date of the 8.0% Convertible Notes would become August 15, 2018. We believe that under those circumstances most, if not all, of the holders of our 8.0% Convertible Notes would convert their notes into our common stock (and any remaining unconverted amounts could be refinanced with available cash or drawings under our asset-based credit facility) and we could issue the 11.0% Unsecured Notes by October 1, 2018 in order to repay the 4.25% Convertible Notes at maturity. In this case, we would seek to extend or refinance our asset-based credit facility prior to July 16, 2018.

Surety Bonds

As of January 31, 2018 and 2017, surety bonds issued to secure performance of our contracted projects amounted to $148.3 million and $223.8 million, respectively. The amount of our surety bonds is based on the expected amount of revenues remaining to be recognized on the projects. Of the amount outstanding at January 31, 2018, $48.4 million related to surety bonds on contracts which were assumed by the purchasers of our Heavy Civil business. We were successful in negotiating an early release of Layne on bonds for 4 of 36 jobs but do not expect to obtain releases on the remaining jobs until those jobs are completed.

(9) Other (Expense) Income, net

Other (expense) income, net consisted of the following:

	Years Ended January 31,		
(in thousands)	2018	2017	2016
Interest income	$ 33	$ 87	$ 732
Currency exchange loss	(204)	(205)	(73)
Other	156	961	423
Total	$ (15)	$ 843	$ 1,082

(10) Income Taxes

On December 22, 2017, the United States enacted tax reform legislation commonly known as the Tax Cuts and Jobs Act (the “The Act”), resulting in significant modifications to existing U.S. tax law, including but not limited to, (1) lowering the corporate federal income tax rate from 35% to 21% effective January 1, 2018; (2) implementing a territorial tax system; and (3) imposing a one-time repatriation tax on deemed repatriated earnings of foreign subsidiaries. Based on our fiscal year, the blended federal tax rate of 32.8% applies to fiscal year ended January 31, 2018.

Deferred tax assets and liabilities are determined based on the differences between the financial statement carrying amounts and tax bases of assets and liabilities as measured by the enacted tax rates that are expected to be in effect when these differences reverse. Deferred tax expense (benefit) is generally the result of changes in the assets or liabilities for deferred taxes. As a result of the reduction in the U.S. corporate income tax rate from 35% to 21% under The Act, we remeasured our ending net domestic deferred tax asset at January 31, 2018 and recognized a provisional tax expense of $31.1 million. Following the remeasurement of our net deferred tax asset, we recorded an offsetting tax benefit as a reduction to our valuation allowance. There was no income expense or benefit recorded as a result in the change in the tax rate.

The Act provides for a one-time deemed repatriation of post-1986 undistributed foreign subsidiary earnings and profits through the year ended January 31, 2018 ("Deemed Dividend"). We estimated a provisional Deemed Dividend of $17.3 million resulting in $5.7 million of tax expense. We recognized a $3.7 million tax benefit upon reversal of a previously recorded deferred tax liability relating to unremitted earnings of our less than 50% owned Affiliates. We also adjusted our valuation allowance as a result of the Deemed Dividend resulting in a $4.6 million tax benefit. The net tax benefit resulting from these adjustments to deferred taxes was $2.6 million during the fiscal year ended January 31, 2018.

The Act provides for a new requirement, beginning in 2018, that certain income earned by controlled foreign corporations in excess of an allowable return on foreign subsidiary's tangible assets is subject to U.S. income tax (the global intangible low-taxed income or "GILTI" provision). Also beginning in 2018, The Act provides for a new base erosion and anti-abuse tax provision ("BEAT") which eliminates the deduction of certain base-erosion payments made to related foreign corporations and imposes a minimum tax if greater than regular tax. We do not expect the GILTI or BEAT provisions to have a material impact to our financial statements.

The SEC staff issued Staff Accounting Bulletin 118 ("SAB 118") which provides additional clarification regarding situations where the Company does not have the necessary information available, prepared, or analyzed in reasonable detail to complete the accounting for certain income tax effects of The Act for the reporting period in which The Act was enacted. We have recognized the provisional tax impacts, based on reasonable estimates, related to the Deemed Dividend and the revaluation of deferred tax assets and liabilities and have included these amounts in our consolidated financial statements for the year ended January 31, 2018. The ultimate impact may differ from these provisional amounts, possibly materially, due to among other things, additional analysis, changes in interpretations and assumptions we have made, additional regulatory guidance that may be issued, and actions we may take as a result of The Act. We intend to complete our accounting under The Act within the measurement period set forth in SAB 118.

Loss from continuing operations before income taxes consisted of the following:

	Years Ended January 31,		
(in thousands)	2018	2017	2016
Domestic	$ (16,076)	$ (37,084)	$ (17,778)
Foreign	837	(8,545)	(29,837)
Total	$ (15,239)	$ (45,629)	$ (47,615)

Components of income tax (benefit) expense from continuing operations were as follows:

	Years Ended January 31,		
(in thousands)	2018	2017	2016
Currently due:			
U.S. federal	$ (659)	$ 63	$ (374)
State and local	452	583	(685)
Foreign	(6,848)	1,480	2,182
	(7,055)	2,126	1,123
Deferred:			
U.S. federal	(2,561)	274	(895)
State and local	(74)	(197)	638
Foreign	(685)	(783)	(129)
	(3,320)	(706)	(386)
Total	$ (10,375)	$ 1,420	$ 737

A reconciliation of the total income tax (benefit) expense from continuing operations to the statutory federal rate is as follows for the fiscal years ended January 31:

(in thousands)	2018 Amount	2018 Effective Rate	2017 Amount	2017 Effective Rate	2016 Amount	2016 Effective Rate
Income tax at statutory rate	$ (4,999)	32.8 %	$ (15,972)	35.0 %	$ (16,665)	35.0 %
State income tax, net	1,282	(8.4)	(3,655)	8.0	579	(1.2)
Difference in tax expense resulting from:						
Nondeductible expenses	1,677	(11.0)	1,123	(2.5)	708	(1.5)
Taxes on foreign affiliates	(683)	4.5	558	(1.2)	2,213	(4.6)
Taxes on foreign operations	1,819	(11.9)	478	(1.0)	(13,594)	28.6
Foreign tax exemption	(3,493)	22.9	—	—	—	—
Impact of the Tax Cuts and Jobs Act	31,100	(204.1)	—	—	—	—
Impact of deemed dividend from Tax Cuts and Jobs Act	1,983	(13.0)	—	—	—	—
Tax benefit related to tax expenses recorded on discontinued operations and equity	—	—	—	—	(1,225)	2.6
Valuation allowance	(37,884)	248.6	17,513	(38.4)	32,742	(68.8)
Changes in uncertain tax provisions	(959)	6.3	(471)	1.0	(1,200)	2.5
Other	(218)	1.4	1,846	(4.0)	(2,821)	5.9
Total	$ (10,375)	68.1 %	$ 1,420	(3.1) %	$ 737	(1.5) %

Our effective tax rate reconciliation includes a $3.5 million income tax benefit resulting from a foreign jurisdiction issuing a tax ruling exempting certain income from taxation during the fourth quarter of the fiscal year ended January 31, 2018. We recorded $8.8 million tax benefit by reducing previously accrued foreign taxes and interest which was partially offset by tax expense of $5.3 million recorded on the related reduction in our U.S. foreign tax credit carryforward which was included in our deferred tax asset. The reduction in our deferred tax asset resulted in an offsetting reduction in our valuation allowance of $5.3 million, which is included in the $37.9 million adjustment to the valuation allowance included in our tax rate reconciliation. The net impact is an income tax benefit of $8.8 million.

The tax effect on pretax loss from continuing operations generally is determined by a computation that does not consider the tax effect on other categories of income or loss (for example, other comprehensive loss, discontinued operations, additional paid in capital, etc.). An exception to that general rule is provided when there is a pretax loss from continuing operations and pretax income from other categories of income. Pursuant to this exception, we recorded a tax benefit on continuing operations during the fiscal year ended January 31, 2016. During the fiscal year ended January 31, 2016, a tax benefit of $1.2 million was recorded on continuing operations which offset tax expense recorded on discontinued operations.

We recorded ($37.9) million, $17.5 million and $32.7 million of valuation allowances from continuing operations on our net domestic and certain foreign deferred tax assets during the fiscal years ended January 31, 2018, 2017 and 2016, respectively. The valuation allowance recorded for the fiscal year ended January 31, 2018 was recorded on deferred tax assets generated during the year and was primarily related to the impact on deferred taxes resulting from the passage of The Act. The total valuation allowance at January 31, 2018 of $130.6 million was comprised of a domestic valuation allowance of $113.7 million and a foreign valuation allowance of $16.9 million.

In assessing the need for a valuation allowance, we concluded that we had a cumulative loss on domestic operations after adjusting for significant non-recurring charges beginning in the fiscal year ended January 31, 2016 and continuing through the fiscal year ended January 31, 2018. Based on this assessment, we concluded that it was not more likely than not that realization of our domestic deferred tax assets would occur in future periods and accordingly a valuation allowance was provided. Similar consideration was given to foreign deferred tax assets and we concluded that certain foreign deferred tax assets were also not more likely than not to be realized and a valuation allowance was recorded. The establishment of a valuation allowance does not have any impact on cash, nor does such an allowance preclude us from using our loss carryforwards or utilizing other deferred tax assets in the future.

The net income (loss) from discontinued operations for the fiscal years ended January 31, 2018, 2017 and 2016 was $22.4 million, ($5.2) million and $3.5 million, respectively. These amounts are net of income tax (expense) benefit of $0.0 million, $0.0 million and ($1.3) million, respectively. The effective tax rates for discontinued operations were 0.0%, 0.0% and 26.4% for the fiscal years ended January 31, 2018, 2016 and 2015, respectively.

Deferred income taxes result from temporary differences between the financial statement and tax bases of our assets and liabilities. The sources of these differences and their cumulative tax effects were as follows:

	Years Ended January 31,	
(in thousands)	2018	2017
Accruals	$ 14,310	$ 24,719
Equity-based compensation	1,725	2,525
Intangibles	1,656	3,429
Foreign tax credit carryforwards	41,539	47,827
Tax loss carryforwards	58,671	70,966
Cumulative currency translation adjustment	5,068	5,068
Capital loss carryforwards	8,677	12,861
Other assets	3,883	1,418
Total deferred tax asset	135,529	168,813
Valuation allowance	(130,613)	(157,664)
Buildings, machinery and equipment	(3,721)	(6,687)
Convertible Notes	(419)	(1,530)
Unremitted foreign earnings	(608)	(4,782)
Other liabilities	(717)	(2,107)
Total deferred tax liability	(5,465)	(15,106)
Net deferred tax liability	$ (549)	$ (3,957)

We had the following tax losses and tax credit carryforwards at January 31, 2018:

(dollars in millions)	Expiration	Gross Carryforward Amount	Expected Tax Benefit Amount	Valuation Allowance
Federal net operating loss carryforwards	2034-2038	$ 150.2	$ 31.5	$ (31.5)
State net operating loss carryforwards	2019-2038	222.8	12.4	(12.4)
Federal capital loss carryforwards	2020	33.5	7.1	(7.1)
State capital loss carryforwards	2020	33.5	1.6	(1.6)
Foreign tax loss carryforwards	2019-2033	48.8	14.7	(14.7)
Federal foreign tax credit carryforwards	2019-2022	n/a	13.2	(13.2)
Federal foreign tax credit carryforwards	2023-2027	n/a	28.3	(28.3)
Total			$ 108.8	$ (108.8)

We intend to indefinitely reinvest certain earnings of our foreign subsidiaries and affiliates. As of January 31, 2018, accumulated undistributed earnings that were considered indefinitely reinvested totaled $40.3 million. The Act generally eliminates U.S. federal income taxes on dividends from foreign subsidiaries after January 31, 2018. As a result, the accumulated undistributed earnings would only be subject to other taxes, such as withholding taxes and local taxes, on distribution of such earnings. It is not practicable to determine the amount of income or withholding tax that would be payable upon remittance of these earnings.

Deferred foreign withholding taxes have been provided on undistributed earnings of certain foreign subsidiaries and foreign Affiliates where the earnings are not considered to be invested indefinitely.

A reconciliation of the beginning and ending amount of gross unrecognized tax benefits, excluding penalties and interest is as follows:

(in thousands)	Years Ended January 31, 2018	2017	2016
Balance, beginning of year	$ 18,449	$ 10,809	$ 13,018
Additions based on tax positions related to current year	70	7,354	81
Additions for tax positions of prior years	94	1,669	1,326
Settlement with tax authorities	—	(1,168)	—
Reductions for tax positions of prior years	(146)	(55)	(3,392)
Reductions due to the lapse of statutes of limitation	(1,138)	(160)	(224)
Balance, end of year	$ 17,329	$ 18,449	$ 10,809

Substantially all of the unrecognized tax benefits recorded at January 31, 2018, 2017 and 2016 would affect the effective rate if recognized. It is reasonably possible that the amount of unrecognized tax benefits will decrease during the next year by approximately $4.5 million due to settlements of audit issues and expiration of statutes of limitation.

We classify interest and penalties related to income taxes as a component of income tax expense. As of January 31, 2018, 2017 and 2016, we had $9.0 million, $8.7 million and $7.8 million, respectively, of interest and penalties accrued associated with unrecognized tax benefits. The liability for interest and penalties increased (decreased) $0.3 million, $0.9 million and ($.07) million during the fiscal years ended January 31, 2018, 2017 and 2016, respectively.

We file income tax returns in the U.S., various state jurisdictions and certain foreign jurisdictions. The statute of limitations remains open for tax years ended January 31, 2011, 2013 and 2015 through 2018. We recently completed our IRS exam for the tax year ended January 31, 2013 with no significant change to income tax expense. We have several state examinations currently in progress.

We file income tax returns in the foreign jurisdictions where we operate. The returns are subject to examination which may be ongoing at any point in time. Tax liabilities are recorded based on estimates of additional taxes which will be due upon settlement of those examinations. The tax years subject to examination by foreign tax authorities vary by jurisdiction, but generally the tax years 2015 through 2018 remain open to examination.

(11) Operating Lease Obligations

Our operating leases are primarily for buildings, light and medium duty trucks and other equipment. We sublease certain portions of our facilities under non-cancelable sublease agreements.

Rent expense under operating leases (including insignificant amounts of contingent rental payments and sublease rental income) was $3.3 million, $4.3 million and $7.0 million for the fiscal years ended January 31, 2018, 2017 and 2016, respectively.

Future minimum lease payments required under operating leases that have initial or remaining non-cancelable lease terms and related subleases in excess of one year from January 31, 2018, are as follows:

(in thousands)	Minimum Rental Commitments
Fiscal Year 2019	$ 2,649
Fiscal Year 2020	1,919
Fiscal Year 2021	1,775
Fiscal Year 2022	1,415
Fiscal Year 2023	1,373
Minimum lease payments	$ 9,131

(12) Employee Benefit Plans

Our salaried and certain hourly employees are eligible to participate in our sponsored, defined contribution plans. Total expense recorded in selling, general and administrative costs for our portion of these plans was $2.7 million, $3.1 million and $3.0 million for the fiscal years ended January 31, 2018, 2017 and 2016, respectively.

We have a deferred compensation plan for certain management employees, however the plan was suspended during the fiscal year ended January 31, 2015. Participants could elect to defer up to 25% of their salaries and up to 50% of their bonuses to the plan. Matching contributions and the vesting period of those contributions, were established at our discretion. Employee deferrals are vested at all times. The total liability for deferred compensation was $4.1 million and $5.1 million as of January 31, 2018 and 2017, respectively. These liabilities are primarily included in other non-current liabilities, except for those amounts due in the next twelve months, which are recorded in accrued compensation in the Consolidated Balance Sheet.

We contribute to a number of multiemployer defined benefit pension plans under the terms of collective-bargaining agreements that cover our union-represented employees. The risks of participating in these multiemployer plans are different from single-employer plans in the following aspects:

- assets contributed to the multiemployer plan by one employer may be used to provide benefits to employees of other participating employers;
- if a participating employer stops contributing to the plan, the unfunded obligations of the plan may be borne by the remaining participating employers; and
- if we choose to stop participating in some of our multiemployer plans, we may be required to pay those plans an amount based on the underfunded status of the plan, referred to as a withdrawal liability.

In accordance with accounting guidance, we evaluated each of our multiemployer plans to determine if any were individually significant. The evaluation was based on the following criteria:

- the total employees participating in the multiemployer plan compared to the total employees covered by the plan;
- the total contributions to the multiemployer plan as a percentage of the total contributions to the plan by all participating employers; and
- the amount of potential liability that could be incurred due to our withdrawal from the multiemployer plan, underfunded status of the plan or other participating employers' withdrawal from the plan.

As of January 31, 2018 and 2017, we did not participate in multiemployer plans that would be considered individually significant.

We make contributions to these multiemployer plans equal to the amounts accrued for pension expense. Total contributions and union pension expense for these plans was $1.1 million, $1.9 million and $2.1 million for the fiscal years ended January 31, 2018, 2017 and 2016, respectively. Information regarding assets and accumulated benefits of these plans has not been made available to us.

We also provide supplemental retirement benefits to a former chief executive officer. Benefits are computed based on the compensation earned during the highest five consecutive years of employment reduced for a portion of Social Security benefits and an annuity equivalent of his defined contribution plan balance. We do not contribute to the plan or maintain any investment assets related to the expected benefit obligation. We have recognized the full amount of our actuarially determined pension liability. The current portion recognized in our Consolidated Balance Sheets as other accrued expenses was $0.3 million as of January 31, 2018 and 2017. The long-term portion recognized in our Consolidated Balance Sheets as of January 31, 2018 and 2017 was $5.1 million, as other non-current liabilities. Net periodic pension cost (benefit) of the supplemental retirement benefits for the fiscal years ended January 31, 2018, 2017 and 2016 was $ 0.3 million, $0.2 million and ($0.4) million, respectively.

(13) Equity-Based Compensation

Layne has an equity-based compensation plan that provides for the granting of options to purchase or the issuance of shares of common stock at a price fixed by the Board of Directors or a committee. As of January 31, 2018, there were 787,247 shares which remain available to be granted under the plan as stock options or restricted stock awards. We have the ability to issue shares under the plan either from new issuances or from treasury, although we have previously always issued new shares and expect to continue to issue new shares in the future.

We granted 263,946 restricted stock units and 277,799 performance vesting restricted stock units under the Layne Christensen Company 2006 Equity Incentive Plan during the fiscal year ended January 31, 2018. The grants consist of both service-based awards and market-based awards. All of the awards granted during the twelve month period ended January 31, 2018, may be settled in cash or shares at the Compensation Committee's discretion except for 36,725 restricted stock units granted to the Board of Directors that are required to be settled in shares. It is the intention to settle all awards in shares.

We recognized $3.1 million, $3.5 million and $3.9 million of compensation cost for equity-based plans for the fiscal years ended January 31, 2018, 2017 and 2016, respectively. Of these amounts, $2.9 million, $3.0 million and $3.0 million, respectively, related to non-vested stock. There was no income tax benefit recognized on our equity-based compensation as a full valuation allowance has been provided on our deferred tax asset.

As of January 31, 2018, total unrecognized compensation cost related to unvested stock options was approximately $0.1 million, which is expected to be recognized over a weighted-average period of 0.4 years. As of January 31, 2018, there was approximately $3.9 million of total unrecognized compensation cost related to nonvested restricted stock awards and restricted stock units that is expected to be recognized over a weighted-average period of 1.8 years.

The fair value of equity-based compensation granted in the form of stock options is determined using a lattice valuation model. The valuations in each respective year were made using the assumptions noted in the following table. Expected volatilities are based on historical volatility of the stock price. We use historical data to estimate early exercise and post-vesting forfeiture rates to be applied within the valuation model. The risk-free interest rate for the periods within the expected term of the option is based on the U.S. Treasury yield curve in effect at the time of grant. The weighted-average fair value per share at the date of grant for options granted during the fiscal years ended January 31, 2017 and 2016 was $1.59 and $1.60, respectively.

	Years Ended January 31,	
Assumptions:	2017	2016
Weighted-average expected volatility	56.1%	52.6%
Expected dividend yield	0%	0%
Risk-free interest rate	0.60%	0.70%
Expected term (in years)	1.9	3.3
Exercise multiple factor	1.39	1.65
Post-vesting forfeiture	20.3%	12.5%

Stock option transactions for the fiscal years ended January 31, 2018, 2017 and 2016 were as follows:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)	Intrinsic Value (in thousands)
Outstanding at January 31, 2015	1,015,514	$ 21.15		
Granted	106,168	5.51		
Exercised	—	—		$ —
Expired	(77,707)	24.73		
Forfeited	(204,260)	26.20		
Outstanding at January 31, 2016	839,715	17.61		
Granted	134,433	7.04		
Exercised	—	—		—
Expired	(10,000)	29.29		
Forfeited	(214,104)	21.19		
Outstanding at January 31, 2017	750,044	14.54		
Exercised	(25,000)	8.22		
Expired	(19,125)	42.42		—
Forfeited	(46,833)	24.98		
Outstanding at January 31, 2018	659,086	13.23	6.1	2,195
Exercisable at January 31, 2016	576,871	19.00		
Exercisable at January 31, 2017	611,453	15.43		
Exercisable at January 31, 2018	649,086	13.30	6.0	2,146
Options expected to vest at January 31, 2018	10,000	8.60	7.5	49

The aggregate intrinsic value was calculated using the difference between the current market price and the exercise price for only those options that have an exercise price less than the current market price.

Nonvested stock awards having service requirements only, are valued as of the grant date closing stock price and generally vest ratably over service periods of one to five years. Other nonvested stock awards vest based upon Layne meeting various performance goals. Certain nonvested stock awards provide for accelerated vesting if there is a change of control (as defined in the plans), termination of employment without cause, retirement or the disability or the death of the executive and for equitable adjustment in the event of changes in our equity structure. We granted certain performance based nonvested stock awards during the years ended January 31, 2018, 2017 and 2016, which were valued using the Monte Carlo simulation model.

Assumptions used in the Monte Carlo simulation model for the fiscal years ended January 31, 2018, 2017 and 2016 were as follows:

	Years Ended January 31,		
Assumptions:	2018	2017	2016
Weighted-average expected volatility	59.6%	58.3%	44.2%
Expected dividend yield	0.0%	0.0%	0.0%
Weighted-average risk free rate	1.5%	0.9%	0.9%
Weighted-average fair value	$ 6.92	$ 4.70	$ 3.04

Non-vested share transactions for the fiscal years ended January 31, 2018, 2017 and 2016 were as follows:

	Number of Shares	Average Grant Date Fair Value	Intrinsic Value (in thousands)
Nonvested stock at January 31, 2015	487,292	14.86	
Granted - Directors	24,085	5.19	
Granted - Restricted stock units	130,287	5.25	
Granted - Performance vesting shares	1,035,409	3.03	
Vested	(182,563)	17.07	
Forfeited	(87,340)	8.57	
Nonvested stock at January 31, 2016	1,407,170	5.20	
Granted - Directors	13,495	7.04	
Granted - Restricted stock units	199,352	7.04	
Granted - Performance vesting shares	447,903	4.70	
Vested	(26,349)	6.22	
Forfeited	(169,931)	8.29	
Nonvested stock at January 31, 2017	1,871,640	5.00	
Granted - Directors	36,725	8.85	
Granted - Restricted stock units	227,221	8.95	
Granted - Performance vesting shares	277,799	6.92	
Vested	(141,537)	12.52	
Forfeited	(314,045)	5.55	
Nonvested stock at January 31, 2018	1,957,803	5.17	$ 26,411

(14) Fair Value Measurements

Our estimates of fair value for financial assets and financial liabilities are based on the framework established in the fair value accounting guidance. The framework is based on the inputs used in the valuation, gives the highest priority to quoted prices in active markets and requires that observable inputs be used in the valuations when available. The three levels of the hierarchy are as follows:

- **Level 1** – Unadjusted quoted prices in active markets for identical assets or liabilities.
- **Level 2** – Observable inputs other than those included in Level 1, such as quoted market prices for similar assets and liabilities in active markets or quoted prices for identical assets in inactive markets.
- **Level 3** – Unobservable inputs reflecting our own assumptions and best estimate of what inputs market participants would use in pricing an asset or liability.

Our assessment of the significance of a particular input to the fair value in its entirety requires judgment and considers factors specific to the asset or liability. Our financial instruments held at fair value, are presented below as of January 31, 2018 and 2017:

		Fair Value Measurements		
(in thousands)	Carrying Value	Level 1	Level 2	Level 3
January 31, 2018				
Financial Assets:				
Long-term restricted deposits held at fair value	$ 6,572	$ 6,572	$ —	$ —
Contingent consideration receivable(1)	4,244	—	—	4,244
January 31, 2017				
Financial Assets:				
Long-term restricted deposits held at fair value	$ 5,055	$ 5,055	$ —	$ —
Contingent consideration receivable(1)	4,244	—	—	4,244

(1) The contingent consideration receivable represents our share in the profits of one of the contracts assumed by the purchaser, as part of the sale of the Geoconstruction business on August 17, 2015. The amount was estimated based on the projected profits of the contract. There have been no changes in the estimated fair value since the closing date of the sale agreement.

Other Financial Instruments

We use the following methods and assumptions in estimating the fair value disclosures for our other financial instruments:

Cash equivalents – The carrying amounts reported in the accompanying Consolidated Balance Sheets approximates their fair values and are classified as Level 1 within the fair value hierarchy.

Short-term and long-term debt, other than the convertible notes – The fair value of debt instruments is classified as Level 2 within the fair value hierarchy and is valued using a market approach based on quoted prices for similar instruments traded in active markets. Where quoted prices are not available, the income approach is used to value these instruments based on the present value of future cash flows discounted at estimated borrowing rates for similar debt instruments or on estimated prices based on current yields for debt issues of similar quality and terms.

Convertible notes – The convertible notes are measured on a non-recurring basis using Level 1 inputs based upon observable quoted prices of the 4.25% Convertible Notes and the 8.0% Convertible Notes.

The following table summarizes the carrying values and estimated fair values of our debt:

	January 31, 2018		January 31, 2017	
(in thousands)	Carrying Value	Fair Value	Carrying Value	Fair Value
4.25% Convertible Notes	$ 67,248	$ 68,631	$ 64,387	$ 64,705
8.0% Convertible Notes	98,769	122,150	97,952	92,156

(15) Contingencies

Our drilling activities involve certain operating hazards that can result in personal injury or loss of life, damage and destruction of property and equipment, damage to the surrounding areas, release of hazardous substances or wastes and other damage to the environment, interruption or suspension of drill site operations and loss of revenues and future business. The magnitude of these operating risks is amplified when we, as is frequently the case, conduct a project on a fixed-price, turn-key basis where we delegate certain functions to subcontractors but remain responsible to the customer for the subcontracted work. In addition, we are exposed to potential liability under foreign, federal, state and local laws and regulations, contractual indemnification agreements or otherwise in connection with our services and products. Litigation arising from any such occurrences may result in Layne being named as a defendant in lawsuits asserting large claims. Although we maintain insurance protection that we consider economically prudent, there can be no assurance that any such insurance will be sufficient or effective under all circumstances or against all claims or hazards to which we may be subject or that we will be able to continue to obtain such insurance protection. A successful claim or damage resulting from a hazard for which we are not fully insured could have a material adverse effect on us. In addition, we do not maintain political risk insurance with respect to our foreign operations.

Through one of our discontinued segments, Geoconstruction, we were a subcontractor on the foundation for the Salesforce Tower office building in San Francisco, California in 2013 and 2014. Certain anomalies were discovered in March 2014 in the foundation's structural concrete, which were remediated by the general contractor during 2015. We have participated in discussions with the project owner and the general contractor regarding potential causes of the anomalies. We have assigned our claims under the project's builder's risk insurance policy to the general contractor. During the fiscal year ended January 31, 2016, the project owner and the general contractor submitted a claim to the project's builder's risk insurers to cover the cost of remedial work and related damages. The claim was denied by the builder's risk insurers and the project owner and the general contractor subsequently filed a legal proceeding against the insurers seeking coverage under the builder's risk insurance policy. Although we were not a party to this legal proceeding, we believe, based on court filings in the legal proceeding, that the project owner and the general contractor are asserting a claim for damages against the project's builder's risk insurers of approximately $100 million. Management does not believe that we are liable for any of the remediation costs or other claims related to this project. As of the date of this report, no action has been filed against us. Accordingly, no provision has been made in these Consolidated Financial Statements.

We are involved in various other matters of litigation, claims and disputes which have arisen in the ordinary course of business. We believe that the ultimate disposition of these matters will not, individually and in the aggregate, have a material adverse effect upon our business or consolidated financial position, results of operations or cash flows. However, it is possible, that future results of operations for any particular quarterly or annual period could be materially affected by changes in the assumptions related to these proceedings. In accordance with GAAP, we record a liability when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. These provisions are reviewed at least quarterly and adjusted to reflect the impacts of negotiations, settlements, rulings, advice of legal counsel and other information and events pertaining to a particular case. To the extent additional information arises or the strategies change, it is possible that our estimate of the probable liability in these matters may change

Litigation Relating to the Merger

On April 3, 2018, two putative class actions captioned Malka Raul v. Layne Christensen Company, et al., and Colleen Witmer v. Layne Christensen Company, et al., were filed in the U.S. District Court for the Southern District of Texas against Layne, Layne's directors, Granite and Merger Sub. The complaints generally allege that Layne, the Layne directors and Granite disseminated a false or misleading registration statement regarding the proposed merger in violation of Section 14(a) of the Exchange Act and SEC Rule 14a-9. Specifically, the complaints allege that the registration statement misstated or omitted material information regarding the parties' financial projections, the valuation analysis performed by Greentech in support of its fairness opinion, and potential conflicts of interest of Greentech. The complaints further allege that the Layne directors and/or Granite are liable for these violations as "controlling persons" of Layne under Section 20(a) of the Exchange Act. The complaints seek injunctive relief, including to enjoin and/or rescind the merger, rescission or rescissory damages in the event the merger is consummated, and an award of attorneys' fees, in addition to other relief.

Additional lawsuits arising out of the merger may be filed in the future. There can be no assurance that any of the defendants will be successful in the outcome of the pending or any potential future lawsuits. A preliminary injunction could delay or jeopardize the completion of the merger, and an adverse judgment granting permanent injunctive relief could indefinitely enjoin the completion of the merger. Layne and Granite believe that the lawsuits are without merit and intend to defend vigorously against the lawsuits and any other future lawsuits challenging the transaction.

(16) Discontinued Operations

Heavy Civil

On April 30, 2017, we completed the sale of substantially all of the assets of the Heavy Civil business to Reycon Partners LLC (the "Buyer"), which is owned by a group of private investors, including members of the former Heavy Civil senior management team. The purchase price was $10.1 million, less an estimate of the amount by which the business's working capital was less than an agreed upon target amount. After final working capital adjustments, the purchase price was $3.5 million.

At January 31, 2017, we performed an asset impairment test of the Heavy Civil reporting segment and no impairment was indicated.

Geoconstruction

On August 17, 2015, we sold our Geoconstruction business segment to a subsidiary of Keller Foundations, LLC, a member of Keller Group plc ("Keller"), for a total of $42.3 million, including the preliminary estimate of the business segment's working capital. After post-closing adjustments, the total purchase price increased to $47.7 million, to adjust for our estimated share in the profits of one of the contracts being assumed by Keller and final working capital adjustments. In addition, as of January 31, 2018 and 2017, we have a $4.2 million contingent consideration receivable, included in Other Assets in the Consolidated Balance Sheet. The contingent consideration represents our best estimate of our share in the profits of one of the contracts assumed by Keller.

The components of assets and liabilities of discontinued operations in the Condensed Consolidated Balance Sheets are as follows:

(in thousands)		As of January 31, 2017
Major classes of assets		
Customer receivables	$	13,731
Costs and estimated earnings in excess of billings on uncompleted contracts		22,970
Inventories		2,426
Other current assets		1,033
Total current assets of discontinued operations		40,160
Property and equipment, net		5,235
Other assets of discontinued operations		895
Total major classes of assets of discontinued operations	$	46,290
Major classes of liabilities		
Accounts payable	$	16,963
Billings in excess of costs and estimated earnings on uncompleted contracts		3,530
Other current liabilities		87
Total current liabilities of discontinued operations		20,580
Total major classes of liabilities of discontinued operations	$	20,580

The financial results of discontinued operations are as follows:

	Year Ended January 31,					
(in thousands)		2018		2017		2016
Revenue	$	30,359	$	137,189	$	210,780
Cost of revenues (exclusive of depreciation and amortization, shown below)		(28,864)		(128,910)		(193,440)
Selling, general and administrative expenses (exclusive of depreciation and amortization, shown below)		(4,577)		(11,655)		(19,878)
Depreciation and amortization		(287)		(1,609)		(5,833)
Gain on sale of fixed assets		4		265		558
Equity in earnings of affiliates		—		—		1,104
Restructuring costs		(27)		(424)		(765)
Other income items		(30)		(43)		(614)
Total operating loss on discontinued operations before income taxes		(3,422)		(5,187)		(8,088)
Income tax expense		—		—		3,832
Total operating loss on discontinued operations	$	(3,422)	$	(5,187)	$	(4,256)
Total consideration	$	3,468			$	47,717
Net book value of assets sold		(21,188)				(31,776)
Transaction costs associated with sale		(1,305)				(3,036)
(Loss) gain on sale of discontinued operations before income taxes		(19,025)				12,905
Income tax expense		-				(5,102)
Total (loss) income on discontinued operations	$	(22,447)			$	3,547

Prior to the completion of the sale of the Geoconstruction business segment, we owned 65% and 50% of Case-Bencor Joint Venture (Washington) and Case-Bencor Joint Venture (Iowa), respectively, which were both included as part of the Geoconstruction business segment as investments in affiliates and were discontinued as a result of the sale. Summarized financial information of the entities, which were accounted for as equity method investments, through the date of the sale was as follows:

(in thousands)		Year Ended January 31, 2016
Revenues	$	10,720
Gross profit		2,466
Net income		2,466

Cash flow data relating to discontinued operations are presented below:

	Year Ended January 31,					
(in thousands)		2018		2017		2016
Cash flow data:						
Depreciation and amortization	$	287	$	1,609	$	5,833
Capital expenditures		226		1,699		1,536
Bad debt expense (recovery)		1,551		1,165		(124)

(17) Segments and Foreign Operations

We are a global solutions provider to the world of essential natural resources – water, minerals and energy. The Chief Operating Decision Maker (CODM) reviews operating results to determine the appropriate allocation of resources within the organization. The CODM defines the operational and organizational structure into discrete segments based on our primary product lines.

During the first quarter of the fiscal year ended January 31, 2018, we completed the sale of substantially all of the assets of our Heavy Civil business. The operating results related to the Heavy Civil business are presented as discontinued operations and, as such, have been excluded from continuing operations and segment results for all periods presented. See Note 16 to Consolidated Financial Statements for further discussion.

In the first quarter of the fiscal year ended January 31, 2017, changes were made to simplify our business and streamline our operating and reporting structure. Our Collector Wells group was shifted from our former Heavy Civil business to Water Resources to better align their operational expertise. We also shifted certain other smaller operations out of our "Other" segment and into our remaining reporting segments and no longer report an "Other" segment. Information for prior periods has been recast to conform to our new presentation.

During the third quarter of the fiscal year ended January 31, 2016, as a result of our strategic review of all aspects of our operations, we realigned our operating structure to combine the Energy Services segment with Water Resources segment. We determined that given the similar nature of the equipment and services for Energy Services and Water Resources, we could more effectively manage our cost structure and serve our customer base in a combined segment. Historical segment numbers have been recast to conform to this new operating structure.

During the second quarter of the fiscal year ended January 31, 2016, we entered into a definitive agreement to sell our Geoconstruction business segment. The operating results of the Geoconstruction business are presented as discontinued operations and, as such, have been excluded from continuing operations and segment results for all periods presented. See Note 16 to Consolidated Financial Statements for further discussion.

Our segments are defined as follows:

Water Resources

Water Resources provides its customers with an array of water management solutions, including discovery and defining of water sources through hydrologic studies, water supply development through water well drilling and intake construction. Through our new Water Midstream business we provide water delivery through pipeline and pumping infrastructure with the ability to deliver non-potable water at multiple points along the pipeline route. Water Resources also brings technologies to the water and wastewater markets and offers water treatment equipment engineering services, providing systems for the treatment of regulated and nuisance contaminants, specifically, iron, manganese, hydrogen sulfide, arsenic, radium, nitrate, perchlorate and volatile organic compounds. Water Resources drills deep injection wells for industrial and municipal clients that need to dispose of wastewater associated with their processes. Water Resources also performs complete diagnostic and rehabilitation services for existing wells, pumps and related equipment, including conducting downhole closed circuit televideo inspections to investigate and resolve water well and pump performance problems. In addition, Water Resources constructs radial collector wells through its Ranney® Collector Wells technology, which is an alternative to conventional vertical wells and can be utilized to develop moderate to very high capacities of groundwater. Water Resources provides water systems and services in most regions of the U.S.

Inliner

Inliner provides a wide range of process, sanitary and storm water rehabilitation techniques and services to municipalities and industrial customers dealing with aging infrastructure needs. Inliner focuses on its proprietary Inliner ® cured-in-place pipe (“CIPP”) which allows it to rehabilitate aging sanitary sewer, storm water and process water infrastructure to provide structural rebuilding as well as infiltration and inflow reduction. Inliner’s trenchless technology minimizes environmental impact and reduces or eliminates surface and social disruption. Inliner has the ability to supply both traditional felt-based CIPP lining tubes cured with water or steam as well as a fiberglass-based lining tubes cured with ultraviolet light. Inliner owns the North American rights to the Inliner CIPP technology, owns and operates the liner manufacturer and also provides installation of Inliner CIPP product. While Inliner focuses on our proprietary Inliner CIPP, it provides full system renewal, including Janssen structural renewal for service lateral connections and mainlines, slip lining, traditional excavation and replacement and form and manhole renewal with cementitious and epoxy products. Inliner provides services in most regions of the U.S.

Mineral Services

Mineral Services conducts primarily above ground drilling activities, including all phases of core drilling, reverse circulation, dual tube, hammer and rotary air-blast methods. Our service offerings include both exploratory and definitional drilling. Global mining companies engage companies such as Mineral Services to extract samples from sites that the mining companies analyze for mineral content before investing heavily in development to extract the minerals. Mineral Services helps its clients determine if minable mineral deposit is on the site, the economic viability of the mining site and the geological properties of the ground, which helps in the determination of mine planning. Mineral Services also offers its customers water management and soil stabilization expertise. Mine water management consists of vertical, large diameter wells for sourcing and dewatering; and horizontal drains for slope de-pressurization. The primary markets are in the western U.S., Mexico and Brazil. As discussed in Note 18 to the Consolidated Financial Statements, during the fiscal year ended January 31, 2016, we implemented a plan to exit our operations in Africa and Australia. Mineral Services also has ownership interests in foreign affiliates operating in Latin America that form our primary presence in Chile and Peru. See Note 5 to Consolidated Financial Statements for discussion of Mineral Services’ equity method investments.

Financial information for our segments is presented below. Unallocated corporate expenses primarily consist of interest expense, tax expense and the expenses of general and administrative functions performed on a company-wide basis and benefiting all segments. These costs include expenses related to accounting, financial reporting, internal audit, treasury, legal, tax compliance, executive management and board of directors. Corporate assets consist of assets not directly associated with a segment and consist primarily of cash and deferred income taxes.

Our measure of Total Adjusted EBITDA, which may not be comparable to other companies’ measure of Total Adjusted EBITDA, represents net loss before discontinued operations, taxes, interest, depreciation and amortization, gain or loss on sale of fixed assets, non-cash equity-based compensation, equity in earnings or losses from affiliates, certain non-recurring items such as restructuring costs and certain other gains or losses, plus dividends received from affiliates. Our chief operating decision maker evaluates segment performance based on the segment’s revenues and Adjusted EBITDA, among other factors. In addition, we use Total Adjusted EBITDA as a factor in incentive compensation decisions and our credit facility agreement uses measures similar to Total Adjusted EBITDA to measure compliance with certain covenants.

(in thousands)	Years Ended January 31, 2018	2017	2016
Water Resources	$ 172,406	$ 204,577	$ 239,897
Inliner	205,873	196,845	193,704
Mineral Services	97,238	63,777	86,390
Other items/eliminations	—	(416)	(1,886)
Total revenues	$ 475,517	$ 464,783	$ 518,105

(in thousands)	Years Ended January 31, 2018	2017	2016
Total Adjusted EBITDA			
Water Resources	$ 5,284	$ (2,410)	$ 23,870
Inliner	32,688	32,036	27,949
Mineral Services	17,358	8,635	1,878
Unallocated corporate expenses	(20,319)	(23,830)	(29,319)
Total Adjusted EBITDA	$ 35,011	$ 14,431	$ 24,378

(in thousands)	Years Ended January 31, 2018	2017	2016
Net loss attributable to Layne Christensen Company	$ (27,311)	$ (52,236)	$ (44,777)
Items not included in Total Adjusted EBITDA			
Net income attributable to noncontrolling interests	—	—	(28)
Net loss (income) from discontinued operations	22,447	5,187	(3,547)
Income tax (benefit) expense	(10,375)	1,420	737
Interest expense	17,120	16,883	18,011
Depreciation expense and amortization	26,701	25,302	30,092
Gain on sale of fixed assets	(3,741)	(3,886)	(507)
Non-cash equity-based compensation	3,379	3,394	3,559
Equity in (earnings) loss of affiliates	(3,431)	(2,655)	612
Impairment charges	—	—	4,598
Restructuring costs	4,903	16,924	17,094
Gain on extinguishment of debt	—	—	(4,236)
Other expense (income), net	15	(843)	(1,082)
Dividends received from affiliates	5,304	4,941	3,852
Total Adjusted EBITDA	$ 35,011	$ 14,431	$ 24,378

(1) Restructuring costs for the fiscal year ended January 31, 2016 include $7.9 million relating to the write-down of the carrying value of inventory in our African and Australian operations, which are reflected as part of cost of revenues in the Consolidated Statement of Operations.

The following table presents various financial information for each segment.

(in thousands)	Years Ended January 31, 2018	2017	2016
Revenues by product line			
Water systems	$ 152,757	$ 181,382	$ 217,001
Water treatment technologies	11,798	12,558	11,601
Sewer rehabilitation	205,873	196,845	193,704
Environmental and specialty drilling	5,690	8,858	7,056
Exploration drilling	94,258	60,975	79,723
Other	5,141	4,165	9,020
Total revenues by product line	$ 475,517	$ 464,783	$ 518,105
Revenues by geographic location			
United States/Canada	$ 429,588	$ 433,237	$ 471,773
Africa/Australia	—	151	12,521
Brazil	10,719	7,989	6,363
Mexico	35,210	23,406	27,448
Total revenues	$ 475,517	$ 464,783	$ 518,105
Depreciation and amortization			
Water Resources	$ 12,316	$ 12,056	$ 13,486
Inliner	6,440	5,551	4,455
Mineral Services	7,188	6,343	10,317
Corporate	757	1,352	1,834
Total depreciation and amortization	$ 26,701	$ 25,302	$ 30,092

(in thousands)	As of and Years Ended January 31, 2018	2017	2016
Assets			
Water Resources	$ 115,145	$ 98,795	$ 124,821
Inliner	98,670	93,055	93,768
Mineral Services	120,434	116,148	128,196
Discontinued Operations	—	46,290	56,207
Corporate	35,940	81,863	85,665
Total assets	$ 370,189	$ 436,151	$ 488,657
Property and equipment, net			
United States	$ 111,860	$ 89,920	$ 95,213
Africa/Australia	—	124	7,302
Brazil	3,263	3,818	3,269
Mexico	5,331	3,123	3,193
Other foreign	150	—	15
Total property and equipment, net	$ 120,604	$ 96,985	$ 108,992
Capital Expenditures			
Water Resources	$ 31,260	$ 7,305	$ 11,812
Inliner	8,432	10,268	9,015
Mineral Services	9,886	3,066	3,309
Discontinued operations	218	1,783	1,802
Corporate	2,428	392	490
Total capital expenditures	$ 52,224	$ 22,814	$ 26,428

(18) Restructuring Costs

During the second quarter of the fiscal year ended January 31, 2017, we initiated a plan to reduce costs and improve profitability in our Water Resources segment ("Water Resources Business Performance Initiative"). The Water Resources Business Performance Initiative involves cost rationalization, increased standardization of functions such as sales, pricing and estimation, disposal of underutilized assets and process improvements to drive efficiencies. We recorded approximately $2.7 million in restructuring costs related to the Water Resources Business Performance Initiative for the fiscal year ended January 31, 2018, which includes costs related to office closures and severance costs. We estimate remaining amounts to be incurred for the Water Resources Business Performance Initiative of approximately $1.6 million.

During the fiscal year ended January 31, 2018, we continued the implementation of our FY2016 Restructuring Plan, which involves the exit of our operations in Africa and Australia and other actions to support our strategic focus in simplifying the business and build upon our capabilities in water ("FY2016 Restructuring Plan"). For the fiscal year ended January 31, 2018, we recognized approximately $2.2 million of restructuring expenses for the FY2016 Restructuring Plan, primarily related to wind down costs for the closure of our Australian and African entities. For the fiscal year ended January 31, 2018, the FY2016 Restructuring Plan related to the segments as follows: $1.1 million in Mineral Services, $1.0 million in Corporate and $0.1 million in Inliner. The FY2016 Restructuring Plan was substantially completed as of January 31, 2018. We estimate remaining amounts to be incurred for the FY2016 Restructuring Plan of approximately $0.1 million.

We previously implemented a restructuring plan during the second quarter of the fiscal year ended January 31, 2015 ("FY2015 Restructuring Plan"). The FY2015 Restructuring Plan involved, among other things, reductions in the global workforce, asset relocation or disposal and process improvements. The FY2015 Restructuring Plan was designed to achieve short and long-term cost reductions and was completed during the first quarter of the fiscal year ended January 31, 2016.

The following table summarizes the carrying amount of the accrual for the restructuring plans discussed above:

(in thousands)	Severance and other personnel-related costs	Write-down of inventory	Asset write-down	Other	Total
Balance at January 31, 2015	$ 497	$ —	$ —	$ 482	$ 979
Restructuring Costs					
FY2016 Restructuring Plan	$ 3,657	$ —	$ 3,870	$ 113	$ 7,640
FY2015 Restructuring Plan	(30)	—	—	1,579	1,549
Total Restructuring Costs	$ 3,627	$ —	$ 3,870	$ 1,692	$ 9,189
Write-down of inventory	—	7,905	—	—	7,905
Cash expenditures	(3,057)	—	—	(496)	(3,553)
Non-cash expense	—	(7,905)	(3,870)	(1,245)	(13,020)
Adjustment to liability	87	—	—	(377)	(290)
Balance at January 31, 2016	$ 1,154	$ —	$ —	$ 56	$ 1,210
Restructuring Costs					
Water Resources Business Performance Initiative	$ 459	$ —	$ —	$ 2,745	$ 3,204
FY2016 Restructuring Plan	400	—	12,878	442	13,720
Total Restructuring Costs	$ 859	$ —	$ 12,878	$ 3,187	$ 16,924
Cash expenditures	(1,354)	—	—	(3,105)	(4,459)
Non-cash expense(1)	—	—	(12,878)	—	(12,878)
Adjustment to liability	10	—	—	32	42
Balance at January 31, 2017	$ 669	$ —	$ —	$ 170	$ 839
Restructuring Costs					
Water Resources Business Performance Initiative	$ 1,012	$ —	$ —	$ 1,698	$ 2,710
FY2016 Restructuring Plan	201	—	—	1,992	2,193
Total Restructuring Costs	$ 1,213	$ —	$ —	$ 3,690	$ 4,903
Cash expenditures	(1,241)	—	—	(2,790)	(4,031)
Non-cash expense	—	—	—	—	—
Adjustment to liability	—	—	—	—	—
Balance at January 31, 2018	$ 641	$ —	$ —	$ 1,070	$ 1,711

(1) For the fiscal year ended January 31, 2017, we recognized an impairment of assets held for sale in Australia and Africa. In calculating the impairment, the carrying amount of the assets included the cumulative currency translation adjustment of $12.4 million associated with the closure of our Australian and African entities.

(19) Quarterly Results (Unaudited)

Unaudited quarterly results were as follows:

(in thousands, except per share data)	Years Ended January 31, 2018 (1) First	Second	Third	Fourth
Revenues	$ 111,507	$ 126,160	$ 127,423	$ 110,427
Cost of revenues (exclusive of depreciation and amortization shown below)(2)	(86,283)	(98,869)	(100,140)	(89,469)
Depreciation and amortization	(6,484)	(6,373)	(6,821)	(7,023)
Net (loss) income from continuing operations	(3,418)	(2,135)	(2,004)	2,693
Net (loss) income	(22,900)	(4,906)	(2,080)	2,575
(Loss) Income per share from continuing operations - basic(3)	(0.17)	(0.11)	(0.10)	0.14
(Loss) Income per share from continuing operations - diluted(3)	(0.17)	(0.11)	(0.10)	0.13
(Loss) Income per share - basic(3)	(1.15)	(0.25)	(0.11)	0.13
(Loss) Income per share - diluted(3)	(1.15)	(0.25)	(0.11)	0.12

(1) All periods have been retrospectively presented to reflect the sale of our Heavy Civil business as discontinued operations.
(2) As discussed in Note 1 to the Consolidated Financial Statements, we utilize multiple methods of revenue recognition based on the nature of work performed. As a result, it is not practical to allocate a portion of depreciation and amortization to cost of revenues for the presentation of gross profit.
(3) Loss per share was computed independently for each of the quarters presented. The sum of the quarters may not equal the total year amount due to the impact of changes in average quarterly shares outstanding.

(in thousands, except per share data)	Years Ended January 31, 2017 (1) First	Second	Third	Fourth
Revenues	$ 120,646	$ 123,635	$ 120,574	$ 99,928
Cost of revenues (exclusive of depreciation and amortization shown below)(2)	(97,062)	(100,474)	(97,124)	(87,441)
Depreciation and amortization	(5,958)	(6,527)	(6,517)	(6,300)
Net loss from continuing operations	(8,021)	(5,413)	(4,463)	(29,152)
Net loss	(8,803)	(5,310)	(5,043)	(33,080)
Loss per share from continuing operations - basic and diluted(3)	(0.41)	(0.27)	(0.23)	(1.47)
Loss per share - basic and diluted(3)	(0.45)	(0.26)	(0.26)	(1.67)

(1) All periods have been retrospectively presented to reflect the sale of our Heavy Civil business as discontinued operations.
(2) As discussed in Note 1 to the Consolidated Financial Statements, we utilize multiple methods of revenue recognition based on the nature of work performed. As a result, it is not practical to allocate a portion of depreciation and amortization to cost of revenues for the presentation of gross profit.
(3) Loss per share was computed independently for each of the quarters presented. The sum of the quarters may not equal the total year amount due to the impact of changes in average quarterly shares outstanding.

(20) Subsequent Event

On February 13, 2018, we entered into a definitive agreement whereby Granite Construction Incorporated will acquire all of the outstanding shares of Layne in a stock-for-stock transaction with each share of Layne common stock exchanged for 0.27 shares of Granite common stock. The transaction is subject to the approval by Layne's shareholders and other customary closing conditions.

Schedule II: Valuation and Qualifying Accounts

(in thousands)	Balance at Beginning of Period	Additions: Charges to Costs and Expenses	Additions: Charges to Other Accounts	Deductions	Balance at End of Period
Allowance for customer receivables:					
Fiscal year ended January 31, 2016	$ 3,167	$ 1,392	$ —	$ (1,314)	$ 3,245
Fiscal year ended January 31, 2017	3,245	188	—	(235)	3,198
Fiscal year ended January 31, 2018	3,198	953	304	(2,371)	2,084
Valuation allowance for deferred tax asset:					
Fiscal year ended January 31, 2016	$ 114,990	$ 26,923	$ (1,580)	$ (209)	$ 140,124
Fiscal year ended January 31, 2017	140,124	20,792	(57)	(3,195)	157,664
Fiscal year ended January 31, 2018	157,664	735	(502)	(27,284)	130,613

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

None.

Item 9A. Controls and Procedures

Disclosure Controls and Procedures

Based on an evaluation of disclosure controls and procedures for the period ended January 31, 2018, conducted under the supervision and with the participation of our management, including the Principal Executive Officer and the Principal Financial Officer, we concluded that our disclosure controls and procedures are effective to ensure that information required to be disclosed in reports that we file or submit under the Securities Exchange Act of 1934 is accumulated and communicated to our management (including the Principal Executive Officer and the Principal Financial Officer) to allow timely decisions regarding required disclosure and is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms.

Management's Report on Internal Control over Financial Reporting

Management of Layne Christensen Company and subsidiaries is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) of the Exchange Act. Under the supervision and with the participation of the our management, including our Principal Executive Officer and Principal Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based upon the framework in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (the "COSO Framework").

Internal control over financial reporting cannot provide absolute assurance of achieving financial reporting objectives because of its inherent limitations. Internal control over financial reporting is a process that involves human diligence and compliance and is subject to lapses in judgment and breakdowns resulting from human failures. Internal control over financial reporting also can be circumvented by collusion or improper management override. Because of such limitations, there is a risk that material misstatements may not be prevented or detected on a timely basis by internal control over financial reporting. However, these inherent limitations are known features of the financial reporting process. Therefore it is possible to design into the process safeguards to reduce, although not eliminate, this risk. Our internal control over financial reporting includes such safeguards. Projections of an evaluation of effectiveness of internal control over financial reporting in future periods are subject to the risk that the controls may become inadequate because of conditions, or because the degree of compliance with our policies and procedures may deteriorate.

Based on the evaluation under the COSO Framework, management concluded that our internal control over financial reporting is effective as of January 31, 2018. Our independent registered public accounting firm has audited the Consolidated Financial Statements included in this Annual Report on Form 10-K and, as part of their audit, has issued their report on the effectiveness of our internal control over financial reporting as of January 31, 2018. The report is included below.

Changes in Internal Control over Financial Reporting

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

Item 9B. Other Information

Due to Layne's entry into the Merger Agreement, Layne's current expectation is that its 2018 Annual Meeting of Stockholders ("2018 Annual Meeting"), previously expected to have been held in early June 2018, will be called at a later date or cancelled. Layne will provide further information regarding the 2018 Annual Meeting in due course.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of
Layne Christensen Company

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Layne Christensen Company and subsidiaries (the "Company") as of January 31, 2018, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of January 31, 2018, based on criteria established in *Internal Control — Integrated Framework (2013) issued by COSO.*

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements and financial statement schedule as of and for the year ended January 31, 2018 of the Company and our report dated April 10, 2018 expressed an unqualified opinion on those financial statements and financial statement schedule.

Basis of Opinion

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

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

Definition and Limitations of Internal Control over Financial Reporting

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

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

/s/DELOITTE & TOUCHE LLP

Houston, Texas
April 10, 2018

PART III

Item 10. Directors, Executive Officers and Corporate Governance

Our Proxy Statement to be used in connection with the 2018 Annual Meeting of Stockholders , will contain, (i) under the caption “Election of Directors,” certain information relating to our directors and Audit Committee financial experts required by Item 10 of Form 10-K and such information is incorporated herein by this reference (except that the information set forth under the subcaption “Compensation of Directors” is expressly excluded from such incorporation), (ii) under the caption “Transactions with Management/Related Party Transactions,” certain information relating to our Code of Ethics required by Item 10 of Form 10-K and such information is incorporated herein by this reference and (iii) under the caption “Section 16(a) Beneficial Ownership Reporting Compliance,” certain information required by Item 10 of Form 10-K and such information is incorporated herein by this reference.

Our executive officers are appointed by the Board of Directors for such terms as shall be determined from time to time by the Board and serve until their respective successors are selected and qualified or until their respective earlier death, retirement, resignation or removal. The Board of Directors may delegate its authority to appoint executive officers to the President or Chief Executive Officer.

Set forth below are the name, age and position of each executive officer of Layne.

Name	Age	Position
Michael J. Caliel	58	President, Chief Executive Officer and Director
J. Michael Anderson	55	Senior Vice President and Chief Financial Officer
Steven F. Crooke	61	Senior Vice President, Chief Administrative Officer and General Counsel
Kevin P. Maher	58	Senior Vice President - Water Resources and Mineral Services
Larry D. Purlee	70	Division President - Inliner

The business experience of each of the executive officers of Layne is as follows:

Michael J. Caliel was appointed President and Chief Executive Officer effective January 2, 2015. Mr. Caliel served as President and Chief Executive Officer of the Invensys Software and Industrial Automation Division of Invensys plc, an automations, controls and process solutions company. Mr. Caliel was employed by Invensys from December 2011 until July 2014. From July 2006 until June 2011, Mr. Caliel served as President, Chief Executive Officer and a Director of Integrated Electrical Services, a publicly held, national provider of electrical and communications solutions for the commercial, industrial and residential markets. From 1993 until June 2006, Mr. Caliel was employed by Invensys, where he served in a variety of senior management positions, including his most recent position as President of Invensys Process Systems. Prior to becoming President of Invensys Process Systems, he served as President of its North America and Europe, Middle East and Africa operations from 2001 to 2003.

J. Michael Anderson was appointed Senior Vice President and Chief Financial Officer effective July 20, 2015. Prior to joining Layne, Mr. Anderson served as Chief Financial Officer at Southcross Energy Partners, L.P., a Master Limited Partnership engaged in the natural gas midstream business. Mr. Anderson previously served as Chief Financial Officer of Exterran Holdings, Inc. and Exterran Partners, L.P., a global market leader in natural gas compression and oil and gas services, from 2003 until 2012. Mr. Anderson also served as Chief Financial Officer and as Chairman and Chief Executive Officer at Azurix Corp., a global owner and operator of water and wastewater assets, during his tenure from 1999 until 2003. Mr. Anderson began his career with JPMorgan Chase & Co. as an investment banker after earning his undergraduate degree in business from Texas Tech University and his MBA from The Wharton School of the University of Pennsylvania.

Steven F. Crooke was promoted to Senior Vice President, Chief Administrative Officer and General Counsel in December 2014. Prior to that, Mr. Crooke served as Senior Vice President, Secretary and General Counsel from 2006 to 2014. Mr. Crooke served as Vice President, Secretary and General Counsel from 2001 to 2006. For the period of June 2000 through April 2001, Mr. Crooke served as Corporate Legal Affairs Manager of Huhtamaki Van Leer. Prior to that, he served as Assistant General Counsel of the Company from 1995 to May 2000.

Kevin P. Maher was promoted to Senior Vice President for Water Resources and Mineral Services in March 2016. Prior to that, Mr. Maher served as the President of Mineral Services of Layne since January 2013, when he joined Layne. Prior to joining the company, Mr. Maher ran his family business, which was acquired and successfully integrated into Boart Longyear. At Boart Longyear, Mr. Maher was the Eastern Regional Manager for Environment & Infrastructure. Most recently, he was Manager of Reverse Circulation & Mine Support Drilling Operations at Major Drilling America. Mr. Maher is an experienced executive with over 25 years of experience in the drilling industry.

Larry D. Purlee became the President of the Inliner division, a wholly-owned subsidiary of Layne which provides wastewater pipeline and structure rehabilitation services, on February 1, 2010. Mr. Purlee served as Executive Vice President of Reynolds Inliner, LLC from the early 1990s until February 1, 2010. Mr. Purlee has over 40 years of experience in the wastewater pipeline rehabilitation industry.

Item 11. Executive Compensation

Our Proxy Statement to be used in connection with the 2018 Annual Meeting of Stockholders, will contain, under the caption "Executive Compensation and Other Information," the information required by Item 11 of Form 10-K and such information is incorporated herein by this reference.

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

Our Proxy Statement to be used in connection with the 2018 Annual Meeting of Stockholders, will contain, under the captions "Ownership of Layne Christensen Common Stock" and "Equity Compensation Plan Information" the information required by Item 12 of Form 10-K and such information is incorporated herein by this reference.

Item 13. Certain Relationships, Related Transactions and Director Independence

Our Proxy Statement to be used in connection with the 2018 Annual Meeting of Stockholders, will contain, under the captions "Other Corporate Governance Matters," and "Transactions with Management/Related Party Transactions" the information required by Item 13 of Form 10-K and such information is incorporated herein by this reference.

Item 14. Principal Accountant Fees and Services

Our Proxy Statement to be used in connection with the 2018 Annual Meeting of Stockholders, will contain, under the caption "Principal Accounting Fees and Services," the information required by Item 14 of Form 10-K and such information is incorporated herein by this reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) Financial Statements, Financial Statement Schedules and Exhibits:

1. Financial Statements:
   The financial statements are listed in the index for Item 8 of this Form 10-K.
2. Financial Statement Schedule:
   The applicable financial statement schedule is listed in the index for Item 8 of this Form 10-K.
3. Exhibits:
   The exhibits filed with or incorporated by reference in this report are listed below:

Exhibit Number	Description
**2.1	Asset Purchase Agreement, dated February 8, 2017, by and among Layne Christensen Company and certain subsidiaries, as Sellers, Reycon Partners, LLC, as Buyer, and the guarantors of Buyer named therein (filed as Exhibit 2.1 to Layne's Form 10-K for the fiscal year ended January 31, 2017, filed on April 10, 2017, and incorporated herein by this reference).
2.2	Amendment No. 1 to Asset Purchase Agreement, dated March 20, , 2017, by and among Layne Christensen Company and certain subsidiaries, as Sellers, Reycon Partners, LLC, as Buyer, and the guarantors of Buyer named therein ((filed as Exhibit 2.2 to Layne's Form 8-K, filed on May 4, 2017, and incorporated herein by this reference).
**2.3	Amendment No. 2 to Asset Purchase Agreement, dated April 28, 2017, by and among Layne Christensen Company and certain subsidiaries, as Sellers, Reycon Partners, LLC, as Buyer, and the guarantors of Buyer named therein (filed as Exhibit 2.3 to Layne's Form 8-K, filed on May 4, 2017, and incorporated herein by this reference).
**2.4	Agreement and Plan of Merger, dated February 13, 2018, by and among Layne Christensen Company, Granite Construction Incorporated and Lowercase Merger Sub Incorporated (filed as Exhibit 2.1 to Layne's Form 8-K, filed on February 14, 2018, and incorporated herein by this reference).
3.1	Amended and Restated Certificate of Incorporation of Layne (filed as Exhibit 3.1 to Layne's Form 10-K for the fiscal year ended January 31, 2015, filed on April 13, 2015, and incorporated herein by this reference).
3.2	Amended and Restated Bylaws of Layne (effective as of April 15, 2014) (filed as Exhibit 3.1 to Layne's Form 8-K filed April 16, 2014, and incorporated herein by this reference).
4.1	Specimen Common Stock Certificate (filed with Amendment No. 3 to Layne's Registration Statement on Form S-1 (File No. 33-48432) as Exhibit 4(1) and incorporated herein by reference) (P).
4.2	Indenture relating to 4.25% Convertible Senior Notes due 2018, dated as of November 12, 2013, between Layne Christensen Company and U.S. Bank National Association, including the form of Global Note attached as Exhibit A thereto (filed as Exhibit 4.1 to Layne's Form 8-K filed on November 12, 2013, and incorporated herein by reference).
4.3	Form of Exchange and Subscription Agreement, dated February 4, 2015 (filed as Exhibit 4.9 to Layne's Form 10-K for the fiscal year ended January 31, 2015, filed on April 14, 2015, and incorporated herein by this reference).
4.4	Form of Amendment to Exchange and Subscription Agreement dated February 27, 2015 (filed as Exhibit 4.10 to Layne's Form 10-K for the fiscal year ended January 31, 2015, filed on April 14, 2015, and incorporated herein by this reference).
4.5	Notice Regarding the Issuance and Sale of 8.0% Senior Secured Second Lien Convertible Notes of Layne Christensen Company dated February 27, 2015 (filed as Exhibit 4.11 to Layne's Form 10-K for the fiscal year ended January 31, 2015, filed on April 14, 2015, and incorporated herein by this reference).
4.6	Indenture relating to the 8.0% Second Lien Senior Secured Convertible Notes, dated as of March 2, 2015, among Layne Christensen Company, the guarantor parties thereto and U.S. Bank National Association, including the form of Global Note attached as Exhibit A thereto (filed as Exhibit 4.1 to Layne's Form 8-K filed on March 2, 2015, and incorporated herein by reference).
4.7	Security Agreement, dated as of March 2, 2015, among Layne Christensen Company, certain of its subsidiaries, as pledgers, and U.S. Bank National Association, as Collateral Agent (filed as Exhibit 4.2 to Layne's Form 8-K filed on March 2, 2015, and incorporated herein by reference).
4.8	Intercreditor and Subordination Agreement dated as of March 2, 2015, between PNC Bank, National Association and U.S. Bank National Association and acknowledged by the Company and the subsidiary guarantors (filed as Exhibit 4.3 to Layne's Form 8-K filed on March 2, 2015, and incorporated herein by reference).

4.9	Amended and Restated Credit Agreement dated as of August 17, 2015 among Layne Christensen Company, as Borrower, certain subsidiaries of Layne Christensen Company, as Co-Borrowers, the guarantors party thereto, the lenders party thereto, PNC Bank, National Association ("PNC Bank"), as Administrative Agent, Jefferies Finance, LLC, as Syndication Agent, Lead Arranger and Book Running Manager, PNC Bank and Wells Fargo Bank, N.A., as Co-Collateral Agents, and PNC Bank, as Swingline Lender and Issuing Bank (filed as Exhibit 4.1 to Layne's Form 8-K filed August 19, 2015, and incorporated herein by this reference).
4.10	First Amendment and Consent to Amended and Restated Credit Agreement dated June 9, 2016, among Layne Christensen Company, as Borrower, certain subsidiaries of Layne Christensen Company, as Co-Borrowers, the guarantors party thereto, the lenders party thereto, and PNC Bank, National Association, as Administrative Agent (filed as Exhibit 4.1 to Layne's Form 10-Q for the fiscal quarter ended July 31, 2016 filed September 6, 2016, and incorporated herein by this reference).
4.11	Second Amendment to Amended and Restated Credit Agreement dated March 30, 2018, among Layne Christensen Company, as Borrower, certain subsidiaries of Layne Christensen Company, as Co-Borrowers, the guarantors party thereto, the lenders party thereto, and PNC Bank, National Association, as Administrative Agent.
4.12	Agreement dated as of March 19, 2018, among Layne Christensen Company and the purchasers listed therein relating to the issuance of Layne's 11.0% Senior Unsecured Notes due October 16, 2019.
4.13	Notice of Substitution dated March 28, 2018 with respect to the purchasers of Layne's 11.0% Senior Unsecured Notes due October 16, 2019.
*10.1	Form of Non-Qualified Stock Option Agreement between Layne and Management of Layne effective as of April 20, 1999 (filed with Layne's Form 10-Q for the quarter ended April 30, 1999 (File No. 0-20578) as Exhibit 10(3) and incorporated herein by reference).
*10.2	Layne Christensen Company 2006 Equity Incentive Plan (as amended and restated) (filed as Exhibit 10.5 to Layne's Form 10-K for the fiscal year ended January 31, 2015, filed on April 14, 2015, and incorporated herein by this reference).
*10.3	Form of Incentive Stock Option Agreement between Layne and management of Layne for use with the 2006 Equity Incentive Plan (filed as Exhibit 4(e) to the Company's Form S-8 (File No. 333-135683), filed July 10, 2006, and incorporated herein by this reference).
*10.4	Form of Nonqualified Stock Option Agreement between Layne and management of Layne for use with the 2006 Equity Incentive Plan, as amended effective January 26, 2009 (incorporated by reference to Exhibit 10(20) to Layne's Annual Report on Form 10-K for the fiscal year ended January 31, 2009, filed on March 31, 2009).
*10.5	Form of Nonqualified Stock Option Agreement between Layne and non-employee directors of Layne for use with the 2006 Equity Incentive Plan, as amended effective January 26, 2009 (incorporated by reference to Exhibit 10(21) to Layne's Annual Report on Form 10-K for the fiscal year ended January 31, 2009, filed on March 31, 2009).
*10.6	Severance Agreement, dated March 13, 2008, by and between Steven F. Crooke and Layne Christensen Company (incorporated by reference to Exhibit 10.3 to Layne's Current Report on Form 8-K filed March 19, 2008).
*10.7	Layne Christensen Company Deferred Compensation Plan for Directors (Amended and Restated, effective as of January 1, 2009) (incorporated by reference to Exhibit 10(37) to Layne's Annual Report on Form 10-K for the fiscal year ended January 31, 2009, filed on March 31, 2009).
*10.8	Layne Christensen Company Key Management Deferred Compensation Plan (amended and restated, effective as of January 1, 2008) (incorporated by reference to Exhibit 10(38) to Layne's Annual Report on Form 10-K for the fiscal year ended January 31, 2009, filed on March 31, 2009).
*10.9	Layne Christensen Company Executive Short-Term Incentive Plan (amended and restated as of February 1, 2017).

*10.10	Form of Restricted Stock Unit Agreement between Layne and management of Layne for use with the 2006 Equity Incentive Plan (filed as Exhibit 10.2 to Layne's Current Report on Form 8-K filed April 4, 2013, and incorporated herein by reference).
*10.11	Form of Performance Shares Agreement between Layne and management of Layne for use with the 2006 Equity Incentive Plan (filed as Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended April 30, 2013, and incorporated herein by reference).
10.12	General Agreement of Indemnity, dated September 2, 2014, by and between Layne Christensen Company, as Indemnitor, and Travelers Casualty and Surety Company of America, as the Company (filed as Exhibit 10.2 to Layne's Form 10-Q for the Fiscal Quarter ended July 31, 2014, filed on September 9, 2014, and incorporated herein by reference).
*10.13	Offer Letter, dated December 8, 2014, between the Company and Michael J. Caliel (filed as Exhibit 10.26 to Layne's Form 10-K for the fiscal year ended January 31, 2015, filed on April 14, 2015, and incorporated herein by this reference).
*10.14	Severance Agreement, dated December 8, 2014, between the Company and Michael J. Caliel (filed as Exhibit 10.27 to Layne's Form 10-K for the fiscal year ended January 31, 2015, filed on April 14, 2015, and incorporated herein by this reference).
*10.15	Offer Letter, dated July 6, 2015, between Layne Christensen Company and J. Michael Anderson (filed as Exhibit 10.1 to Layne's Form 10-Q for the quarter ended July 31, 2015, filed on September 9, 2015, and incorporated herein by reference).
*10.16	Severance Agreement, dated July 6, 2015, between Layne Christensen Company and J. Michael Anderson (filed as Exhibit 10.2 to Layne's Form 10-Q for the quarter ended July 31, 2015, filed on September 9, 2015, and incorporated herein by reference).
10.17	General Agreement of Indemnity dated February 4, 2015, by and between Layne Christensen Company, as Indemnitor, and Liberty Mutual Group, as Company (filed as Exhibit 10.1 to Layne's Form 10-Q for the quarter ended April 30, 2015, filed on June 9, 2015, and incorporated herein by reference).
*10.18	Form of Indemnification Agreement between Layne and its directors and officers (filed as Exhibit 10.1 to Layne's Form 10-Q for the quarter ended July 31, 2016, filed on September 6, 2016, and incorporated herein by reference).
*10.19	Retention Bonus Agreement dated February 5, 2018 by and between Layne Christensen Company and Kevin Maher.
*10.20	Retention Bonus Agreement dated January 31, 2018 by and between Layne Christensen Company and Larry Purlee.
*10.21	Layne Christensen Company 2006 Equity Incentive Plan, as amended and restated (filed as Exhibit 10.1 to Layne's Form 8-K filed June 2, 2017, and incorporated herein by this reference).
*10.22	Severance Agreement, dated March 29, 2016, by and between Layne Christensen Company and Kevin Maher.
*10.23	2017 Form of Restricted Stock Unit Agreement for Employees for use with the 2006 Equity Incentive Plan (filed as Exhibit 10.1 to Layne's Quarterly Report on Form 10-Q filed September 11, 2107, and incorporated herein by reference).
*10.24	2017 Form of Performance Shares Agreement between Layne and management of Layne for use with the 2006 Equity Incentive Plan.
*10.25	Layne Christensen Company Long-Term Incentive Plan (amended and restated as of February 1, 2017).
21.1	List of Subsidiaries.

23.1	Consent of Deloitte & Touche LLP.
31.1	Section 302 Certification of Chief Executive Officer of the Company.
31.2	Section 302 Certification of Chief Financial Officer of the Company.
32.1	Section 906 Certification of Chief Executive Officer of the Company.
32.2	Section 906 Certification of Chief Financial Officer of the Company.
95	Mine Safety Disclosures.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

* Management contracts or compensatory plans or arrangements required to be identified by Item 14(a)(3).

** The schedules and exhibits have been omitted pursuant to Item 601(b)(2) of Regulation S-K. Layne Christensen Company undertakes to furnish supplemental copies of any of the omitted schedules or exhibits upon request by the Securities and Exchange Commission.

(b) Exhibits
The exhibits filed with this report on Form 10-K are identified above under Item 15(a)(3).

Item 16. Form 10-K Summary

None.

Signatures

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

Layne Christensen Company

By /s/ Michael J. Caliel
Michael J. Caliel
President and Chief Executive Officer
Dated April 10, 2018

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 and Title	Date
/s/Michael J. Caliel Michael J. Caliel President, Chief Executive Officer and Director (Principal Executive Officer)	April 10, 2018
/s/J. Michael Anderson J. Michael Anderson Senior Vice President, Chief Financial Officer (Principal Financial Officer)	April 10, 2018
/s/Lisa Curtis Lisa Curtis Vice President and Chief Accounting Officer (Principal Accounting Officer)	April 10, 2018
/s/David A. B. Brown David A. B. Brown Director	April 10, 2018
/s/J. Samuel Butler J. Samuel Butler Director	April 10, 2018
/s/Robert R. Gilmore Robert R. Gilmore Director	April 10, 2018
/s/John T. Nesser III John T. Nesser III Director	April 10, 2018
/s/Nelson Obus Nelson Obus Director	April 10, 2018
/s/Alan P. Krusi Alan P. Krusi Director	April 10, 2018

SECOND AMENDMENT TO AMENDED AND RESTATED CREDIT AGREEMENT

This Second Amendment to Amended and Restated Credit Agreement, dated March 30, 2018, by and among Layne Christensen Company, a Delaware corporation (the "Administrative Borrower"), each Co-Borrower (as defined in the Credit Agreement (as defined below)), the Guarantors (as defined in the Credit Agreement), the Lenders (as defined in the Credit Agreement) and PNC Bank, National Association, as administrative agent for the Lenders (in such capacity, the "Agent") (the "Second Amendment").

W I T N E S S E T H:

WHEREAS, the Administrative Borrower, each Co-Borrower, the Guarantors, the Lenders (as defined in the Credit Agreement) party thereto, the Co-Collateral Agents (as defined in the Credit Agreement), the Agent, the Swingline Lender (as defined in the Credit Agreement), the Issuing Bank (as defined in the Credit Agreement), the Arranger (as defined in the Credit Agreement) and the Syndication Agent (as defined in the Credit Agreement) entered into that certain Amended and Restated Credit Agreement, dated as of August 17, 2015 (as amended, modified, supplemented or restated from time to time, the "Credit Agreement"), pursuant to which, among other things, the Lenders, the Swingline Lender and the Issuing Bank, as applicable, agreed to extend credit to Borrowers (as defined in the Credit Agreement);

WHEREAS, the Borrowers and the Guarantors desire to amend certain provisions of the Credit Agreement and the Agent and the Lenders desire to permit such amendments on the terms and subject to the satisfaction of the conditions set forth herein.

NOW, THEREFORE, in consideration of the premises contained herein and other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and intending to be legally bound hereby, the parties hereto agree as follows:

1.**Capitalized Terms**. All capitalized terms used herein which are defined in the Credit Agreement shall have the same meaning herein as in the Credit Agreement unless the context clearly indicates otherwise.

2.**Amendments**. The effective date of this Second Amendment shall be the date on which this Second Amendment becomes effective in accordance with Section 3 below (the "Effective Date"). As of the Effective Date, the Credit Agreement is amended as follows:

(a) Section 1.01 of the Credit Agreement is hereby amended by adding the following new definitions in the appropriate alphabetical order:

"**11.0% Senior Unsecured Notes**" shall mean the Administrative Borrower's 11.0% Senior Unsecured Notes due October 16, 2019 issued pursuant to the 11.0% Senior Unsecured Notes Documents in

the aggregate original principal face amount of $71,000,000. Such 11.0% Senior Unsecured Notes shall be classified as and comply with the requirements of "Permitted Refinancing Indebtedness" with respect to the Senior Unsecured Notes under this Agreement for all purposes. The proceeds of such 11.0% Senior Unsecured Notes shall be used solely to Effectively Discharge the Senior Unsecured Notes.

"**11.0% Senior Unsecured Notes Agreement**" shall mean that certain note purchase agreement dated as of March 19, 2018 among the Administrative Borrower and the purchasers listed therein providing for the issuance of 11.0% Senior Unsecured Notes.

"**11.0% Senior Unsecured Notes Documents**" shall mean any and all agreements, instruments and documents executed and delivered in connection with the 11.0% Senior Unsecured Notes Agreement.

"**Second Amendment Closing Date**" shall mean March 30, 2018.

(b) The definition of "**Maturity Date**" is hereby amended and restated in its entirety as follows:

"**Maturity Date**" shall mean April 15, 2019; provided, however, that, the Maturity Date shall mean (a) July 16, 2018 if the Agent has not received evidence reasonably satisfactory to it that the Senior Unsecured Notes have been Effectively Discharged with the proceeds from the issuance of the 11.0% Senior Unsecured Notes by July 15, 2018 or (b) if (i) the issuance of the 11.0% Senior Unsecured Notes is cancelled for any reason or (ii) the proceeds of the 11.0% Senior Unsecured Notes are used for a purpose other than to Effectively Discharge the Senior Unsecured Notes in full, then May 15, 2018; provided, that if such event described in clause (i) or (ii) above occurs after May 15, 2018, then the date such event shall have occurred.

3.**Conditions to Effectiveness**. The provisions of Section 2 of this Second Amendment shall not become effective until the Agent has received the following, each in form and substance acceptable to the Agent:

(a)this Second Amendment, duly executed by the Borrowers, the Guarantors, the Lenders and the Agent;

(b)Lenders, the Agent and Agent's counsel shall have received payment of all fees and expenses owed to the Lenders, the Agent and the Agent's counsel, respectively, in connection with this Second Amendment;

(c)the Administrative Borrower shall have furnished to the Agent a certificate from a Responsible Officer of the Administrative Borrower certifying as to compliance with the requirements of clauses (a) through (e) of "Permitted Refinancing Indebtedness" in the Credit Agreement with respect to the 11.0% Senior Unsecured Notes; and

(d)such other documents as may be reasonably requested by the Agent.

The authorization of the Agent and the Lenders to release their executed signature page for this Second Amendment shall constitute their acknowledgment that all of the above conditions have been satisfied.

4.**Reaffirmation**. The Loan Parties hereby reconfirm and reaffirm that each of the representations and warranties made by any Loan Party set forth in Article III of the Credit Agreement or in any other Loan Document are true and correct in all material respects (or true and correct in all respects in the case of representations and warranties qualified by materiality or Material Adverse Effect) as of the date of this Second Amendment (or, to the extent any such representations or warranties relate to an earlier date, such representations and warranties shall have been true and correct in all material respects (or true and correct in all respects in the case of representations and warranties qualified by materiality or Material Adverse Effect) on and as of such earlier date).

5.**Security Grant**. The Loan Parties acknowledge and agree that at all times the Security Documents continue to secure prompt payment when due of the Obligations and the Guarantees remain in full force and effect.

6.**Representations and Warranties**. Each Loan Party hereby represents and warrants to the Lenders and the Agent that (i) this Second Amendment and the transactions to be entered into by each Loan Party in connection herewith are within such Loan Party's powers and have been duly authorized by all necessary corporate or other organizational action on the part of such Loan Party; (ii) the execution and delivery hereof by the Loan Parties and the performance and observance by the Loan Parties of the provisions hereof and of the Credit Agreement and all documents executed or to be executed therewith, do not violate the Organizational Documents of any Loan Party or any material Legal Requirement in any material respect; and (iii) this Second Amendment, the Credit Agreement and the other Loan Documents executed or to be executed by the Loan Parties in connection herewith or therewith, when executed by such Loan Party, will constitute a legal, valid and binding obligation of such Loan Party, enforceable in accordance with their respective terms, subject to applicable bankruptcy, insolvency, reorganization, moratorium or other laws affecting creditors' rights generally and subject to general principles of equity, regardless of whether considered in a proceeding in equity or at law. The Loan Parties represent and warrant that (i) no Default or Event of Default exists under the Credit Agreement, nor will any occur as a result of the execution and delivery and effectiveness of this Second Amendment or the performance or observance of any provision hereof and (ii) they presently have no claims or actions of any kind at law or in equity against the Lenders or the Agent arising out of or in any way relating to the Credit Agreement or the Loan Documents.

7.**Miscellaneous**.

(a)Each reference to the Credit Agreement that is made in the Credit Agreement or any other document executed or to be executed in connection therewith shall hereafter be construed as a reference to the Credit Agreement as amended hereby.

(b)The agreements contained in this Second Amendment are limited to the specific agreements contained herein. Except as amended hereby, all of the terms and conditions of the Credit Agreement and the Loan Documents shall remain in full force and effect. This Second Amendment amends the Credit Agreement and is not a novation thereof.

(c)The headings of any paragraph of this Second Amendment are for convenience only and shall not be used to interpret any provision hereof.

(d)This Second Amendment may be executed in any number of counterparts and by the different parties hereto on separate counterparts each of which, when so executed, shall be deemed to be an original, but all such counterparts shall constitute but one and the same instrument.

(e)This Second Amendment shall be governed by, and shall be construed and enforced in accordance with, the laws of the State of New York. This Second Amendment is a Loan Document.

[INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, and intending to be legally bound, the parties hereto, have caused this Second Amendment to be duly executed by their duly authorized officers on the day and year first above written.

ADMINISTRATIVE BORROWER

LAYNE CHRISTENSEN COMPANY

By: /s/ J. Michael Anderson
Name: J. Michael Anderson
Title: Chief Financial Officer

CO-BORROWERS

LAYNE GEO, INC.
COLLECTOR WELLS INTERNATIONAL, INC.
FENIX SUPPLY LLC
INLINER TECHNOLOGIES, LLC
INTERNATIONAL DIRECTIONAL SERVICES, L.L.C.
LAYNE HEAVY CIVIL, INC.
LAYNE INLINER, LLC
LAYNE TRANSPORT CO.
LINER PRODUCTS, LLC
REYNOLDS WATER ISLAMORADA, LLC
LAYNE VTI, INC.
W.L. HAILEY & COMPANY, INC.

By: /s/ J. Michael Anderson
Name: J. Michael Anderson
Title: Chief Financial Officer

GUARANTORS

BOYLES BROS. DRILLING COMPANY
CHRISTENSEN BOYLES CORPORATION
LAYNE INTERNATIONAL, LLC
LAYNE SOUTHWEST, INC.
MEADORS CONSTRUCTION CO., INC.
MID-CONTINENT DRILLING COMPANY

By: /s/ J. Michael Anderson
Name: J. Michael Anderson
Title: Chief Financial Officer

PNC BANK, NATIONAL ASSOCIATION,
as Agent and as a Lender

By: /s/ Victor Alarcon
Name: Victor Alarcon
Title: Senior Vice President

WELLS FARGO BANK, N.A.,
as a Lender

By: /s/ Lynn Fiore
Name: Lynn Fiore
Title: Vice President

JFIN BUSINESS CREDIT FUND I, LLC,
as a Lender

By: /s/ J. Paul McDonnell
Name: J. Paul McDonnell
Title: Managing Director

Exhibit 4.12

Layne Christensen Company

$71,000,000

11.0% Senior Unsecured Notes due October 16, 2019

Dated March 19, 2018

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LAYNE CHRISTENSEN COMPANY
1800 Hughes Landing Boulevard
Suite 800
The Woodlands, Texas 77380

$71,000,000 11.0% Senior Unsecured Notes due October 16, 2019

March 19, 2018

To each of the Purchasers listed in
Schedule B hereto (each a
"Purchaser and collectively,
the **"Purchasers"**):

Ladies and Gentlemen:

Layne Christensen Company, a Delaware corporation (the **"Company"**), agrees with each of the Purchasers as follows:

Section 1. Authorization of Notes.

Authorization of Issue of Notes

. The Company will authorize the issue and sale of $71,000,000 aggregate principal amount of its 11.0% Senior Unsecured Notes due October 16, 2019 (as amended, restated or otherwise modified from time to time pursuant to Section 17 and including any such notes issued in substitution therefor pursuant to Section 11, the **"Notes"**). The Notes shall be substantially in the form set out in Schedule C. *Certain capitalized and other terms used in this Agreement are defined in Schedule A, and, for purposes of this Agreement, the rules of construction set forth in Section 20.3 shall govern.*

Section 2. Issuance of Notes; Fees.

Sale and Purchase of Notes

. Subject to the terms and conditions of this Agreement, the Company will issue and sell to each Purchaser and each Purchaser will purchase from the Company, at the Closing provided for in Section 3, Notes in the principal amount specified opposite such Purchaser's name in Schedule B at the purchase price of 100% of the principal amount thereof. The Purchasers' obligations hereunder are several and not joint obligations and no Purchaser shall have any liability to any Person for the performance or non-performance of any obligation by any other Purchaser hereunder.

Fees

. The Company will pay to each Purchaser the fees provided for in the Fee Letter as and when required by the Fee Letter.

Section 3. Closing.

Closing

. Unless the Purchasers' commitment has been terminated pursuant to Section 3.2, the sale and purchase of the Notes to be purchased by each Purchaser shall take place by conference call and by exchange of signature pages by email or fax, at 10:00 a.m., Central

time, at a closing (the **"Closing"**) on the earlier to occur of (i) October 1, 2018 and (ii) fifth Business Day after deliver of a Funding Notice by the Company to the Purchasers (the day of the Closing being the **"Closing Date"**). At the Closing the Company will deliver to each Purchaser the Notes to be purchased by such Purchaser in the form of a single Note (or such greater number of Notes in denominations of at least $1,000,000 as such Purchaser may request) dated the date of the Closing and registered in such Purchaser's name (or in the name of its nominee), against delivery by such Purchaser to the Company or its order of immediately available funds in the amount of the purchase price therefor by wire transfer of immediately available funds for the account of the Company to the account specified in the Funding Notice.

Commitment Termination

. The commitment of the Purchasers to purchase the Notes on the Closing Date shall terminate upon the earliest to occur of: (i) a Change of Control and (ii) delivery of a written notice of termination signed by a Senior Financial Officer on Company letterhead. The Purchasers shall have no obligation to purchase any Notes after the commitment is terminated or the Notes have been repaid. The Company's obligations under this Agreement shall survive the termination of the Purchasers' commitment.

Section 4. Conditions to Closing.

The Purchasers' obligations under this Agreement to purchase the Notes at the Closing shall be subject to the fulfillment to the Purchasers' satisfaction of the following conditions (unless waived in writing by each of the Purchasers):

Officer's Certificate

. The Company shall have delivered to the Purchasers an Officer's Certificate or Officer's Certificates, dated the Closing Date, certifying that the representations and warranties of the Company in this Agreement are true and correct as of the date of this Agreement and as of the Closing Date, and that the Company is in compliance with all of the Company's covenants in this Agreement as of the Closing Date.

Secretary's Certificate

. The Company shall have delivered to the Purchasers a certificate of its Secretary or Assistant Secretary and one other officer, dated the Closing Date, certifying as to the following:

(a) the resolutions of the board of directors of the Company authorizing the execution and delivery of the Note Documents, and the issuance of the Notes, and of all documents evidencing other necessary company action and governmental approvals, if any, with respect to the Note Documents;

(b) the names and true signatures of the officers of the Company authorized to sign the Note Documents and the other documents to be delivered hereunder and thereunder;

(c) the certificate of incorporation (or equivalent formation document) and bylaws (or equivalent governing document) of the Company; and

(d) A good standing certificate (or equivalent) for the Company from the Secretary of State of the jurisdiction of organization of the Company dated of a recent date

prior to the Closing Date and such other evidence of the status of the Company as the Purchasers may reasonably request.

Opinions of Counsel

. The Purchasers shall have received opinions in form and substance satisfactory to the Purchasers, dated the Closing Date from Stinson Leonard Street LLP, counsel for the Company, covering the matters set forth in Schedule D (and the Company hereby instructs its counsel to deliver such opinion to the Purchasers).

Section 4.4. Payment of Fees.

(a) Without limiting Section 13.1, the Company shall have paid to each Purchaser on any fees due it pursuant to or in connection with this Agreement, including any fees due pursuant to Section 2.

(b) Without limiting Section 13.1, the Company shall have paid on or before the date of this Agreement the fees, charges and disbursements of the legal consultant to the Purchasers, to the extent reflected in a statement of such consultant rendered to the Company at least one Business Day prior to the date of this Agreement.

Section 5. Representations and Warranties of the Company.

The Company represents and warrants to each Purchaser that as of the date of this Agreement and as of the Closing Date:

Organization; Power and Authority

(a) . The Company (i) has been duly formed and is validly existing and in good standing under the laws of its jurisdiction of organization, (ii) has full power and authority to (A) execute, deliver and perform its obligations under this Agreement and the Notes and (B) carry on its business and to own, lease and operate its properties and assets as described in the Company's Annual Report on Form 10-K for the fiscal year ended January 31, 2017 or in any Current Report on Form 8-K or Quarterly Report on Form 10-Q of the Company filed with or furnished to the SEC after January 31, 2017 (such filings, collectively, the "**Exchange Act Reports**") and (iii) is duly qualified or licensed to do business and is in good standing as a foreign corporation, partnership or other entity as the case may be, authorized to do business in each jurisdiction in which the nature of such business or the ownership or leasing of such properties requires such qualification, except where the failure to be so qualified would not individually or in the aggregate have a Material Adverse Effect.

Authorization, Etc.

(a) The Notes have been duly and validly authorized by the Company and, when issued and authenticated in accordance with this Agreement and delivered to and paid for by the Purchasers in accordance with the terms hereof, will have been duly executed and delivered by the Company and will constitute legal, valid and binding obligations of the Company, enforceable against the Company in accordance with their terms, except that the enforcement thereof may be subject to (1) bankruptcy, insolvency, reorganization, receivership, moratorium, fraudulent conveyance, fraudulent transfer or other similar laws now or hereafter in effect relating to creditors' rights generally; and (2)

general principles of equity (whether applied by a court of law or equity) and the discretion of the court before which any proceeding therefor may be brought.

(b) This Agreement has been duly and validly authorized, executed and delivered by the Company and constitutes a legal, valid and binding obligation of the Company, enforceable against the Company in accordance with its terms, except that the enforcement thereof may be subject to (1) bankruptcy, insolvency, reorganization, receivership, moratorium, fraudulent conveyance, fraudulent transfer or other similar laws now or hereafter in effect relating to creditors' rights generally; and (2) general principles of equity (whether applied by a court of law or equity) and the discretion of the court before which any proceeding therefor may be brought.

Private Offering by the Company

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(a) Assuming the accuracy of the representations and warranties of the Purchasers, the issuance and sale of the Notes are exempt from the registration and prospectus-delivery requirements of the Securities Act.

(b) The Notes, when issued, will not be of the same class as securities listed on a national securities exchange registered under Section 6 of the Exchange Act, or quoted in a U.S. automated inter-dealer quotation system, within the meaning of Rule 144A(d)(3)(i) under the Securities Act.

No Conflicts

. Neither the execution, delivery or performance of the Note Documents nor the consummation of any of the transactions contemplated by the Note Documents (including the application of the proceeds from the issuance and sale of the Notes) will conflict with, violate, constitute a breach of or a default (with the passage of time or otherwise) or a Debt Repayment Triggering Event under, or result in the imposition of a Lien, on any assets of the Company or any of its Subsidiaries, or in the imposition of any penalty, under or pursuant to (1) the Charter Documents of the Company or its Subsidiaries; (2) any Material Contract; (3) any U.S. or non-U.S. federal, state or local statute, law (including, without limitation, common law) or ordinance, or any judgment, decree, rule, regulation, order or injunction (collectively, "**Applicable Law**") of any Governmental Authority, applicable to the Company or any of its Subsidiaries or any of their respective properties, except, in the case of this clause (3), for any filings that may be required to be made by the Company after the Closing Date under the securities or "Blue Sky" laws of U.S. state or non-U.S. jurisdictions or other non-U.S. laws applicable to the purchase of the Notes outside the United States in connection with the transactions contemplated by this Agreement, which filings shall be made by the Company within the applicable prescribed time periods; or (4) any order, writ, judgment, injunction, decree, determination or award binding upon or affecting the Company or any of its Subsidiaries.

Compliance with Laws, Other Instruments, Etc.

The Company is not (i) in violation of its Charter Documents; or (ii) in violation of any Applicable Law of any Governmental Authority, applicable to any of them or any of their respective properties, except, in the case of clause (ii) for such violations that would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. There exists no condition that, with the passage of time or otherwise, would constitute a violation of such Charter Documents or

Applicable Laws, except, in the case of Applicable Laws, for such violations that would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

Required Consents

. No consent, approval, authorization, order, filing or registration of or with any Governmental Authority or third party is required for execution, delivery or performance of the Note Documents or the consummation of the transactions contemplated by the Note Documents, except for (1) those that have been obtained or made at or prior to the Closing, as the case may be, that are in full force and effect and (2) any filings as may be required to be made by the Company under the securities or "Blue Sky" laws of U.S. state or non-U.S. jurisdictions or other non-U.S. laws applicable to the purchase of the Notes outside the United States in connection with the transactions contemplated by this Agreement, which filings shall be made by the Company within the applicable prescribed time periods.

Investment Company Act

. As of the date hereof and, after giving effect to the issuance and sale of the Notes pursuant to this Agreement and the application of the proceeds therefrom, none of the Company or its Subsidiaries is or will be an "investment company" that is required to be registered under the Investment Company Act of 1940, as amended.

Solvency

. On the Closing Date, after giving pro forma effect to the issuance and sale of the Notes pursuant to this Agreement and the application of the proceeds from the issuance and sale of such Notes, the Company (1) will be Solvent; (2) will have sufficient capital for carrying on its business; and (3) will be able to pay its debts as they mature.

Disclosure

. Each of the Company's Exchange Act Reports did not, as of the date they were filed with the SEC, and, as of the date hereof, does not, and, at the Closing, will not (except to the extent superseded by subsequent Exchange Act Reports) include any untrue statement of a material fact or omit to state any material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading. Such documents, when they were filed with the SEC, conformed in all material respects to the requirements of the Exchange Act and the rules and regulations of the SEC thereunder.

No Brokers

. There are no contracts, agreements or understandings (and will not be any contracts, agreements, or understandings immediately after giving effect to the transactions contemplated hereby) between the Company and any Person that would give rise to a valid claim against the Company (other than with respect to Greentech Capital Advisors Securities, LLC) or any Purchaser for a brokerage commission, finder's fee or other like payment in connection with the issuance of the Notes.

Litigation

. Except as disclosed in the Exchange Act Reports, there are no pending actions, suits or proceedings against or affecting the Company, any of its Subsidiaries or any of their respective properties that would reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect; and, to the knowledge of the Company, no such actions, suits or proceedings have been threatened.

Financial Statements

. The financial statements with respect to the Company and its consolidated subsidiaries included in the Exchange Act Reports present fairly in all material respects the consolidated financial position of the Company as of the dates shown and

its consolidated results of operations and cash flows for the periods shown, and such financial statements have been prepared in conformity with the generally accepted accounting principles in the United States applied on a consistent basis except as disclosed in the Exchange Act Reports.

[Intentionally Omitted]

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No Adverse Rating Actions

No "nationally recognized statistical rating organization" as defined in Section 3(a)(62) of the Exchange Act (i) has imposed (or has informed the Company that it is considering imposing) any condition (financial or otherwise) on any rating assigned to the Company, any securities of the Company or (ii) has indicated to the Company that it is considering (A) the downgrading, suspension, or withdrawal of, or any review for a possible change that does not indicate the direction of the possible change in, any rating so assigned or (B) any change in the outlook for any rating of the Company or any securities of the Company.

Liens

. As of the Closing Date, there will be no currently effective financing statement, security agreement or other document filed or recorded with any filing records, registry, or other document filed or recorded with any filing records, registry or other public office, that purports to cover or give notice of any Lien securing indebtedness for borrowed money on any assets or property of the Company or any Subsidiary, except for Liens under the Credit Agreement and the 8.00% Convertible Notes Indenture.

Compliance with Anti-Bribery Laws

. Except as disclosed in the Company's Exchange Act Reports, none of the Company or any Subsidiary or, to the knowledge of the Company, any director, officer, employee or any agent or other Person acting on behalf of the Company or any Subsidiary has, in the course of its actions for, or on behalf of, the Company or any Subsidiary (i) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expenses relating to political activity; (ii) made any direct or indirect unlawful payment to any domestic government official, "foreign official" (as defined in the U.S. Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder (collectively, the "**FCPA**")) or employee from corporate funds; (iii) violated or is in violation of any provision of the FCPA or any applicable non U.S. anti-bribery statute or regulation including the U.K. Bribery Act of 2010; or (iv) made any unlawful bribe, rebate, payoff, influence payment, kickback or other unlawful payment to any domestic government official, such foreign official or employee.

Foreign Assets Control Regulations, Etc.

(a) The operations of the Company and the Subsidiaries are and have been conducted at all times in compliance with applicable financial recordkeeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the money laundering statutes of all applicable jurisdictions, the rules and regulations thereunder and any related or similar rules, regulations or guidelines issued, administered or enforced by any governmental agency (collectively, the "**Money Laundering Laws**"), and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or the Subsidiaries with respect to the Money Laundering Laws is pending or, to the Company's knowledge, threatened.

(b) Neither the Company nor the Subsidiaries nor, to the Company's knowledge, any director, officer, agent, employee or Affiliate of the Company or any of the Subsidiaries or other Person acting on their behalf is currently subject to any U.S. sanctions administered by OFAC; and the Company will not directly or indirectly use the proceeds from the issuance and sale of the Notes, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other Person or entity, for the purpose of financing the activities of or business with any Person, or in any country or territory, that currently is subject to any U.S. sanctions administered by OFAC or in any other manner that will result in a violation by any Person (including any Person participating in the transaction whether as initial purchaser, advisor, investor or otherwise) of U.S. sanctions administered by OFAC.

Section 6. Representations of the Purchasers.

Each Purchaser severally represents and warrants to the Company that as of date of this Agreement and as of the Closing Date:

Organization; Power and Authority

. Such Purchaser is a corporation, limited partnership, limited liability company or other entity, as the case may be, duly formed, validly existing and in good standing under the laws of the jurisdiction of its formation. Such Purchaser has full power and authority to enter into this Agreement and perform all obligations required to be performed by the Purchaser hereunder.

Authorization, Etc.

. This Agreement has been duly and validly authorized, executed and delivered by such Purchaser and constitutes a legal, valid and binding obligation of the Purchaser, enforceable against the Purchaser in accordance with its terms, except that the enforcement thereof may be subject to (1) bankruptcy, insolvency, reorganization, receivership, moratorium, fraudulent conveyance, fraudulent transfer or other similar laws now or hereafter in effect relating to creditors' rights generally; and (2) general principles of equity (whether applied by a court of law or equity) and the discretion of the court before which any proceeding therefor may be brought.

No Conflicts

. The purchase of the Notes by such Purchaser will not contravene (1) any law, rule or regulation binding on the Purchaser or any investment guideline or restriction applicable to the Purchaser that would not, individually or in the aggregate, have a material adverse effect on (x) the ability of the Purchasers to perform its obligations under this Agreement, (y) the validity or enforceability of this Agreement, or (z) the consummation of any of the transactions contemplated by this Agreement or (2) the charter or bylaws (or equivalent organizational documents) of the Purchaser.

Purchase for Investment

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(a) Such Purchaser is a resident of the state or other jurisdiction set forth on the signature page hereto and is not acquiring the Notes as a nominee or agent or otherwise for any other Person.

(b) Such Purchaser understands and accepts that the Notes involve risks. The Purchaser has such knowledge, skill and experience in business, financial and investment matters that the Purchaser is capable of evaluating the merits and risks of an investment in the Notes. With the assistance of the Purchaser's own professional advisors, to the extent that the Purchaser has deemed appropriate, the Purchaser has made its own legal, tax, accounting and financial evaluation of the merits and risks of an investment in the Notes. The Purchaser has considered the suitability of the Notes as an investment in light of its own circumstances and financial condition, and the Purchaser is able to bear the risks associated with an investment in the Notes.

(c) Such Purchaser has had access to the filings of the Company with the SEC and such other information concerning the Company and the Notes as it deems necessary to enable it to make an informed investment decision concerning the purchase of the Notes. The Purchaser has been offered the opportunity to ask questions of the Company and its representatives and has received answers thereto as the Purchaser deems necessary to enable it to make an informed investment decision concerning the purchase of the Notes.

(d) Such Purchaser understands that no federal, state, local or foreign agency has passed upon the merits or risks of an investment in the Notes or made any finding or determination concerning the fairness or advisability of such investment.

(e) Such Purchaser is an "accredited Purchaser" as defined in Rule 501(a) under the Securities Act and a Qualified Institutional Buyer. The Purchaser agrees to furnish any additional information reasonably requested by the Company or any of its affiliates to assure compliance with applicable U.S. federal and state securities laws in connection with the purchase of the Notes.

(f) Such Purchaser is acquiring the Notes solely for the Purchaser's own beneficial account, for investment purposes, and not with a view to, or for resale in connection with, any distribution of the Notes. The Purchaser understands that the offer and sale of the Notes has not been registered under the Securities Act or any state securities laws by reason of specific exemptions under the provisions thereof that depend in part upon the investment intent of the Purchaser and the accuracy of the other representations made by the Purchaser in this Agreement. The Purchaser understands that the Company is relying upon the representations and agreements contained in this Agreement (and any supplemental information) for the purpose of determining whether the Purchaser's participation in this Agreement meets the requirements for such exemptions.

Section 7. Payment and Prepayment of the Notes.

Maturity

. The entire unpaid principal balance of each Note shall be due and payable on the Maturity Date.

Optional Prepayments

. The Company may, at its option, upon notice as provided below, prepay at any time all, or from time to time any part of the Notes, in an amount that is an integral multiple of $100,000 and not less than $1,000,000, at 100% of the principal amount so prepaid, plus any Early Payment Event Fee with respect to such amount pursuant to

Section 7.7. The Company will give each holder of the Notes to be prepaid written notice of each optional prepayment under this Section 7.2 at least one Business Day prior to the date fixed for such prepayment unless the Company and the Required Holders agree to another time period pursuant to Section 15. Each such notice shall specify such date (which shall be a Business Day), the aggregate principal amount of the Notes to be prepaid on such date, the principal amount of each Note held by such holder to be prepaid (determined in accordance with Section 7.4), and the interest to be paid on the prepayment date with respect to such principal amount being prepaid.

Mandatory Prepayments

. Not later than one Business Day following the consummation of a Change of Control, the Company shall repay or prepay the entire unpaid principal balance of each Note. Prepayment of the Notes to be prepaid pursuant to this Section 7.3 shall be at 100% of the then unpaid principal amount of the Notes, plus any Early Payment Event Fee with respect to such amount pursuant to Section 7.7.

Allocation of Partial Prepayments

. In the case of any partial prepayment of the Notes, the principal amount of the Notes to be prepaid shall be allocated among all of the Notes at the time outstanding in proportion, as nearly as practicable, to the respective unpaid principal amounts thereof not theretofore called for prepayment.

Maturity; Surrender, Etc.

In the case of each prepayment of Notes pursuant to this Section 7, the principal amount of each Note to be prepaid shall mature and become due and payable on the date fixed for such prepayment, together with interest on such principal amount accrued to such date and any Early Payment Event Fee with respect to such principal amount pursuant to Section 7.7. From and after such date, unless the Company shall fail to pay such principal amount when so due and payable, together with the interest and any Early Payment Event Fee, as aforesaid, interest on such principal amount shall cease to accrue. Any Note paid or prepaid in full shall be surrendered to the Company and cancelled and shall not be reissued, and no Note shall be issued in lieu of any prepaid principal amount of any Note.

Payments Due on Non-Business Days

. Anything in this Agreement or the Notes to the contrary notwithstanding, (x) except as set forth in clause (y), any payment of interest or Early Payment Event Fee on any Note that is due on a date that is not a Business Day shall be made on the next succeeding Business Day without including the additional days elapsed in the computation of the interest or Early Payment Event Fee payable on such next succeeding Business Day; and (y) any payment of principal on any Note (including principal due on the Maturity Date of such Note) that is due on a date that is not a Business Day shall be made on the next succeeding Business Day and shall include the additional days elapsed in the computation of interest and any Early Payment Event Fee payable on such next succeeding Business Day.

Early Payment Event Fee

. Each prepayment of the Notes pursuant to Section 7.2 or Section 7.3, and each repayment of, or distribution in respect of, the Notes upon the maturity thereof or after acceleration thereof pursuant to Section 9 or such amount otherwise becoming or being declared immediately due and payable pursuant to the terms hereof (each such prepayment, repayment, distribution, amount becoming or being declared immediately due and payable, an "**Early Payment Event**"), in each case in which the Early Payment Event occurs less than 90 days after the Closing Date, shall be accompanied by, and there shall become due and payable automatically upon such Early Payment Event, a fee (the "**Early Payment Event Fee**")

payable in cash on the principal amount so prepaid or on the principal amount that has become or is to be declared to be immediately due and payable pursuant to Section 9 or otherwise or in respect of which such claim in a case or proceeding under any Bankruptcy Law has arisen, as applicable (the "**Early Payment Principal Amount**"). The amount of the Early Payment Event Fee shall be equal to the excess, if any, of (x) the amount of interest that would have accrued with respect to the Early Payment Principal Amount from the Closing Date to and including the date 90 days after the Closing Date had the Maturity Date or any other Early Payment Event not occurred during such period, over (y) the amount of interest accrued and paid or payable with respect to the Early Payment Principal Amount from the Closing Date to and including the date of the Early Payment Event.

Section 8. Covenants.

The Company covenants that from and after the earliest date that (i) the Closing has occurred, (ii) none of the 8.00% Convertible Notes are outstanding or (iii) all or any of the provisions of the 8.00% Convertible Notes Indenture are no longer in effect or have been amended or waived; provided, however, that the Company and its Restricted Subsidiaries shall only be required to comply with Section 8.12 through Section 8.18 from and after the earliest date that (i) none of the 8.00% Convertible Notes are outstanding or (ii) all or any of the provisions of the 8.00% Convertible Notes Indenture are no longer in effect or have been amended or waived:

Reports and Notices

. The Company shall deliver to each holder of a Note that is an Institutional Investor:

(a) *Quarterly Statements* — within 45 days after the end of each quarterly fiscal period in each fiscal year of the Company (other than the last quarterly fiscal period of each such fiscal year), copies of,

(i) a consolidated balance sheet of the Company and its Subsidiaries as at the end of such quarter, and

(ii) consolidated statements of income, changes in shareholders' equity and cash flows of the Company and its Subsidiaries, for such quarter and (in the case of the second and third quarters) for the portion of the fiscal year ending with such quarter,

setting forth in each case in comparative form the figures for the corresponding periods in the previous fiscal year, all in reasonable detail, prepared in accordance with GAAP applicable to quarterly financial statements generally, and certified by a Senior Financial Officer as fairly presenting, in all material respects, the financial position of the companies being reported on and their results of operations and cash flows, subject to changes resulting from year-end adjustments; *provided*, that delivery within the time period specified above of copies of the Company's Form 10-Q prepared in compliance with the requirements therefor and filed with the SEC shall be deemed to satisfy the requirements of this Section 8.1(a) with respect to financial statements;

(b) *Annual Statements* — within 90 days after the end of each fiscal year of the Company, copies of

(i) a consolidated balance sheet of the Company and its Subsidiaries as at the end of such year, and

(ii) consolidated statements of income, changes in shareholders' equity and cash flows of the Company and its Subsidiaries for such year,

setting forth in each case in comparative form the figures for the previous fiscal year, all in reasonable detail, prepared in accordance with GAAP, and accompanied by an opinion thereon of independent public accountants of recognized national standing, which opinion shall state that such financial statements present fairly, in all material respects, the financial position of the companies being reported upon and their results of operations and cash flows and have been prepared in conformity with GAAP, and that the examination of such accountants in connection with such financial statements has been made in accordance with generally accepted auditing standards, and that such audit provides a reasonable basis for such opinion in the circumstances; *provided*, that the delivery within the time period specified above of the Company's Form 10-K for such fiscal year prepared in accordance with the requirements therefor and filed with the SEC, shall be deemed to satisfy the requirements of this Section 8.1(b) with respect to financial statements;

(c) *Compliance Certificate* — Each set of financial statements delivered to a holder of a Note pursuant to Section 8.1(a) or Section 8.1(b) shall be accompanied by a certificate of a Senior Financial Officer certifying that such Senior Financial Officer has reviewed the relevant terms hereof and has made, or caused to be made, under his or her supervision, a review of the transactions and conditions of the Company and its Subsidiaries from the beginning of the quarterly or annual period covered by the statements then being furnished to the date of the certificate and that such review shall not have disclosed the existence during such period of any condition or event that constitutes a Default or an Event of Default or, if any such condition or event existed or exists, specifying the nature and period of existence thereof and what action the Company shall have taken or proposes to take with respect thereto;

(d) *Notice of Default or Event of Default* — promptly, and in any event within five Business Days after a Senior Financial Officer becoming aware of the existence of any Default or Event of Default or that any Person has given any notice or taken any action with respect to a claimed default hereunder, a written notice specifying the nature and period of existence thereof and what action the Company is taking or proposes to take with respect thereto; and

(e) *Electronic Delivery* — Financial statements, opinions of independent certified public accountants and Officer's Certificates that are required to be delivered by the Company pursuant to Section 8.1(a), Section 8.1(b), Section 8.1(c) and Section 8.1(d) shall be deemed to have been delivered if the Company satisfies any of the following requirements with respect thereto:

(i) such financial statements satisfying the requirements of Section 8.1(a) or Section 8.1(b) and related Officer's Certificate satisfying the requirements of Section 8.1(c) are delivered to each holder of a Note by e-mail at the e-mail address set

forth in such holder's Purchaser Schedule or as communicated from time to time in a separate writing delivered to the Company;

(ii) the Company shall have timely filed such Form 10–Q or Form 10–K, satisfying the requirements of Section 8.1(a) or Section 8.1(b), as the case may be, with the SEC on EDGAR and shall have made such form and the related Officer's Certificate satisfying the requirements of Section 8.1(c) available on its home page on the internet, which is located at http://www.layne.com as of the date of this Agreement; or

(iii) such financial statements satisfying the requirements of Section 8.1(a) or Section 8.1(b) and related Officer's Certificate(s) satisfying the requirements of Section 8.1(c) are timely posted by or on behalf of the Company on IntraLinks or on any other similar website to which each holder of Notes has free access.

Compliance

. Without limiting Section 8.8, the Company will, and will cause each of its Subsidiaries to, (a) comply in all material respects with the provisions of its Charter Documents, (b) comply in all material respects with all Material Contracts then in effect and (c) comply with all laws, ordinances or governmental rules or regulations to which each of them is subject, and will obtain and maintain in effect all licenses, certificates, permits, franchises and other governmental authorizations necessary to the ownership of their respective properties or to the conduct of their respective businesses, in each case to the extent necessary to ensure that non-compliance with such laws, ordinances or governmental rules or regulations or failures to obtain or maintain in effect such licenses, certificates, permits, franchises and other governmental authorizations could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

Insurance

. The Company will, and will cause each of its Subsidiaries to, maintain, with financially sound and reputable insurers, insurance with respect to their respective properties and businesses against such casualties and contingencies, of such types, on such terms and in such amounts (including deductibles, co-insurance and self-insurance, if adequate reserves are maintained with respect thereto) as is customary in the case of entities of established reputations engaged in the same or a similar business and similarly situated.

Maintenance of Properties

. The Company will, and will cause each of its Subsidiaries to, maintain and keep, or cause to be maintained and kept, their respective properties in good repair, working order and condition (other than ordinary wear and tear), so that the business carried on in connection therewith may be properly conducted at all times, *provided* that this Section shall not prevent the Company or any Subsidiary from discontinuing the operation and the maintenance of any of its properties if such discontinuance is desirable in the conduct of its business and the Company has concluded that such discontinuance could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

Payment of Taxes and Claims

. The Company will, and will cause each of its Subsidiaries to, file all tax returns required to be filed in any jurisdiction and to pay and discharge all taxes shown to be due and payable on such returns and all other taxes, assessments, governmental charges, or levies imposed on them or any of their properties, assets, income or franchises, to the extent the same have become due and payable and before they have become

delinquent and all claims for which sums have become due and payable that have or might become a Lien on properties or assets of the Company or any Subsidiary, *provided* that neither the Company nor any Subsidiary need pay any such tax, assessment, charge, levy or claim if (i) the amount, applicability or validity thereof is contested by the Company or such Subsidiary on a timely basis in good faith and in appropriate proceedings, and the Company or a Subsidiary has established adequate reserves therefor in accordance with GAAP on the books of the Company or such Subsidiary or (ii) the nonpayment of all such taxes, assessments, charges, levies and claims could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

Corporate Existence, Etc.

Subject to Section 8.8, the Company will at all times preserve and keep its corporate existence in full force and effect. Subject to Section 8.8, the Company will at all times preserve and keep in full force and effect the organizational existence of each of its Subsidiaries (unless merged into the Company or a Wholly-Owned Subsidiary) and all rights and franchises of the Company and its Subsidiaries unless, in the good faith judgment of the Company, the termination of or failure to preserve and keep in full force and effect such corporate existence, right or franchise could not, individually or in the aggregate, have a Material Adverse Effect.

Books and Records

. The Company will, and will cause each of its Subsidiaries to, maintain proper books of record and account in conformity with GAAP and all applicable requirements of any Governmental Authority having legal or regulatory jurisdiction over the Company or such Subsidiary, as the case may be. The Company will, and will cause each of its Subsidiaries to, keep books, records and accounts which, in reasonable detail, accurately reflect all transactions and dispositions of assets. The Company and its Subsidiaries have devised a system of internal accounting controls sufficient to provide reasonable assurances that their respective books, records, and accounts accurately reflect all transactions and dispositions of assets and the Company will, and will cause each of its Subsidiaries to, continue to maintain such system.

Merger, Consolidation, Etc.

The Company will not, directly or indirectly, (1) consolidate with or merge with or into, or (2) sell, convey, transfer or lease all or substantially all of its properties and assets to, any other Person, unless:

(a) either:

(i) the Company is the surviving corporation; or

(ii) the resulting, surviving or transferee Person (if other than the Company):

(I) is a corporation organized and validly existing under the laws of the United States of America, any State thereof or the District of Columbia; and

(II) expressly assumes, by executing and delivering an instrument that is reasonably satisfactory in form to the Purchasers, all of the obligations of the Company under the Notes and this Agreement; and

(b) immediately after giving effect to such consolidation, merger or transfer, no Default or Event of Default under this Agreement or the Notes will have occurred and be continuing.

Amendment of Certain Agreements

. The Company will not and will not permit any Subsidiary to, amend or modify, or waive any of its rights under, any of its Charter Documents or any Material Contract, in any case in a manner material and adverse to the holders of Notes, *provided*, that nothing in this Agreement shall require any member of the Consolidated Group to maintain or to renew, or shall prohibit any member of the Consolidated Group from terminating, any Material Contract, so long as the failure to maintain or to renew or the termination of such Material Contract (and, if applicable, after giving effect to any new contract entered or to be entered into in full or partial replacement of such Material Contract) could not be reasonably be expected to have a Material Adverse Effect.

Use of Funds

. The Company will not and will not permit any Subsidiary to, use any of the proceeds of the Notes except to (i) repay the unpaid principal amount of the 8.00% Convertible Notes or the 4.25% Convertible Notes, in each case together with accrued and unpaid interest thereon, on their Maturity Date (as defined in the 8.00% Convertible Notes Indenture or the 4.25% Convertible Notes Indenture, as applicable) or (ii) Effectively Discharge (as defined in the 8.00% Convertible Notes Indenture) the 4.25% Convertible Notes.

Accounting Changes

. The Company will not and will not permit any Subsidiary to, make any significant change in accounting treatment or reporting practices, except as required by GAAP, or change its fiscal year, except to change the fiscal year of a Subsidiary to conform its fiscal year to that of the Company or to change the fiscal year to a calendar year.

Limitation on Indebtedness

. The Company will not and will not permit any Restricted Subsidiary to, incur, create, assume or permit to exist, directly or indirectly, any Indebtedness, except:

(a) Indebtedness incurred under this Agreement and the Notes;

(b) Indebtedness under the Credit Agreement in an amount not to exceed $150,000,000 at any one time outstanding; provided, however, that any outstanding borrowings under the Credit Agreement in excess of $50,000,000 shall be used solely to repay Indebtedness of the Company and/or its Restricted Subsidiaries;

(c) Indebtedness outstanding on the date of this Agreement, other than Indebtedness outstanding on the date of this Agreement under the Credit Agreement, and Indebtedness incurred in respect of refinancing of the principal amount thereof (plus all accrued and unpaid interest on such Indebtedness being refinanced and the amount of all fees and expenses, including premiums, incurred in connection therewith);

(d) Indebtedness owing from a Restricted Subsidiary to the Company or another Restricted Subsidiary or from the Company to a Restricted Subsidiary;

(e) Indebtedness of the Company and its Restricted Subsidiaries in respect of Purchase Money Obligations, Capital Lease Obligations, Sale and Leaseback Transactions, and other unsecured Indebtedness, and Indebtedness incurred in respect of refinancing of the principal amount of any of the foregoing (plus all accrued and unpaid interest on such Indebtedness being

refinanced and the amount of all fees and expenses, including premiums, incurred in connection therewith), in an aggregate amount not to exceed at any time outstanding $35,000,000;

(f) Indebtedness of any Person that becomes a Restricted Subsidiary after the Closing Date in connection with a Permitted Acquisition or other investment permitted hereunder in an aggregate principal amount not to exceed $30,000,000 at any time outstanding for all such Restricted Subsidiaries; provided, that, such Indebtedness (i) exists at the time such Person becomes a Restricted Subsidiary, (ii) is not created in anticipation or contemplation of such Person becoming a Restricted Subsidiary and (iii) is not directly or indirectly recourse to any of the Company, any of its Restricted Subsidiaries or any of their respective assets, other than to the Person that becomes a Restricted Subsidiary, and Indebtedness incurred in respect of refinancing of the principal amount thereof (plus all accrued and unpaid interest on such Indebtedness being refinanced and the amount of all fees and expenses, including premiums, incurred in connection therewith);

(g) Indebtedness under Hedging Obligations, in each case entered into in the ordinary course of business and not for speculative purposes or taking a "market view"; provided, that, if such Hedging Obligations relate to interest rates, (i) such Hedging Obligations relate to payment obligations on Indebtedness otherwise permitted to be incurred by the Credit Agreement and (ii) the notional principal amount of such Hedging Obligations at the time incurred does not exceed the principal amount of the Indebtedness to which such Hedging Obligations relate;

(h) Indebtedness in respect of bid, performance or surety bonds issued for the account of the Company or any Restricted Subsidiary in the ordinary course of business, including guarantees or obligations of the Company or any Restricted Subsidiary with respect to letters of credit supporting such bid, performance or surety obligations (in each case other than for an obligation for borrowed money);

(i) Contingent Obligations of the Company or any Restricted Subsidiary in respect of Indebtedness otherwise permitted under this Section 8.12 (other than this Section 8.12(i));

(j) Indebtedness arising from the honoring by a bank or other financial institution of a check, draft or similar instrument inadvertently (except in the case of daylight overdrafts) drawn against insufficient funds in the ordinary course of business; provided, however, that such Indebtedness is extinguished within five Business Days of incurrence;

(k) Indebtedness arising in connection with endorsement of instruments for deposit in the ordinary course of business;

(l) Indebtedness consisting of the financing of insurance premiums in the ordinary course of business; and

(m) other Indebtedness; including without limitation Indebtedness under the Credit Agreement not permitted under Section 8.12(b), provided that, the Company's Consolidated Leverage Ratio at the time of the Incurrence of such other Indebtedness, and after giving effect thereto, shall be less than (i) 6.00 to 1.00 if the Test Period ends on or before April 30, 2019 or (ii) 4.00 to 1.00 if the Test Period ends after April 30, 2019.

Limitation on Liens

. The Company will not, and will not permit any Restricted Subsidiary to, create, incur, assume or permit to exist, directly or indirectly, any Lien on any property now owned or hereafter acquired by it or on any income or revenues or rights in respect of any thereof, except for Permitted Liens.

Limitation on Sale and Leaseback Transaction

. The Company will not, and will not permit any Restricted Subsidiary, to enter into any Sale and Leaseback Transaction, unless (i) the sale of such property is made for cash consideration in an amount not less than the Fair Market Value of such property, (ii) the Sale and Leaseback Transaction is consummated within 10 Business Days after the date on which such property is sold or transferred, (iii) any Liens arising in connection with its use of the property are Permitted Liens, and (iv) the Sale and Leaseback Transaction would be permitted under Section 8.12, if any Attributable Indebtedness with respect to the Sale and Leaseback Transaction constitutes Indebtedness under Section 8.12.

Limitation on Asset Sales

. The Company will not, and will not permit any Restricted Subsidiary, to effect any disposition of any property, or agree to effect any disposition of any property; except that the following shall be permitted:

(a) Sales, trade-ins or dispositions of used equipment in the ordinary course of business, and dispositions of surplus, worn out or obsolete property by the Company or any Restricted Subsidiaries in the ordinary course of business and the abandonment or other disposition of intellectual property that is, in the reasonable good faith judgment of the Company, no longer economically practicable to maintain or useful in the conduct of the business of the Company and its Restricted Subsidiaries taken as a whole;

(b) other dispositions of property (other than the Equity Interests of a Restricted Subsidiary of the Company); provided, that, (i) the aggregate consideration received in respect of all dispositions of property pursuant to this clause (b) shall not exceed $15,000,000 in any period of 12 consecutive months, except, that, the consideration received in respect of the sales of assets listed on Schedule 8.14(b) shall not be applied against such dollar limit, (ii) such dispositions of property are made for Fair Market Value and on an arms-length commercial basis and (iii) at least seventy-five (75%) percent of the consideration payable in respect of such disposition of property is in the form of cash or cash equivalents and is received at the time of the consummation of any such disposition;

(c) leases of real or personal property (other than Sale and Leaseback Transactions) in the ordinary course of business;

(d) dispositions of cash and other property to joint ventures with unaffiliated Persons in an aggregate amount not to exceed $30,000,000;

(e) dispositions consisting of mergers and consolidations in compliance with Section 8.8;

(f) Dividends or Restricted Payments in compliance with Section 8.16;

(g) sales of inventory in the ordinary course of business and dispositions of cash and cash equivalents in the ordinary course of business;

(h) any disposition of property that constitutes a Casualty Event;

(i) any disposition of property by (i) any Subsidiary of the Company to the Company or any of its Restricted Subsidiaries, (ii) any Restricted Subsidiary of the Company to another Restricted Subsidiary of the Company and (iii) the Company to any of its Restricted Subsidiaries;

(j) grants of licenses or sublicenses in the ordinary course of business to use the Company's or any of its Restricted Subsidiaries' intellectual property and technology to the extent that such license or sublicense does not materially impair the conduct of the business of the Company or any of its Restricted Subsidiaries; and

(k) Sale and Leaseback Transactions permitted under Section 8.14.

Limitation on Dividends and other Restricted Payments

. The Company will not, and will not permit any Restricted Subsidiary to, authorize, declare or pay, directly or indirectly, any Dividends or other Restricted Payment with respect to the Company or any Restricted Subsidiary (including pursuant to any Synthetic Purchase Agreement) or incur any obligation (contingent or otherwise) to do so, except that the following shall be permitted:

(a) any Restricted Subsidiary of the Company may pay Dividends to the Company or to any Wholly-Owned Subsidiary of the Company that is a Restricted Subsidiary and (ii) any non- Wholly-Owned Subsidiary of the Company that is a Restricted Subsidiary may pay cash Dividends to its shareholders, members or partners generally, so long as the Company or its respective Restricted Subsidiary which owns the Equity Interest in the Restricted Subsidiary paying such Dividends receives at least its proportionate share thereof (based upon its relative holding of the Equity Interest in the Restricted Subsidiary paying such Dividends and taking into account the relative preferences, if any, of the various classes of Equity Interests of such Restricted Subsidiary);

(b) so long as no Event of Default then exists or would result therefrom, payments by the Company to repurchase or redeem Qualified Capital Stock of the Company held by officers, directors or employees or former officers, directors or employees (or their transferees, estates or beneficiaries under their estates) of the Company, upon their death, disability, retirement, severance or termination of employment or service; provided, that, the aggregate amount of such payments shall not exceed, in any period of 12 consecutive months, $1,000,000 and, in the aggregate, $3,000,000;

(c) so long as no Event of Default then exists or would result therefrom and the Company is treated as a partnership or similar pass through entity for federal income taxes, cash Dividends by the Company to its equity holders at the times and in the amounts necessary to enable such equity holders to make tax payments solely with respect to their allocable share of the income of the Company in any taxable year (collectively, the "**Permitted Tax Distributions**"); except, that, with respect to any Permitted Tax Distributions under this Section 8.16(c) that are attributable to any Unrestricted Subsidiary, such Permitted Tax Distributions shall only be permitted to the extent that such Unrestricted Subsidiary has made one or more cash distributions, to the Company or any of its Restricted Subsidiaries for such purpose in an amount up to the amount of such Unrestricted Subsidiary's proportionate share of such Permitted Tax Distributions;

(d) the Company may make Restricted Payments pursuant to and in accordance with stock option and benefits plans, including, without limitation, (i) cashless exercises of any such options, (ii) the delivery to the Company of shares of the Company's common stock or restricted stock units by directors, management and employees of the Company or any Subsidiary thereof to cover tax withholding obligations associated with grants or exercises of stock options, restricted stock, restricted stock units or other equity-based awards, as well as other Restricted Payments pursuant to and in accordance with option plans or other benefit plans for management or employees of the Company and its Subsidiaries and (iii) so long as no Event of Default is then outstanding or would result therefrom, the purchase of the Company's common stock on the open market and the re-issuance of such common stock to officers and employees of the Company in connection with incentive compensation plans or other agreements with officers, directors or employees of the Company approved by the Board of Directors of the Company, option plans or other benefit plans for management or employees of the Company and its Subsidiaries;

(e) the Company may exchange an Equity Interest of the Company for Qualified Capital Stock of the Company; and

(f) the Company may pay cash in lieu of fractional shares in connection with the conversion of the 8.00% Convertible Notes or the 4.25% Convertible Notes into Equity Interests that are not Disqualified Capital Stock.

Transactions with Affiliates

. The Company will not, and will not permit and Restricted Subsidiary to, enter into, directly or indirectly, any transaction or series of related transactions, whether or not in the ordinary course of business, with any Affiliate of the Company or any Restricted Subsidiary (other than between or among the Company and its Restricted Subsidiaries), other than on terms and conditions at least as favorable to such Company as would reasonably be obtained by such Company at that time in a comparable arm's-length transaction with a Person other than an Affiliate, except that the following shall be permitted: (a) Restricted Payments permitted by Section 8.16; and (b) reasonable and customary director, officer and employee compensation (including bonuses) and other benefits (including retirement, health, stock option and other benefit plans) and indemnification arrangements

Maximum Leverage Ratio

. The Company will not permit the Consolidated Leverage Ratio for the most recent Test Period for which financial statements are available to be greater than 6.00 to 1.00.

Section 9. Events of Default.

An **"Event of Default"** shall exist if any of the following conditions or events shall occur and be continuing:

(a) the Company fails to pay the principal of the Notes when due at maturity, upon a Change of Control, declaration of acceleration or otherwise;

(b) the Company fails to pay any interest when due and such failure continues for a period of 30 days after the applicable due date;

(c) the Company fails to comply with its obligations under Section 8.8;

(d) the Company fails to perform or observe any of its covenants or warranties in this Agreement or in the Notes (other than a covenant or agreement specifically addressed in Section 9(a), Section 9(b) or Section 9(c)) and such failure continues for a period of 30 days after (A) the Company receives notice of such failure from holders of at least 25% of the aggregate principal amount of then outstanding Notes;

(e) the default by the Company or any Subsidiary with respect to any mortgage, agreement or other instrument under which there may be outstanding, or by which there may be secured or evidenced, any indebtedness for money borrowed by the Company and/or any Subsidiaries in excess of $5.0 million in the aggregate, whether such indebtedness exists as of the Issue Date or is later created, if that default:

(i) results in such indebtedness becoming or being declared due and payable (prior to its express maturity); or

(ii) constitutes a failure to pay the principal of, or interest on, such indebtedness when due and payable at its express maturity, upon required repurchase, upon declaration or otherwise;

(f) a final judgment for the payment of $5.0 million or more (excluding any amounts covered by insurance) is rendered against the Company or any of its Subsidiaries, and such judgment is not discharged or stayed within 60 days after (i) the date on which all rights to appeal such judgment have expired if no appeal has commenced, or (ii) the date on which all rights to appeal have been extinguished;

(g) the Company or any Significant Subsidiary, pursuant to or within the meaning of any Bankruptcy Law:

(i) commences a voluntary case;

(ii) consents to the entry of an order for relief against it in an involuntary case;

(iii) consents to the appointment of a Custodian of it or for any substantial part of its property;

(iv) makes a general assignment for the benefit of its creditors;

(v) takes any comparable action under any foreign laws relating to insolvency; or

(vi) generally is not paying its debts as they become due; or

(h) a court of competent jurisdiction enters an order or decree under any Bankruptcy Law that:

(i) is for relief against the Company or any Significant Subsidiary in an involuntary case or proceeding;

(ii) appoints a Custodian of the Company or any Significant Subsidiary, or for any substantial part of the property of the Company or any Significant Subsidiary;

(iii) orders the winding up or liquidation of the Company or any Significant Subsidiary; or

(iv) grants any similar relief under any foreign laws;

and, in each such case under this Section 9(h), the order or decree remains unstayed and in effect for 60 days.

Section 10. Remedies on Default, Etc.

Acceleration

.

(a) If an Event of Default with respect to the Company described in Section 9(g) or Section 9(h) has occurred, all the Notes then outstanding shall automatically become immediately due and payable.

(b) If any other Event of Default has occurred and is continuing, the Required Holders may at any time at its or their option, by notice or notices to the Company, declare all the Notes then outstanding to be immediately due and payable.

(c) If any Event of Default described in Section 9(a) has occurred and is continuing, any holder or holders of Notes at the time outstanding affected by such Event of Default may at any time, at its or their option, by notice or notices to the Company, declare all the Notes held by it or them to be immediately due and payable.

Upon any Notes becoming due and payable under this Section 10.1, whether automatically or by declaration, such Notes will forthwith mature and the entire unpaid principal amount of such Notes, plus all accrued and unpaid interest thereon (including, but not limited to, interest accrued thereon at the Default Rate), shall all be immediately due and payable, in each and every case without presentment, demand, protest or further notice, all of which are hereby waived.

Other Remedies

. If any Event of Default has occurred and is continuing, and irrespective of whether any Notes have become or have been declared immediately due and payable under Section 10.1, the holder of any Note at the time outstanding may proceed to protect and enforce the rights of such holder by an action at law, suit in equity or other appropriate proceeding, whether for the specific performance of any agreement contained herein or in any Note, or for an injunction against a violation of any of the terms hereof or thereof, or in aid of the exercise of any power granted hereby or thereby or by law or otherwise.

Rescission

. At any time after any Notes have been declared due and payable pursuant to Section 10.1(b) or Section 10.1(c), the Required Holders, by written notice to the Company, may rescind and annul any such declaration and its consequences if (a) the Company has paid all interest on the Notes that is due and payable and is unpaid other than by reason of such declaration, (b) neither the Company nor any other Person shall have paid any amounts which have become due solely by reason of such declaration, (c) all Events of Default and Defaults, other than

non-payment of amounts that have become due solely by reason of such declaration, have been cured or have been waived pursuant to Section 15, and (d) no judgment or decree has been entered for the payment of any monies due pursuant hereto or to the Notes. No rescission and annulment under this Section 10.3 will extend to or affect any subsequent Event of Default or Default or impair any right consequent thereon.

No Waivers or Election of Remedies, Expenses, Etc.

No course of dealing and no delay on the part of any holder of any Note in exercising any right, power or remedy shall operate as a waiver thereof or otherwise prejudice such holder's rights, powers or remedies. No right, power or remedy conferred by this Agreement or any Note upon any holder thereof shall be exclusive of any other right, power or remedy referred to herein or therein or now or hereafter available at law, in equity, by statute or otherwise. Without limiting the obligations of the Company under Section 13, the Company will pay to the holder of each Note on demand such further amount as shall be sufficient to cover all costs and expenses of such holder incurred in any enforcement or collection under this Section 10, including, without limitation, reasonable attorneys' fees, expenses and disbursements.

Section 11. Registration; Exchange; Substitution of Notes.

Registration of Notes

. The Company shall keep at its principal executive office a register for the registration and registration of transfers of Notes. The name and address of each holder of one or more Notes, each transfer thereof and the name and address of each transferee of one or more Notes shall be registered in such register. If any holder of one or more Notes is a nominee, then (a) the name and address of the beneficial owner of such Note or Notes shall also be registered in such register as an owner and holder thereof and (b) at any such beneficial owner's option, either such beneficial owner or its nominee may execute any amendment, waiver or consent pursuant to this Agreement. Prior to due presentment for registration of transfer, the Person(s) in whose name any Note(s) shall be registered shall be deemed and treated as the owner and holder thereof for all purposes hereof, and the Company shall not be affected by any notice or knowledge to the contrary. The Company shall give to any holder of a Note that is an Institutional Investor promptly upon request therefor, a complete and correct copy of the names and addresses of all registered holders of Notes.

Transfer and Exchange of Notes

. Upon surrender of any Note to the Company at the address and to the attention of the designated officer (all as specified in Section 16), for registration of transfer or exchange (and in the case of a surrender for registration of transfer accompanied by a written instrument of transfer duly executed by the registered holder of such Note or such holder's attorney duly authorized in writing and accompanied by the relevant name, address and other information for notices of each transferee of such Note or part thereof), within 10 Business Days thereafter, the Company shall execute and deliver, at the Company's expense (except as provided below), one or more new Notes (as requested by the holder thereof) in exchange therefor, in an aggregate principal amount equal to the unpaid principal amount of the surrendered Note. Each such new Note shall be payable to such Person as such holder may request and shall be substantially in the form of Schedule C. Each such new Note shall be dated and bear interest from the date to which interest shall have been paid on the surrendered Note or dated the date of the surrendered Note if no interest shall have been paid thereon. The Company may require payment of a sum sufficient to cover any stamp tax or governmental charge imposed in respect of

any such transfer of Notes. Notes shall not be transferred in denominations of less than $100,000, *provided* that if necessary to enable the registration of transfer by a holder of its entire holding of Notes, one Note may be in a denomination of less than $100,000. Any transferee, by its acceptance of a Note registered in its name (or the name of its nominee), shall be deemed to have made the representations set forth in Section 6.

Replacement of Notes

. Upon receipt by the Company at the address and to the attention of the designated officer (all as specified in Section 16) of evidence reasonably satisfactory to it of the ownership of and the loss, theft, destruction or mutilation of any Note (which evidence shall be, in the case of an Institutional Investor, notice from such Institutional Investor of such ownership and such loss, theft, destruction or mutilation), and

(a) in the case of loss, theft or destruction, of indemnity reasonably satisfactory to it (*provided* that if the holder of such Note is, or is a nominee for, an original Purchaser or another holder of a Note with a minimum net worth of at least $100,000,000 or a Qualified Institutional Buyer, such Person's own unsecured agreement of indemnity shall be deemed to be satisfactory), or

(b) in the case of mutilation, upon surrender and cancellation thereof,

within 10 Business Days thereafter, the Company at its own expense shall execute and deliver, in lieu thereof, a new Note as such lost, stolen, destroyed or mutilated Note, dated and bearing interest from the date to which interest shall have been paid on such lost, stolen, destroyed or mutilated Note or dated the date of such lost, stolen, destroyed or mutilated Note if no interest shall have been paid thereon.

Section 12. Payments on Notes.

Place of Payment

. Subject to Section 12.2, payments of principal and interest becoming due and payable on the Notes shall be made in The Woodlands, Texas at the principal office of the Company in such jurisdiction. The Company may at any time, by notice to each holder of a Note, change the place of payment of the Notes so long as such place of payment shall be either the principal office of the Company in such jurisdiction or the principal office of a bank or trust company in such jurisdiction.

Home Office Payment

. So long as any Purchaser or its nominee shall be the holder of any Note, and notwithstanding anything contained in Section 12.1 or in such Note to the contrary, the Company will pay all sums becoming due on such Note for principal, interest and all other amounts becoming due hereunder by the method and at the address specified for such purpose below such Purchaser's name in Schedule B, or by such other method or at such other address as such Purchaser shall have from time to time specified to the Company in writing for such purpose, without the presentation or surrender of such Note or the making of any notation thereon, except that upon written request of the Company made concurrently with or reasonably promptly after payment or prepayment in full of any Note, such Purchaser shall surrender such Note for cancellation, reasonably promptly after any such request, to the Company at its principal executive office or at the place of payment most recently designated by the Company pursuant to Section 12.1. Prior to any sale or other disposition of any Note held by a Purchaser or its nominee,

such Purchaser will, at its election, either endorse thereon the amount of principal paid thereon and the last date to which interest has been paid thereon or surrender such Note to the Company in exchange for a new Note or Notes pursuant to Section 11.2. The Company will afford the benefits of this Section 12.2 to any Institutional Investor that is the direct or indirect transferee of any Note purchased by a Purchaser under this Agreement and that has made the same agreement relating to such Note as the Purchasers have made in this Section 12.2.

FATCA Information

. By acceptance of any Note, the holder of such Note agrees that such holder will with reasonable promptness duly complete and deliver to the Company, or to such other Person as may be reasonably requested by the Company, from time to time (a) in the case of any such holder that is a United States Person, such holder's United States tax identification number or other Forms reasonably requested by the Company necessary to establish such holder's status as a United States Person under FATCA and as may otherwise be necessary for the Company to comply with its obligations under FATCA and (b) in the case of any such holder that is not a United States Person, such documentation prescribed by applicable law (including as prescribed by section 1471(b)(3)(C)(i) of the Code) and such additional documentation as may be necessary for the Company to comply with its obligations under FATCA and to determine that such holder has complied with such holder's obligations under FATCA or to determine the amount (if any) to deduct and withhold from any such payment made to such holder. Nothing in this Section 12.3 shall require any holder to provide information that is confidential or proprietary to such holder unless the Company is required to obtain such information under FATCA and, in such event, the Company shall treat any such information it receives as confidential.

Section 13. Expenses, Etc.

Transaction Expenses

. Whether or not the transactions contemplated hereby are consummated, the Company will pay all costs and expenses (including reasonable attorneys' fees of the Purchasers) incurred by the Purchasers and each other holder of a Note in connection with such transactions and in connection with any amendments, waivers or consents under or in respect of this Agreement or the Notes (whether or not such amendment, waiver or consent becomes effective), including, without limitation: (a) the costs and expenses incurred in enforcing or defending (or determining whether or how to enforce or defend) any rights under this Agreement or the Notes or in responding to any subpoena or other legal process or informal investigative demand issued in connection with this Agreement or the Notes, or by reason of being a holder of any Note, and (b) the costs and expenses, including financial advisors' fees, incurred in connection with the insolvency or bankruptcy of the Company or any Subsidiary or in connection with any work-out or restructuring of the transactions contemplated hereby and by the Notes.

Indemnification.

The Company will pay, and will indemnify and save each Purchaser and each other holder of a Note and each of their respective Affiliates, officers, directors, representatives, employees, advisors and agents (collectively, the **"Indemnified Parties"**) harmless from, (i) all claims in respect of any fees, costs or expenses, if any, of brokers and finders (other than those, if any, retained by a Purchaser or other holder in connection with its purchase of the Notes) and any judgment, liability, claim, order, decree, cost, fee, expense, loss, action or obligation resulting from the consummation of the transactions contemplated hereby,

including the use of the proceeds of the Notes by the Company, (ii) any judgment, liability, claim, order, decree, fine, penalty, cost, fee, expense (including reasonable attorneys' fees and expenses) or obligation resulting from the consummation of the transactions contemplated hereby, including the use of the proceeds of the Notes by the Company, and (iii) any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, costs, claims, expenses or disbursements of any kind or nature whatsoever which may at any time be imposed on, incurred by or asserted against any Indemnified Party in any way relating to, arising out of or incurred in respect this Agreement, any other Note Document or any documents contemplated by or referred to herein or therein or the transactions contemplated hereby or thereby or the enforcement of any of the terms hereof or thereof or of any such other documents, whether foreseeable or unforeseeable, and reasonable attorneys' and consultants' fees and court costs (collectively, the "**Indemnified Losses**"), except to the extent that any Indemnified Loss is finally determined by a court of competent jurisdiction to be the direct result from the gross negligence or willful misconduct of the party seeking indemnification.

Certain Taxes.

The Company agrees to pay all stamp, documentary or similar taxes or fees which may be payable in respect of the execution and delivery or the enforcement of any Note Document or of any amendment of, or waiver or consent under or with respect to, any Note Document, and to pay any value added tax due and payable in respect of reimbursement of costs and expenses by the Company pursuant to this Section 13, and will save each holder of a Note to the extent permitted by applicable law harmless against any loss or liability resulting from nonpayment or delay in payment of any such tax or fee required to be paid by the Company hereunder.

Survival.

The obligations of the Company under this Section 13 will survive the payment or transfer of any Note, the enforcement, amendment or waiver of any provision of this Agreement or any other Note Documents, and the termination of this Agreement.

Section 14. Survival of Representations and Warranties; Entire Agreement.

All representations and warranties contained herein shall survive the execution and delivery of this Agreement and the Notes, the purchase or transfer by any Purchaser of any Note or portion thereof or interest therein and the payment of any Note, and may be relied upon by any subsequent holder of a Note, regardless of any investigation made at any time by or on behalf of such Purchaser or any other holder of a Note. All statements contained in any certificate or other instrument delivered by or on behalf of the Company pursuant to this Agreement shall be deemed representations and warranties of the Company under this Agreement. Subject to the preceding sentence, this Agreement and the Notes embody the entire agreement and understanding between each Purchaser and the Company and supersede all prior agreements and understandings relating to the subject matter hereof.

Section 15. Amendment and Waiver.

Requirements

. This Agreement and the Notes may be amended, and the observance of any term hereof or of the Notes may be waived (either retroactively or prospectively), only with the written consent of the Company and the Required Holders, except that:

(a) no amendment or waiver of any of Section 1, Section 2, Section 3 or Section 4 hereof, or any defined term (as it is used therein) will be effective as to any holder of a Note unless consented to by such holder in writing; and

(b) no such amendment or waiver may, without the written consent of each holder of each Note at the time outstanding, (i) subject to Section 10 relating to acceleration or rescission, change the amount or time of any prepayment or payment of principal of, or reduce the rate or change the time of payment or method of computation of interest on the Notes, (ii) change the percentage of the principal amount of the Notes the holders of which are required to consent to any amendment or waiver, or (iii) amend any of Section 7, Section 9(a), Section 9(b), Section 10, Section 15 or Section 18.

Section 15.2. Solicitation of Holders of Notes.

(a) *Solicitation.* The Company will provide each holder of a Note with sufficient information, sufficiently far in advance of the date a decision is required, to enable such holder to make an informed and considered decision with respect to any proposed amendment, waiver or consent in respect of any of the provisions hereof or of any other Note Document. The Company will deliver executed or true and correct copies of each amendment, waiver or consent effected pursuant to this Section 15 or any other Note Document to each holder of a Note and any such Purchaser promptly following the date on which it is executed and delivered by, or receives the consent or approval of, the requisite holders of Notes.

(b) *Payment.* The Company will not directly or indirectly pay or cause to be paid any remuneration, whether by way of supplemental or additional interest, fee or otherwise, or grant any security or provide other credit support, to any holder of a Note or any such Purchaser described in Section 15.2(a) as consideration for or as an inducement to the entering into by such holder or such Purchaser of any waiver or amendment of any of the terms and provisions hereof or of any other Note Document unless such remuneration is concurrently paid, or security is concurrently granted or other credit support concurrently provided, on the same terms, ratably to each holder of a Note and any such Purchaser even if such holder did not consent to such waiver or amendment.

Binding Effect, Etc.

Any amendment or waiver consented to as provided in this Section 15 or any other Note Document applies equally to all holders of Notes and is binding upon them and upon each future holder of any Note and upon the Company without regard to whether such Note has been marked to indicate such amendment or waiver. No such amendment or waiver will extend to or affect any obligation, covenant, agreement, Default or Event of Default not expressly amended or waived or impair any right consequent thereon. No course of dealing between the Company and any holder of a Note and no delay in exercising any rights hereunder or under any other Note Document shall operate as a waiver of any rights of any holder of such Note.

Notes Held by Company, Etc.

Solely for the purpose of determining whether the holders of the requisite percentage of the aggregate principal amount of Notes then outstanding approved or consented to any amendment, waiver or consent to be given under this

Agreement or any other Note Document, or have directed the taking of any action provided herein or in any other Note Document to be taken upon the direction of the holders of a specified percentage of the aggregate principal amount of Notes then outstanding, Notes directly or indirectly owned by the Company or any of its Affiliates shall be deemed not to be outstanding.

Section 16. Notices.

Except to the extent otherwise provided in Section 8.1(e), all notices and communications provided for hereunder shall be in writing and sent (a) by telecopy if the sender on the same day sends a confirming copy of such notice by an internationally recognized overnight delivery service (charges prepaid), or (b) by registered or certified mail with return receipt requested (postage prepaid), or (c) by an internationally recognized overnight delivery service (with charges prepaid). Any such notice must be sent:

(i) if to any Purchaser or its nominee, to such Purchaser or nominee at the address specified for such communications in Schedule B, or at such other address as such Purchaser or nominee shall have specified to the Company in writing,

(ii) if to any other holder of any Note, to such holder at such address as such other holder shall have specified to the Company in writing, or

(iii) if to the Company, to the Company at its address set forth at the beginning hereof to the attention of the Chief Executive Officer, or at such other address as the Company shall have specified to the holder of each Note in writing.

Notices under this Section 16 will be deemed given only when actually received.

Section 17. Reproduction of Documents.

This Agreement and all documents relating thereto, including, without limitation, (a) consents, waivers and modifications that may hereafter be executed, (b) documents received by any Purchaser at the Closing (except the Notes themselves), and (c) financial statements, certificates and other information previously or hereafter furnished to any Purchaser, may be reproduced by such Purchaser by any photographic, photostatic, electronic, digital, or other similar process and such Purchaser may destroy any original document so reproduced. The Company agrees and stipulates that, to the extent permitted by applicable law, any such reproduction shall be admissible in evidence as the original itself in any judicial or administrative proceeding (whether or not the original is in existence and whether or not such reproduction was made by such Purchaser in the regular course of business) and any enlargement, facsimile or further reproduction of such reproduction shall likewise be admissible in evidence. This Section 17 shall not prohibit the Company or any other holder of Notes from contesting any such reproduction to the same extent that it could contest the original, or from introducing evidence to demonstrate the inaccuracy of any such reproduction.

Section 18. Confidential Information.

For the purposes of this Section 18, **"Confidential Information"** means information delivered to any Purchaser by or on behalf of the Company or any Subsidiary in connection with the transactions contemplated by or otherwise pursuant to this Agreement, *provided* that such term does not include information that (a) was publicly known or otherwise known to such Purchaser prior to the time of such disclosure, (b) subsequently becomes publicly known through no act or omission by such Purchaser or any Person acting on such Purchaser's behalf, (c) otherwise becomes known to such Purchaser other than through disclosure by the Company or any Subsidiary or (d) constitutes financial statements delivered to such Purchaser under Section 18 that are otherwise publicly available. Each Purchaser will maintain the confidentiality of such Confidential Information and use such Confidential Information in accordance with procedures adopted by such Purchaser in good faith to protect confidential information of third parties delivered to such Purchaser and its use thereof, *provided* that such Purchaser may deliver or disclose Confidential Information to (i) its directors, officers, employees, agents, attorneys, trustees and affiliates (to the extent such disclosure reasonably relates to the administration of the investment represented by its Notes), (ii) its auditors, financial advisors and other professional advisors who agree to hold confidential the Confidential Information substantially in accordance with this Section 18, (iii) any other holder of any Note, (iv) any Institutional Investor to which it sells or offers to sell such Note or any part thereof or any participation therein (if such Person has agreed in writing prior to its receipt of such Confidential Information to be bound by this Section 18), (v) any Person from which it offers to purchase any Security of the Company (if such Person has agreed in writing prior to its receipt of such Confidential Information to be bound by this Section 18), (vi) any federal or state regulatory authority having jurisdiction over such Purchaser, or (vii) any other Person to which such delivery or disclosure may be necessary or appropriate (w) to effect compliance with any law, rule, regulation or order applicable to such Purchaser, (x) in response to any subpoena or other legal process, (y) in connection with any litigation to which such Purchaser is a party or (z) if an Event of Default has occurred and is continuing, to the extent such Purchaser may reasonably determine such delivery and disclosure to be necessary or appropriate in the enforcement or for the protection of the rights and remedies under such Purchaser's Notes, this Agreement or any other Note Document. Each holder of a Note, by its acceptance of a Note, will be deemed to have agreed to be bound by and to be entitled to the benefits of this Section 18 as though it were a party to this Agreement. On reasonable request by the Company in connection with the delivery to any holder of a Note of information required to be delivered to such holder under this Agreement or requested by such holder (other than a holder that is a party to this Agreement or its nominee), such holder will enter into an agreement with the Company embodying this Section 18.

In the event that as a condition to receiving access to information relating to the Company or its Subsidiaries in connection with the transactions contemplated by or otherwise pursuant to this Agreement, any Purchaser or holder of a Note is required to agree to a confidentiality undertaking (whether through IntraLinks, another secure website, a secure virtual workspace or otherwise) which is different from this Section 18, this Section 18 shall not be amended thereby and, as between such Purchaser or such holder and the Company, this Section 18 shall supersede any such other confidentiality undertaking.

Section 19. Substitution of Purchaser.

Each Purchaser shall have the right to substitute any one of its Affiliates or another Purchaser or any one of such other Purchaser's Affiliates (a **"Substitute Purchaser"**) as the purchaser of the Notes that it has agreed to purchase hereunder, by written notice to the Company, which notice shall be signed by both such Purchaser and such Substitute Purchaser, shall contain such Substitute Purchaser's agreement to be bound by this Agreement and shall contain a confirmation by such Substitute Purchaser of the accuracy with respect to it of the representations set forth in Section 6. Upon receipt of such notice, any reference to such Purchaser in this Agreement (other than in this Section 19), shall be deemed to refer to such Substitute Purchaser in lieu of such original Purchaser. In the event that such Substitute Purchaser is so substituted as a Purchaser hereunder and such Substitute Purchaser thereafter transfers to such original Purchaser all of the Notes then held by such Substitute Purchaser, upon receipt by the Company of notice of such transfer, any reference to such Substitute Purchaser as a "Purchaser" in this Agreement (other than in this Section 19), shall no longer be deemed to refer to such Substitute Purchaser, but shall refer to such original Purchaser, and such original Purchaser shall again have all the rights of an original holder of the Notes under this Agreement.

Section 20. Miscellaneous.

Successors and Assigns

. All covenants and other agreements contained in this Agreement by or on behalf of any of the parties hereto bind and inure to the benefit of their respective successors and assigns (including, without limitation, any subsequent holder of a Note) whether so expressed or not, except that the Company may not assign or otherwise transfer any of its rights or obligations hereunder or under the Notes without the prior written consent of each holder. Nothing in this Agreement, expressed or implied, shall be construed to confer upon any Person (other than the parties hereto and their respective successors and assigns permitted hereby) any legal or equitable right, remedy or claim under or by reason of this Agreement.

Severability

. Any provision of this Agreement that is prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions hereof, and any such prohibition or unenforceability in any jurisdiction shall (to the full extent permitted by law) not invalidate or render unenforceable such provision in any other jurisdiction.

Construction, Etc.

Each covenant contained herein shall be construed (absent express provision to the contrary) as being independent of each other covenant contained herein, so that compliance with any one covenant shall not (absent such an express contrary provision) be deemed to excuse compliance with any other covenant. Where any provision herein refers to action to be taken by any Person, or which such Person is prohibited from taking, such provision shall be applicable whether such action is taken directly or indirectly by such Person.

Defined terms herein shall apply equally to the singular and plural forms of the terms defined. Whenever the context may require, any pronoun shall include the corresponding masculine, feminine and neuter forms. The words "include," "includes" and "including" shall be deemed to be followed by the phrase "without limitation." The word "will" shall be construed to have the same meaning and effect as the word "shall." Unless the context requires otherwise (a)

any definition of or reference to any agreement, instrument or other document herein shall be construed as referring to such agreement, instrument or other document as from time to time amended, supplemented or otherwise modified (subject to any restrictions on such amendments, supplements or modifications set forth herein) and, for purposes of the Notes, shall also include any such notes issued in substitution therefor pursuant to Section 11, (b) subject to Section 20.1, any reference herein to any Person shall be construed to include such Person's successors and assigns, (c) the words "herein," "hereof" and "hereunder," and words of similar import, shall be construed to refer to this Agreement in its entirety and not to any particular provision hereof, (d) all references herein to Sections and Schedules shall be construed to refer to Sections of, and Schedules to, this Agreement, and (e) any reference to any law or regulation herein shall, unless otherwise specified, refer to such law or regulation as amended, modified or supplemented from time to time.

Counterparts

. This Agreement may be executed in any number of counterparts, each of which shall be an original but all of which together shall constitute one instrument. Each counterpart may consist of a number of copies hereof, each signed by less than all, but together signed by all, of the parties hereto.

Governing Law

. This Agreement and the Notes shall be construed and enforced in accordance with, and the rights of the parties shall be governed by, the law of the State of New York excluding choice-of-law principles of the law of such State that would permit the application of the laws of a jurisdiction other than such State.

Jurisdiction and Process; Waiver of Jury Trial

. (a) The Company and each holder of a Note irrevocably submits to the non-exclusive jurisdiction of any New York State or federal court sitting in the Borough of Manhattan, The City of New York, over any suit, action or proceeding arising out of or relating to any Note Document. To the fullest extent permitted by applicable law, the Company and each holder of a Note irrevocably waive and agree not to assert, by way of motion, as a defense or otherwise, any claim that it is not subject to the jurisdiction of any such court, any objection that it may now or hereafter have to the laying of the venue of any such suit, action or proceeding brought in any such court and any claim that any such suit, action or proceeding brought in any such court has been brought in an inconvenient forum.

(b) The Company and each holder of a Note agree, to the fullest extent permitted by applicable law, that a final judgment in any suit, action or proceeding of the nature referred to in Section 20.6(a) brought in any such court shall be conclusive and binding upon it subject to rights of appeal, as the case may be, and may be enforced in the courts of the United States of America or the State of New York (or any other courts to the jurisdiction of which it or any of its assets is or may be subject) by a suit upon such judgment.

(c) The Company consents to process being served by or on behalf of any holder of Notes in any suit, action or proceeding of the nature referred to in Section 20.6 by mailing a copy thereof by registered, certified mail, priority or express (or any substantially similar form of mail), postage prepaid, return receipt or delivery confirmation requested, to it at its address specified in Section 16 or at such other address of which such holder shall then have been notified pursuant to said Section. The Company agrees that

such service upon receipt (i) shall be deemed in every respect effective service of process upon it in any such suit, action or proceeding and (ii) shall, to the fullest extent permitted by applicable law, be taken and held to be valid personal service upon and personal delivery to it. Notices hereunder shall be conclusively presumed received as evidenced by a delivery receipt furnished by the United States Postal Service or any reputable commercial delivery service.

(d) Nothing in this Section 20.6 shall affect the right of any holder of a Note to serve process in any manner permitted by law, or limit any right that the holders of any of the Notes may have to bring proceedings against the Company in the courts of any appropriate jurisdiction or to enforce in any lawful manner a judgment obtained in one jurisdiction in any other jurisdiction.

(e) The parties hereto hereby waive trial by jury in any action brought on or with respect to this Agreement, each other Note Document or any other document executed in connection herewith or therewith.

Accounting Terms; GAAP

. Except as otherwise expressly provided herein, all financial statements to be delivered pursuant to this Agreement shall be prepared in accordance with, and all terms of an accounting or financial nature shall be construed and interpreted in accordance with, GAAP as in effect from time to time. If at any time any change in GAAP would affect the computation of the Consolidated Leverage Ratio, and the Company shall so request, the Company and the Required Holders shall negotiate in good faith to amend such ratio or requirement to preserve the original intent thereof in light of such change in GAAP; provided, that, until so amended, such ratio or requirement shall continue to be computed in accordance with GAAP prior to such change therein, and the Company shall provide to the Holders within five days after delivery of each certificate or financial report required hereunder that is affected thereby a written statement of a Senior Financial Officer of the Company setting forth in reasonable detail the differences (including any differences that would affect any calculations relating to the Consolidated Leverage Ratio) that would have resulted if such financial statements had been prepared as if such change had been implemented; provided, further, that obligations relating to a lease that were accounted for by a Person as an operating lease as of the Closing Date and any similar lease entered into after the Closing Date by such Person shall be accounted for as obligations relating to an operating lease and not as a Capital Lease Obligation. Notwithstanding any other provision contained herein, all terms of an accounting or financial nature used herein shall be construed, and all computations of amounts and ratios referred to in Section 8 shall be made, without giving effect to any election under Statement of Financial Accounting Standards 159 (or any other Financial Accounting Standard having a similar result or effect) to value any Indebtedness or other liabilities of the Company or any of its Subsidiaries at “fair value”.

* * * * *

If you are in agreement with the foregoing, please sign the form of agreement on a counterpart of this Agreement and return it to the Company, whereupon this Agreement shall become a binding agreement between you and the Company.

Very truly yours,

Layne Christensen Company

By:_:_/s/ J. Michael Anderson
Name: J. Michael Anderson
Title: Chief Financial Officer

Signature Page to Note Purchase Agreement

This Agreement is hereby
accepted and agreed to as
of the date hereof.

Corre Opportunities Qualified Master Fund, LP

By: /s/ Eric Soderlund
Name: Eric Soderlund
Title: Authorized Signatory

Corre Opportunities II Master Fund, LP

By: /s/ Eric Soderlund
Name: Eric Soderlund
Title: Authorized Signatory

DEFINED TERMS

As used herein, the following terms have the respective meanings set forth below or set forth in the Section hereof following such term:

"4.25% Convertible Notes" means the 4.25% Convertible Senior Notes due 2018 of the Company issued pursuant to the 4.25% Convertible Notes Indenture.

"4.25% Convertible Notes Indenture" means the Indenture dated as of October 162, 2013 between the Company and U.S. Bank National Association, as trustee, pursuant to which the Company issued its 4.25% Convertible Senior Notes due 2018.

"8.00% Convertible Notes" means the 8.00% Senior Secured Second Lien Convertible Notes of the Company issued pursuant to the 8.00% Convertible Notes Indenture.

"8.00% Convertible Notes Indenture" means the Indenture dated as of March 2, 2015 among the Company, each of the guarantors party thereto, and U.S. Bank National Association, as trustee and collateral agent, pursuant to which the Company issued its 8.00% Senior Secured Second Lien Convertible Notes.

"Affiliate" means, at any time, (a) with respect to any Person, any other Person that at such time directly or indirectly through one or more intermediaries Controls, or is Controlled by, or is under common Control with, such first Person and (b) with respect to the Company, shall include any Person beneficially owning or holding, directly or indirectly, 10% or more of any class of voting or equity interests of the Company or any Subsidiary or any Person of which the Company and its Subsidiaries beneficially own or hold, in the aggregate, directly or indirectly, 10% or more of any class of voting or equity interests. As used in this definition, **"Control"** means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise. Unless the context otherwise clearly requires, any reference to an **"Affiliate"** is a reference to an Affiliate of the Company.

"Agreement" means this Note Purchase Agreement, including all Schedules attached hereto.

"Applicable Law" is defined in Section 5.4.

"Attributable Indebtedness" shall mean, when used with respect to any Sale and Leaseback Transaction, as at the time of determination, the present value (discounted at a rate equivalent to the Company's then current weighted average cost of funds for borrowed money as at the time of determination, compounded on a semi-annual basis) of the total obligations of the lessee for rental payments (and substantially similar payments) during the remaining term of the lease included in any such Sale and Leaseback Transaction.

"**Bankruptcy Law**" means Title 11, United States Code, or any similar U.S. federal, state or non-U.S. law for the relief of debtors.

"Board of Directors" shall mean, with respect to any Person, (a) in the case of any corporation, the board of directors of such Person, (b) in the case of any limited liability company, the board of managers or board of directors, as applicable, of such Person, or if such limited liability company does not have a board of managers or board of directors, the functional equivalent of the foregoing, (c) in the case of any partnership, the board of directors or board of managers, as applicable, of the general partner of such Person, or if such general partner does not have a board of managers or board of directors, the functional equivalent of the foregoing, and (d) in any other case, the functional equivalent of the foregoing.

"Business Day" means any day other than a Saturday, a Sunday or a day on which commercial banks in New York, New York or Houston, Texas are required or authorized to be closed.

"**Capital Lease**" shall mean, with respect to any Person, any lease of, or other arrangement conveying the right to use, any property by such Person as lessee that has been or should be accounted for as a capital lease on a balance sheet of such Person prepared in accordance with GAAP.

"Capital Lease Obligations" of any Person shall mean the obligations of such Person to pay rent or other amounts under any Capital Lease, any lease entered into as part of any Sale and Leaseback Transaction or any Synthetic Lease, or a combination thereof, which obligations are required to be classified and accounted for as Capital Leases on a balance sheet of such Person under GAAP, and the amount of such obligations shall be the capitalized amount thereof determined in accordance with GAAP.

"Casualty Event" shall mean any loss of title (other than through a consensual disposition of such property in accordance with this Agreement) or any loss of or damage to or any destruction of, or any condemnation, temporary requisition or other taking (including by any Governmental Authority) or any settlement in lieu thereof of, any property of the Company or any Restricted Subsidiary.

"Change of Control" means an event that will be deemed to occur if any of the following occurs:

(i) a "person" or "group" within the meaning of Section 13(d) of the Exchange Act other than the Company, its Subsidiaries, and the Company and its Subsidiaries' employee benefit plans, has become the direct or indirect "beneficial owner" (as defined in Rules 13d-3 and 13d-5 under the Exchange Act, except that a "person" or "group" shall be deemed to have "beneficial ownership" of all Equity Interests that such "person" or "group" has the right to acquire, whether such right is exercisable immediately or only after the passage of time) of shares of the Company's common equity representing more than 50% of the voting power of the Company's common equity;

(ii) the consummation of:

(I) any sale, lease or other transfer in one transaction or a series of transactions of all or substantially all of the consolidated assets of the Company and its Subsidiaries, taken as a whole, to any Person; or

(II) any transaction or series of related transactions in connection with which (whether by means of exchange, liquidation, consolidation, merger, combination, reclassification, recapitalization, acquisition or otherwise) all of the common stock is exchanged for, converted into, acquired for, or constitutes solely the right to receive, other securities, other property, assets or cash, but excluding any merger, consolidation, share exchange or acquisition of the Company with or by another Person pursuant to which the Persons that "beneficially owned" (as defined above), directly or indirectly, the shares of the Company's Voting Stock immediately prior to such transaction beneficially own, directly or indirectly, immediately after such transaction, shares of the surviving, continuing or acquiring corporation's Voting Stock representing more than 50% of the total outstanding voting power of all outstanding classes of Voting Stock of the surviving, continuing or acquiring corporation in substantially the same proportions vis-à-vis each other as immediately prior to such transaction; or

(iii) the Company's stockholders approve any plan or proposal for the liquidation or dissolution of the Company.

"**Charter Documents**" of a corporation, limited liability company or other entity means such company or entity's certificate or articles of incorporation, by-laws or other organizational documents, as applicable.

"Closing" is defined in Section 3.1.

"Closing Date" is defined in Section 3.1.

"Code" means the Internal Revenue Code of 1986, as amended from time to time, and the rules and regulations promulgated thereunder from time to time.

"Company" is defined in the preamble to this Agreement. **"Confidential Information"** is defined in Section 18.

"Consolidated Group" means, collectively, the Company and its Subsidiaries.

"Consolidated Amortization Expense" shall mean, for any period, the amortization expense of the Company and its Restricted Subsidiaries for such period, determined on a consolidated basis in accordance with GAAP.

"Consolidated Depreciation Expense" shall mean, for any period, the depreciation expense of the Company and its Restricted Subsidiaries for such period, determined on a consolidated basis in accordance with GAAP.

"Consolidated EBITDA" shall mean, for any period, Consolidated Net Income for such period, adjusted by (x) adding thereto, without duplication, in each case only to the extent (and in

the same proportion) deducted in determining such Consolidated Net Income (and with respect to the portion of Consolidated Net Income attributable to any Restricted Subsidiary of the Company only if a corresponding amount of cash would be permitted to be distributed to the Company by such Restricted Subsidiary by operation of the terms of its organizational documents and all agreements, instruments, and legal requirements applicable to such Restricted Subsidiary or its equityholders during such period): (a) Consolidated Interest Expense for such period; (b) Consolidated Amortization Expense for such period; (c) Consolidated Depreciation Expense for such period; (d) Consolidated Tax Expense for such period; (e) non-recurring transaction costs and expenses (including legal, accounting, tax and appraisal and collateral field exam costs and expenses) directly incurred in connection with this Agreement or the Credit Agreement during such period; (f) non-recurring severance costs, relocation costs, signing costs and retention bonuses directly incurred, within 365 days following the Closing Date, during such period in an aggregate amount for all severance costs, relocation costs, signing costs and retention bonuses added back pursuant to this clause (f) not to exceed five (5%) percent of Consolidated EBITDA in any Test Period (calculated before giving effect to this clause (f)); (g) the aggregate amount of all other non-cash charges reducing Consolidated Net Income (including (i) any write-down, impairment or write-off of assets for such period, (ii) non-cash compensation expense and (iii) any unusual or nonrecurring non-cash charges, accruals or reserves; provided, however, that in the case of this clause (iii), if any such charge, accrual or reserve represents a cash payment in any future period, such cash payment shall be deducted when calculating Consolidated EBITDA for such future period); (h) non-recurring fees and expenses incurred during such period in connection with any Permitted Acquisition or incurrence or issuance of equity interests or Indebtedness (other than intercompany Indebtedness); and (i) without duplication, any cash distributions or payments made by an Unrestricted Subsidiary to the Company or any Restricted Subsidiary during such period in respect of the operating cash flow of such Unrestricted Subsidiary; (y) subtracting therefrom, without duplication, the aggregate amount of all non-cash income increasing Consolidated Net Income (other than the accrual of revenue or recording of receivables in the ordinary course of business) for such period.

"Consolidated Funded Indebtedness" shall mean, as at any date, an amount equal to the sum of, without duplication, the aggregate principal amount of all Indebtedness of the Company and its Restricted Subsidiaries of the type described in clauses (a), (b) (other than performance, surety or similar bonds), (f) and (i) (but only with respect to the aggregate amount of unreimbursed drawings in respect of letters of credit (or similar facilities) issued for the account of the Company or any of its Restricted Subsidiaries) of the definition of Indebtedness, plus the aggregate amount of all Contingent Obligations of the Company and its Restricted Subsidiaries in respect of Indebtedness of third Persons of the type described above, in each case calculated on a consolidated basis for the Company and its Restricted Subsidiaries. The 4.25% Convertible Notes shall be excluded from Consolidated Funded Indebtedness on and after the dated the 4.25% Convertible Notes have been Effectively Discharged (as defined in the 4.25% Convertible Notes Indenture).

"Consolidated Interest Expense" shall mean, for any period, the total consolidated interest expense of the Company and its Restricted Subsidiaries for such period determined on a consolidated basis in accordance with GAAP plus, without duplication: (a) imputed interest on Capital Lease Obligations and Attributable Indebtedness of the Company and its Restricted Subsidiaries for such period; (b) commissions, discounts and other fees and charges owed by the Company or any of its Restricted Subsidiaries with respect to letters of credit securing financial

obligations, bankers' acceptance financing, receivables financings and similar credit transactions for such period; (c) amortization or write-off of debt issuance costs, deferred financing costs, debt discount or premium and other financing fees and expenses incurred by the Company or any of its Restricted Subsidiaries for such period; (d) cash contributions to any employee stock ownership plan or similar trust made by the Company or any of its Restricted Subsidiaries to the extent such contributions are used by such plan or trust to pay interest or fees to any Person (other than the Company or any of its Restricted Subsidiaries that are Wholly-Owned Subsidiaries) in connection with Indebtedness incurred by such plan or trust for such period; (e) all interest paid or payable with respect to discontinued operations of the Company or any of its Restricted Subsidiaries for such period; (f) the interest portion of any payment obligations of the Company or any of its Restricted Subsidiaries for such period deferred for payment at any future time, whether or not such future payment is subject to the occurrence of any contingency, and includes any and all payments representing the purchase price and any assumptions of Indebtedness and/or Contingent Obligations, "earn-outs" and other agreements to make any payment the amount of which is, or the terms of payment of which are, in any respect subject to or contingent upon the revenues, income, cash flow or profits (or the like) of any Person or business; and (g) all interest on any Indebtedness of the Company or any of its Restricted Subsidiaries of the type described in clause (e) or (j) of the definition of "Indebtedness" for such period; provided, that, Consolidated Interest Expense shall be calculated after giving effect to Hedging Agreements (including associated costs) intended to protect against fluctuations in interest rates, but excluding unrealized gains and losses with respect to any such Hedging Agreements.

"Consolidated Leverage Ratio" shall mean, at any date of determination, the ratio of (a) Consolidated Funded Indebtedness of the Company and its Restricted Subsidiaries, to (b) Consolidated EBITDA of the Company and its Restricted Subsidiaries for the Test Period then most recently ended.

"Consolidated Net Income" shall mean, for any period, the consolidated net income (or loss) of the Company and its Restricted Subsidiaries for such period, determined on a consolidated basis in accordance with GAAP (but treating as Consolidated Tax Expense, to the extent not otherwise included therein in accordance with GAAP, Permitted Tax Distributions for such period); provided, that, there shall be excluded from such net income (to the extent otherwise included therein), without duplication: (a) the net income (or loss) of any Person (other than a Restricted Subsidiary of the Company) in which any Person other than the Company or any of its Restricted Subsidiaries has an ownership interest, except to the extent that cash in an amount equal to any such income has actually been received by the Company or (subject to clause (b) below) any of its Restricted Subsidiaries from such Person during such period; (b) the net income of any Restricted Subsidiary of the Company during such period to the extent that the declaration and/or payment of dividends or similar distributions by such Restricted Subsidiary of that income is not permitted by operation of the terms of its organizational documents or any agreement (other than the Credit Agreement, the 4.25% Convertible Notes Indenture or the 8.00% Convertible Notes Indenture), instrument, or other requirement of Applicable Law applicable to that Restricted Subsidiary or its equityholders during such period, except that the Company's equity in the net loss of any such Restricted Subsidiary for such period shall be included in determining Consolidated Net Income; (c) earnings resulting from any reappraisal, revaluation or write-up of assets; and (d) any extraordinary gains or extraordinary losses for such period.

"Consolidated Tax Expense" shall mean, for any period, the sum of, without duplication, (a) the tax expense of the Company and its Restricted Subsidiaries for such period, determined on a consolidated basis in accordance with GAAP and (b) the aggregate amount of all Permitted Tax Distributions made during such period.

"Contingent Obligation" shall mean, as to any Person, any obligation, agreement, understanding or arrangement of such Person guaranteeing or intended to guarantee any Indebtedness (the "primary obligations") of any other Person (the "primary obligor") in any manner, whether directly or indirectly, including any obligation agreement, understanding or arrangement of such Person, whether or not contingent: (a) to purchase any such primary obligation or any property constituting direct or indirect security therefor; (b) to advance or supply funds (i) for the purchase or payment of any such primary obligation or (ii) to maintain working capital or equity capital of the primary obligor or otherwise to maintain the net worth, net equity, liquidity, level of income, cash flow or solvency of the primary obligor; (c) to purchase or lease property, securities or services primarily for the purpose of assuring the primary obligor of any such primary obligation of the ability of the primary obligor to make payment of such primary obligation; (d) with respect to bankers' acceptances, letters of credit and similar credit arrangements, until a reimbursement or equivalent obligation arises (which reimbursement obligation shall constitute a primary obligation); or (e) otherwise to assure or hold harmless the primary obligor of any such primary obligation against loss (in whole or in part) in respect thereof; provided, however, that the term "Contingent Obligation" shall not include endorsements of instruments for deposit or collection in the ordinary course of business or any product warranties given in the ordinary course of business.

The amount of any Contingent Obligation shall be deemed to be an amount equal to the stated or determinable amount of the primary obligation, or portion thereof, in respect of which such Contingent Obligation is made (or, if less, the maximum amount of such primary obligation for which such Person may be liable, whether singly or jointly, pursuant to the terms of the instrument, agreements or other documents or, if applicable, unwritten agreement, evidencing such Contingent Obligation) or, if not stated or determinable, the amount that can reasonably be expected to become an actual or matured liability in respect thereof (assuming such Person is required to perform thereunder) as determined by such Person in good faith.

"Credit Agreement" means the Amended and Restated Credit Agreement dated as of August 15, 2015 among the Company, as the administrative borrower, certain Subsidiaries party thereto, as co-borrowers or guarantors, the lenders from time to time party thereto, and PNC Bank, National Association, as administrative agent, as the same may be amended, restated, supplemented, replaced, refinanced or otherwise modified from time to time.

"**Custodian**" means any receiver, trustee, assignee, liquidator, custodian or similar official under any Bankruptcy Law.

"**Debt Repayment Triggering Event**" means any event or condition that gives, or with the giving of notice or lapse of time would give, the holder of any note, debenture or other evidence of indebtedness for borrowed money (or any Person acting on such holder's behalf) the right to require the repurchase, redemption or repayment of all or a portion of such indebtedness by the Company or any of its Subsidiaries.

"Default" means an event or condition the occurrence or existence of which would, with the lapse of time or the giving of notice or both, become an Event of Default.

"Default Rate" means that rate of interest per annum that is the greater of (a) 2.00% above the rate of interest stated in clause (a) of the first paragraph of the Notes or (b) 2.00% over *The Wall Street Journal* Prime Rate published from time to time.

"Disqualified Capital Stock" shall mean any Equity Interest which, by its terms (or by the terms of any security or instrument into which it is convertible or for which it is exchangeable or exercisable), or upon the happening of any event, (a) matures (excluding any maturity as the result of an optional redemption by the issuer thereof) or is mandatorily redeemable, pursuant to a sinking fund obligation or otherwise, or is redeemable at the option of the holder thereof, in whole or in part, on or prior to 91 days after the Maturity Date, (b) is convertible into or exchangeable or exercisable (unless at the sole option of the issuer thereof) for (i) debt securities or other indebtedness or (ii) any Equity Interests referred to in (a) above, in each case at any time on or prior to the date that is 91 days after the Maturity Date, or (c) contains any repurchase or payment obligation which may come into effect prior to the date that is 91 days after the Maturity Date.

For the avoidance of doubt, any Equity Interest that may or shall be repurchased or redeemed (but only to the extent permitted hereunder at such time) from officers, directors or employees or former officers, directors or employees (or their transferees, estates or beneficiaries under their estates) of the Company or any of its Restricted Subsidiaries, upon their death, disability, retirement, severance or termination of employment or service or in connection with satisfaction of the exercise price for stock options or tax withholding obligations in connection with the granting, vesting or exercise of equity awards, shall not be deemed to be "Disqualified Capital Stock" for such reason alone.

"Dividend" shall mean, with respect to any Person, that such Person has declared or paid a dividend or returned any equity capital to the holders of its Equity Interests or authorized or made any other distribution, payment or delivery of property (other than Qualified Capital Stock of such Person) or cash to the holders of its Equity Interests as such, or redeemed, retired, purchased or otherwise acquired, directly or indirectly, for consideration any of its Equity Interests outstanding (or any options or warrants issued by such Person with respect to its Equity Interests), or set aside or otherwise reserved, directly or indirectly, any funds for any of the foregoing purposes, or shall have permitted any of its Subsidiaries to purchase or otherwise acquire for consideration any of the outstanding Equity Interests of such Person (or any options or warrants issued by such Person with respect to its Equity Interests).

"EDGAR" means the SEC's Electronic Data Gathering, Analysis and Retrieval System or any successor SEC electronic filing system for such purposes.

"**Equity Interests**" means as to any Person, all capital stock, partnership interests, membership interests, beneficial interests in a trust or other indicia of equity rights issued by such Person from time to time, and any warrants, options or other rights entitling the holder thereof to purchase or acquire any such equity interest.

"**ERISA**" shall mean the Employee Retirement Income Security Act of 1974, as amended.

"Event of Default" is defined in Section 9.

"**Exchange Act**" means the Securities Exchange Act of 1934, as amended from time to time, and the rules and regulations promulgated thereunder from time to time in effect.

"Fair Market Value" shall mean, with respect to any asset (including any Equity Interests of any Person), the price at which a willing buyer, not an Affiliate of the seller, and a willing seller who does not have to sell, would agree to purchase and sell such asset, as determined in good faith by the Board of Directors or, pursuant to a specific delegation of authority by such Board of Directors or a designated senior executive officer, of the Company, or the Subsidiary of the Company selling such asset.

"FATCA" means (a) sections 1471 through 1474 of the Code, as of the date of this Agreement (or any amended or successor version that is substantively comparable and not materially more onerous to comply with), together with any current or future regulations or official interpretations thereof, (b) any treaty, law or regulation of any other jurisdiction, or relating to an intergovernmental agreement between the United States of America and any other jurisdiction, which (in either case) facilitates the implementation of the foregoing clause (a), and (c) any agreements entered into pursuant to section 1471(b)(1) of the Code.

"**Funding Notice**" means a written notice signed by a Senior Financial Officer on letterhead of the Company and delivered to each Purchaser at least five Business Days prior to the Closing Date, specifying the Closing Date for the purchase and sale of the Notes and including wire transfer instructions for bank account into which the purchase price for the Notes is to be deposited.

"GAAP" means generally accepted accounting principles as in effect from time to time in the United States of America.

"Governmental Authority" means

(a) the government of

(i) the United States of America or any state or other political subdivision thereof, or

(ii) any other jurisdiction in which the Company or any Subsidiary conducts all or any part of its business, or which asserts jurisdiction over any properties of the Company or any Subsidiary, or

(b) any entity exercising executive, legislative, judicial, regulatory or administrative functions of, or pertaining to, any such government.

"Hedging Agreement" shall mean (a) any and all rate swap transactions, basis swaps, credit derivative transactions, forward rate transactions, commodity swaps, commodity options, forward commodity contracts, equity or equity index swaps or options, bond or bond price or bond index swaps or options or forward bond or forward bond price or forward bond index transactions, interest rate options, forward foreign exchange transactions, currency swap transactions, cross-

currency rate swap transactions, currency options, cap transactions, floor transactions, collar transactions, spot contracts, futures contracts or other liabilities for the purchase or sale of currency or other commodities at a future date in the nature of a futures contract or any other similar transactions or any combination of any of the foregoing (including any options or warrants to enter into any of the foregoing), whether or not any such transaction is governed by, or otherwise subject to, any master agreement or any netting agreement, and (b) any and all transactions or arrangements of any kind, and the related confirmations, which are subject to the terms and conditions of, or governed by, any form of master agreement (or similar documentation) published from time to time by the International Swaps and Derivatives Association, Inc., any International Foreign Exchange Master Agreement, or any other master agreement (any such agreement or documentation, together with any related schedules, a "Master Agreement"), including any such obligations or liabilities under any Master Agreement.

"Hedging Obligations" shall mean obligations under or with respect to Hedging Agreements.

"Hedging Termination Value" shall mean, in respect of any one or more Hedging Agreements, after taking into account the effect of any netting agreements relating to such Hedging Agreements (to the extent, and only to the extent, such netting agreements are legally enforceable in insolvency proceedings against the applicable counterparty obligor thereunder), (a) for any date on or after the date such Hedging Agreements have been closed out and termination value(s) determined in accordance therewith, such termination value(s), and (b) for any date prior to the date referenced in preceding clause (a), the amount(s) determined as the mark-to-market value(s) for such Hedging Agreements, as determined based upon one or more mid-market or other readily available quotations provided by any recognized dealer in such Hedging Agreements.

"holder" means, with respect to any Note, the Person in whose name such Note is registered in the register maintained by the Company pursuant to Section 11.1, *provided, however,* that if such Person is a nominee, then for the purposes of Section 8.1, Section 10, Section 15.2 and Section 16 and any related definitions in this Schedule A, "holder" shall mean the beneficial owner of such Note whose name and address appears in such register.

"Indebtedness" of any Person shall mean, without duplication, (a) all obligations of such Person for borrowed money or advances; (b) all obligations of such Person evidenced by bonds, debentures, notes, loan agreements or similar instruments; (c) all obligations of such Person under conditional sale or other title retention agreements relating to property purchased by such Person (even though the rights and remedies of the seller or lender under such agreement in the event of default are limited to repossession or sale of such property); (d) all obligations of such Person issued or assumed as part of the deferred purchase price of property or services (excluding trade accounts payable and accrued obligations incurred in the ordinary course of business on normal trade terms and not overdue by more than 90 days); (e) all Indebtedness secured by any Lien on property owned or acquired by such Person (including indebtedness arising under conditional sales or other title retention agreements), whether or not the obligations secured thereby have been assumed, but limited to the lower of (i) the Fair Market Value of such property and (ii) the amount of the Indebtedness secured; (f) all Capital Lease Obligations, Purchase Money Obligations and Synthetic Lease Obligations of such Person; (g) all obligations of such Person, contingent or otherwise, to purchase, redeem, retire or otherwise acquire for value any Equity Interests of such

Person, valued, in the case of a redeemable preferred Equity Interest, at the greater of its voluntary or involuntary liquidation preference plus accrued and unpaid dividends; (h) all obligations of such Person under Hedging Agreements valued at the Hedging Termination Value thereof; (i) all obligations of such Person for the reimbursement of any obligor in respect of letters of credit, letters of guaranty, bankers' acceptances and similar credit transactions; and (j) all Contingent Obligations of such Person in respect of Indebtedness or obligations of others of the kinds referred to in clauses (a) through (i) above.

The Indebtedness of any Person shall include the Indebtedness of any other entity (including any partnership in which such Person is a general partner) to the extent such Person is liable therefor as a result of such Person's ownership interest in or other relationship with such entity, except (other than in the case of general partner liability) to the extent that terms of such Indebtedness expressly provide that such Person is not liable therefor.

"Institutional Investor" means (a) any Purchaser of a Note, (b) any holder of a Note holding (together with one or more of its Affiliates) more than 5.00% of the aggregate principal amount of the Notes then outstanding, (c) any bank, trust company, savings and loan association or other financial institution, any pension plan, any investment company, any insurance company, any broker or dealer, or any other similar financial institution or entity, regardless of legal form, and (d) any Related Fund of any holder of any Note.

"Lien" means any mortgage, pledge, security interest, lien (statutory or otherwise), charge, encumbrance, hypothecation, assignment, deposit arrangement, or other arrangement having the practical effect of the foregoing or any preference, priority or other security agreement or preferential arrangement of any kind or nature whatsoever (including any conditional sale or other title retention agreement and any Capital Lease having the same economic effect as any of the foregoing).

"Material" means material in relation to the business, operations, affairs, financial condition, assets, properties, or prospects of the Company and its Subsidiaries taken as a whole.

"Material Adverse Effect" means a material adverse effect on (a) the business, operations, affairs, financial condition, assets or properties of the Company and its Subsidiaries taken as a whole, (b) the ability of the Company to perform any of its obligations under any of the Note Documents or (c) the legality, validity or enforceability of any of the Note Documents.

"Material Contracts" means any contract or other agreement (other than the Note Documents), whether written or oral, to which the Company is a party that involves payments in an aggregate amount of more than $25,000,000 or as to which the breach, nonperformance, cancellation or failure to renew by any party thereto would have a Material Adverse Effect.

"Maturity Date" means October 16, 2019.

"Note Documents" means this Agreement, the Notes and all other documents now or hereafter executed and delivered by the Company pursuant to or in connection with any of the foregoing or any of the transactions contemplated hereby, and any and all amendments, supplements and other modifications to any of the foregoing.

"Notes" is defined in Section 1.

"OFAC" means the Office of Foreign Assets Control of the United States Department of the Treasury.

"Officer's Certificate" means a certificate of a Senior Financial Officer or of any other officer of the Company whose responsibilities extend to the subject matter of such certificate.

"**Permitted Acquisition**" shall mean any transaction or series of related transactions for the direct or indirect (a) acquisition of all or substantially all of the property of any Person, or of any business or division of any Person, (b) acquisition of all of the Equity Interests of any Person, and otherwise causing such Person to become a Wholly Owned Subsidiary of such Person, or (c) merger or consolidation or any other combination with any Person, if each of the following conditions is met:

(i) no Default then exists or would result therefrom;

(ii) neither the Company nor any Restricted Subsidiary shall, in connection with any such transaction, assume or remain liable with respect to any Indebtedness of the related seller or the business, Person or properties acquired, except to the extent permitted to be incurred under Section 8.12;

(iii) the Board of Directors of the Person to be acquired shall not have indicated its opposition to the consummation of such acquisition (which opposition has not been publicly withdrawn);

(v) all transactions in connection therewith shall be consummated, in all material respects, in accordance with all requirements of Applicable Laws and the organizational documents of the Company or the applicable Restricted Subsidiary;

(vi) the Company shall have provided the Holders with (A) historical financial statements for the last three fiscal years (or, if less, the number of years since formation) of the Person or business to be acquired (audited if available without undue cost or delay) and unaudited financial statements thereof for the most recent interim period that is available and (B) all such other information and data relating to such transaction or the Person or business to be acquired as may be reasonably requested by the Holders;

(vii) at least five Business Days prior to the proposed date of consummation of the transaction (or such shorter period as is acceptable to the Required Holders), the Company shall have delivered to the Holders an Officer's Certificate of the Company certifying that such transaction complies with this definition (which shall have attached thereto reasonably detailed backup data and calculations showing such compliance);

(viii) (a) in the case of an acquisition of all or substantially all of the property of any Person, the Person making such acquisition is the Company or a Restricted Subsidiary, (b) in the case of an acquisition of the Equity Interests of any Person, (A) the Person making such acquisition is the Company or a Restricted Subsidiary and (B) no less than one hundred (100%) percent of the Equity Interests of the target Person shall be acquired by

the Person making such acquisition, and (c) in the case of a merger or consolidation or any other combination with any Person, the Person surviving such merger, consolidation or other combination (x) is the Company or a Restricted Subsidiary or (y) upon consummation of the Permitted Acquisition becomes a Restricted Subsidiary; and

(ix) in the case of the acquisition of one hundred (100%) percent of the Equity Interests of any Person (including by way of merger, consolidation or other combination), such Person shall own no Equity Interests of any other Person (other than de minimis amounts) unless either (x) such Person owns one hundred (100%) percent of the Equity Interests of such other Person or (y) if such Person owns Equity Interests in any other Person which is not a Wholly Owned Subsidiary of such Person, (1) such non-Wholly Owned Subsidiary shall not have been created or established in contemplation of, or for purposes of, the respective Permitted Acquisition, (2) any such non-Wholly Owned Subsidiary of the respective Person shall have been a non-Wholly Owned Subsidiary of such Person prior to the date of the respective Permitted Acquisition and (3) such Person and/or its Wholly Owned Subsidiaries own at least ninety (90%) percent of the total value of all the assets owned by such Person and its Subsidiaries (for purposes of such determination, excluding the value of the Equity Interests of non-Wholly Owned Subsidiaries held by such Person and its Wholly Owned Subsidiaries).

"Permitted Liens" means the following:

(a) inchoate Liens for taxes not yet due and payable or that are immaterial or being contested in good faith by appropriate proceedings and for which the obligor has set aside on its books adequate reserves in accordance with GAAP, which proceedings (or orders entered in connection with such proceedings) have the effect of preventing the forfeiture or sale of the property subject to any such Lien;

(b) Liens in respect of property imposed by law, which were incurred in the ordinary course of business and do not secure Indebtedness for borrowed money, such as carriers', warehousemen's, materialmen's, landlords', workmen's, suppliers', repairmen's and mechanics' Liens and other similar Liens arising in the ordinary course of business (including customary contractual landlords' liens under operating leases entered into in the ordinary course of business), and (i) which do not in the aggregate materially detract from the value of the property of the Company and its Restricted Subsidiaries, taken as a whole, and do not materially impair the use thereof in the operation of the business of the Company and its Restricted Subsidiaries, taken as a whole, taken as a whole, and (ii) which, if they secure obligations that are then due and unpaid, are being contested in good faith by appropriate proceedings timely initiated and for which adequate reserves have been established in accordance with GAAP, which proceedings (or orders entered in connection with such proceedings) have the effect of preventing the forfeiture or sale of the property subject to any such Lien;

(c) any Lien in existence on the Closing Date and any Lien granted as a replacement or substitute therefor (any such Lien, an "**Existing Lien**"); provided, that, any such replacement or substitute Lien secures only the Indebtedness secured by the Existing Lien or any refinancing thereof (plus all accrued and unpaid interest on such Indebtedness

being refinanced and the amount of all fees and expenses, including premiums, incurred in connection therewith);

(d) easements, rights-of-way, restrictions (including zoning restrictions), covenants, licenses, encroachments, protrusions, servitudes and other similar charges or encumbrances, and minor title deficiencies, in each case, on or with respect to any real property, whether now or hereafter in existence, not (i) securing Indebtedness, (ii) individually or in the aggregate materially impairing the value or marketability of such real property or (iii) individually or in the aggregate materially interfering with the ordinary conduct of the business of the Company and its Restricted Subsidiaries at or otherwise with respect to such real property;

(e) Liens arising out of judgments, attachments or awards not resulting in an Event of Default and in respect of which such obligor shall in good faith be diligently prosecuting an appeal or proceedings for review in respect of which there shall be secured a subsisting stay of execution pending such appeal or proceedings;

(f) Liens (other than any Lien imposed by ERISA) (x) imposed by law or deposits made in connection therewith in the ordinary course of business in connection with workers' compensation, unemployment insurance and other types of social security legislation, (y) incurred in the ordinary course of business to secure the performance of tenders, statutory obligations (other than excise taxes), surety, bid, performance, stay, customs and appeal bonds, statutory bonds, bids, leases, government contracts, trade contracts, performance and return of money bonds and other similar obligations (in each case, exclusive of obligations for the payment of Indebtedness other than Indebtedness permitted under Section 8.12(h)), or (z) arising by virtue of deposits made in the ordinary course of business to secure liability for premiums to insurance carriers; provided, that, with respect to the foregoing clauses (x), (y) and (z), such Liens are for amounts not yet due and payable or delinquent or, to the extent such amounts are so due and payable, such amounts are being contested in good faith by appropriate proceedings for which adequate reserves have been established in accordance with GAAP, which proceedings (or orders entered in connection with such proceedings) have the effect of preventing the forfeiture or sale of the property subject to any such Lien;

(g) leases of the properties of the Company or any Restricted Subsidiary, in each case entered into in the ordinary course of such company's business so long as such leases do not, individually or in the aggregate, (i) interfere in any material respect with the ordinary conduct of the business of the Company and its Restricted Subsidiaries or (ii) materially impair the use (for its intended purposes) or the value of the property subject thereto;

(h) Liens arising out of conditional sale, title retention, consignment or similar arrangements for the sale of goods entered into by the Company or any Restricted Subsidiary in the ordinary course of business in accordance with the past practices of such company;

(i) Liens securing Indebtedness incurred pursuant to Section 8.12(e), provided, that, (i) any such Liens attach only to the property being financed pursuant to such Indebtedness and (ii) do not encumber any other property of any Company;

(j) Liens on property rented to, or leased by, the Company or any Restricted Subsidiary pursuant to a Sale and Leaseback Transaction; provided, that, (i) such Sale and Leaseback Transaction is permitted by Section 8.14, (ii) such Liens do not encumber any other property of the Company or any Restricted Subsidiary, and (iii) such Liens secure only the Attributable Indebtedness incurred in connection with such Sale and Leaseback Transaction;

(k) bankers' Liens, rights of setoff and other similar Liens existing solely with respect to cash and cash equivalents on deposit in one or more accounts maintained by the Company or any Restricted Subsidiary, in each case granted in the ordinary course of business in favor of the bank or banks with which such accounts are maintained, securing amounts owing to such bank with respect to cash management and operating account arrangements, including those involving pooled accounts and netting arrangements;

(l) Liens on property of a Person existing at the time such Person is acquired or merged with or into or consolidated with the Company or any Restricted Subsidiary to the extent permitted hereunder (and Liens securing refinancings of the Indebtedness secured by such Liens (plus all accrued and unpaid interest on such Indebtedness being refinanced and the amount of all fees and expenses, including premiums, incurred in connection therewith)); provided, that, such Liens (i) do not extend to property not subject to such Liens at the time of such acquisition, merger or consolidation (other than improvements thereon), (ii) are no more favorable to the lienholders than such existing Liens and (iii) are not created in anticipation or contemplation of such acquisition, merger or consolidation;

(m) Liens securing the obligations under the Credit Agreement and the related loan documents;

(n) licenses of intellectual property granted by the Company or any Restricted Subsidiary in the ordinary course of business and not interfering in any material respect with the ordinary conduct of business of the Company and its Restricted Subsidiaries;

(o) the filing of UCC financing statements solely as a precautionary measure in connection with operating leases or consignment of goods;

(p) Liens of a collecting bank arising in the ordinary course of business under Section 4-210 of the UCC (or Section 4-208 of the New York UCC) covering only the items being collected upon;

(q) Liens arising solely by virtue of cash collateralizing letters of credit permitted under this Agreement;

(r) a Lien in favor of the holder of the Indebtedness permitted under Section 8.12(l) on insurance policies and any unearned premiums refundable with respect thereto;

(s) Liens granted to joint venture partners on Equity Interests owned by the Company or any Restricted Subsidiary in connection with the formation of a Person (other than an individual) in which the ownership interests are held in part by the Company or a Restricted Subsidiary and a non-Affiliated Person, including, without limitation, rights of first refusal and rights of first offer held by such joint venture partners in respect of transfers of Equity Interests in such joint ventures;

(t) any cash deposit made by the Company to the account of the trustee of the 8.00% Convertible Notes, for the benefit of the holders of such securities, solely in connection with the payment of the 8.00% Convertible Notes at maturity;

(u) any cash deposit made by the Company to the account of the trustee of the 4.25% Convertible Notes, for the benefit of the holders of such securities, solely in connection with an Effective Discharge (as defined in the 4.25% Convertible Notes Indenture; and

(v) additional Liens of the Company or any Restricted Subsidiary not otherwise permitted by this Section 8.13 and incurred in the ordinary course of business that (i) do not materially impair the use of such assets in the operation of the business of the Company or any Restricted Subsidiary and (ii) do not secure obligations in excess of $10,000,000 in the aggregate for all such Liens at any time.

"Person" means an individual, partnership, corporation, limited liability company, association, trust, unincorporated organization, business entity or Governmental Authority.

"Purchase Money Obligation" shall mean, for any Person, the obligations of such Person in respect of Indebtedness (including Capital Lease Obligations) incurred for the purpose of financing all or any part of the purchase price of any fixed or capital assets or the cost of installation, construction or improvement of any fixed or capital assets; provided, however, that (a) such Indebtedness is incurred within 90 days after such acquisition, installation, construction or improvement of such fixed or capital assets by such Person and (b) the amount of such Indebtedness does not exceed the lesser of one hundred (100%) percent of the Fair Market Value of such fixed or capital asset or the cost of the acquisition, installation, construction or improvement thereof, as the case may be.

"Purchaser" is defined in the addressee line to this Agreement.

"Qualified Capital Stock" of any Person shall mean any Equity Interests of such Person that do not constitute Disqualified Capital Stock.

"Qualified Institutional Buyer" means any Person who is a "qualified institutional buyer" within the meaning of such term as set forth in Rule 144A(a)(1) under the Securities Act.

"Related Fund" means, with respect to any holder of any Note, any fund or entity that (i) invests in Securities or bank loans, and (ii) is advised or managed by such holder, the same investment advisor as such holder or by an Affiliate of such holder or such investment advisor.

"Required Holders" means, at any time on or after the Closing, the holders of at least 50.1% in principal amount of the Notes at the time outstanding (exclusive of Notes then owned by the Company or any of its Affiliates).

"Restricted Payments" shall mean (a) any Dividend, or (b) any earnout (or similar) payment in respect of a Permitted Acquisition or other investment consummated after the date of this Agreement.

"Restricted Subsidiary" shall mean, collectively, any existing or future direct or indirect Subsidiary of the Company, other than any Unrestricted Subsidiary.

"Sale and Leaseback Transaction" shall mean any arrangement, directly or indirectly, with any Person whereby it shall sell or transfer any property used or useful in its business, whether now owned or hereafter acquired, and thereafter such Person or any Affiliate rents or leases such property or other property which such Person or Affiliate intends to use for substantially the same purpose or purposes as the property being sold or transferred.

"SEC" means the Securities and Exchange Commission of the United States, or any successor thereto.

"Securities" or **"Security"** shall have the meaning specified in section 2(1) of the Securities Act.

"Securities Act" means the Securities Act of 1933, as amended from time to time, and the rules and regulations promulgated thereunder from time to time in effect.

"Senior Financial Officer" means the president, chief financial officer, principal accounting officer, treasurer or comptroller of the Company.

"**Significant Subsidiary**" means any Subsidiary that is a "significant subsidiary" of the Company within the meaning of Rule 1-02(w) of Regulation S-X promulgated under the Exchange Act.

"**Solvent**" means, with respect to a Person on particular date, that on such date (1) the present fair market value (or present fair saleable value) of the assets of such Person is not less than the total amount required to pay the liabilities of such Person on its total existing debts and liabilities (including contingent liabilities) as they become absolute and matured; (2) such Person is able to pay its debts and other liabilities, contingent obligations and commitments as they mature and become due in the normal course of business; (3) assuming consummation of the issuance of Notes pursuant to this Agreement, such Person is not incurring debts or liabilities beyond its ability to pay as such debts and liabilities mature; (4) such Person is not engaged in any business or transaction, and is not about to engage in any business or transaction, for which its property would constitute unreasonably small capital after giving due consideration to the prevailing practice in the industry in which such Person is engaged; and (5) such Person is not otherwise insolvent under the standards set forth in Applicable Laws.

"Subsidiary" means, as to any Person, any other Person in which such first Person or one or more of its Subsidiaries or such first Person and one or more of its Subsidiaries owns sufficient

equity or voting interests to enable it or them (as a group) ordinarily, in the absence of contingencies, to elect a majority of the directors (or Persons performing similar functions) of such second Person, and any partnership or joint venture if more than a 50% interest in the profits or capital thereof is owned by such first Person or one or more of its Subsidiaries or such first Person and one or more of its Subsidiaries (unless such partnership or joint venture can and does ordinarily take major business actions without the prior approval of such Person or one or more of its Subsidiaries). Unless the context otherwise clearly requires, any reference to a "Subsidiary" is a reference to a Subsidiary of the Company.

"Substitute Purchaser" is defined in Section 19.

"Synthetic Lease" shall mean, as to any Person, (a) any lease (including leases that may be terminated by the lessee at any time) of any property (i) that is accounted for as an operating lease under GAAP and (ii) in respect of which the lessee retains or obtains ownership of the property so leased for U.S. federal income tax purposes, other than any such lease under which such Person is the lessor or (b)(i) a synthetic, off-balance sheet or tax retention lease, or (ii) an agreement for the use or possession of property (including a Sale and Leaseback Transaction), in each case under this clause (b), creating obligations that do not appear on the balance sheet of such Person but which, upon the application of any Bankruptcy Laws to such Person, would be characterized as the indebtedness of such Person (without regard to accounting treatment).

"Synthetic Lease Obligations" shall mean, as to any Person, an amount equal to the capitalized amount of the remaining lease payments under any Synthetic Lease that would appear on a balance sheet of such Person in accordance with GAAP if such obligations were accounted for as Capital Lease Obligations.

"Synthetic Purchase Agreement" shall mean any swap, derivative or other agreement or combination of agreements pursuant to which the Company or any of its Restricted Subsidiaries is or may become obligated to make (a) any payment in connection with a purchase by any third party from a Person other than the Company or a Restricted Subsidiary of any Equity Interest or (b) any payment (other than on account of a permitted purchase by it of any Equity Interest) the amount of which is determined by reference to the price or value at any time of any Equity Interest.

"Test Period" shall mean each period of four consecutive fiscal quarters of the Company then last ended (in each case taken as one accounting period).

"United States Person" has the meaning set forth in Section 7701(a)(30) of the Code.

"Unrestricted Subsidiary" shall mean each Subsidiary of the Company listed on Schedule E.

"**Voting Stock**" of a Person means Equity Interests of such Person of the class or classes pursuant to which the holders thereof have the general voting power under ordinary circumstances to elect at least a majority of the board of directors, managers or trustees of such Person (irrespective of whether or not at the time Equity Interests of any other class or classes will have or might have voting power by reason of the happening of any contingency).

"Wholly-Owned Subsidiary" means, at any time, any Subsidiary all of the Equity Interests (except directors' qualifying shares) and voting interests of which are owned by any one or more of the Company and the Company's other Wholly-Owned Subsidiaries at such time.

PURCHASER SCHEDULE

Layne Christensen Company
11.0% Senior Unsecured Notes due October 16, 2019

	Aggregate Principal Amount of Notes to be Purchased	Note Denomination
Corre Opportunities Qualified Master Fund, LP	**$ 48,447,800**	**$ 48,447,800**
Corre Opportunities II Master Fund, LP	**$ 22,552,200**	**$ 22,552,200**

____

(1) All payments on account of Notes held by such purchaser shall be made by wire transfer of immediately available funds for credit to:

___See SSI delivered separately______

____
ABA No.: _________
Account Name: _________
Account No.: _________

Each such wire transfer shall set forth the name of the Company, a reference to "11.0% Senior Unsecured Notes due October 16, 2019, Security No. _____, " and the due date and application (as among principal and interest) of the payment being made.

(2) Address for all communications and notices:

ATTN: Operations Manager
Corre Partners Management, LLC
12 East 49th Street, 40th Floor
New York, NY 10017
operations@correpartners.com
(646) 863-7151

____

[FORM OF NOTE]

LAYNE CHRISTENSEN COMPANY

11.0% Senior Unsecured Note Due October 16, 2019

No. [_____] [Date]
$[_______]

FOR VALUE RECEIVED, the undersigned, LAYNE CHRISTENSEN COMPANY (the **"Company"**), a corporation organized and existing under the laws of the State of Delaware, hereby promises to pay to **[____________]**, or registered assigns, the principal sum of **[_____________________]** DOLLARS (or so much thereof as shall not have been prepaid) on October 16, 2019 (the **"Maturity Date"**), with interest (computed on the basis of a 360-day year of twelve 30-day months) (a) on the unpaid balance hereof at the rate of 11.0% per annum from the date hereof, payable monthly in arrears, on the 1st day of each month, commencing April 1, 2018 and on the Maturity Date, until the principal hereof shall have become due and payable, and (b) to the extent permitted by law, (x) on any overdue payment of interest and, (y) during the continuance of an Event of Default, on such unpaid balance, at a rate per annum (the **"Default Rate"**) from time to time equal to the greater of (i) 13.0%% or (ii) 2.00% over *The Wall Street Journal* Prime Rate publish from time to time, payable monthly as aforesaid (or, at the option of the registered holder hereof, on demand). If a prepayment of the Notes occurs, or if this Note becomes due by occurrence of the Maturity Date, acceleration or otherwise, within 90 days of the date of this Note, the Company will pay the holder of this Note an Early Payment Fee as provided in the Note Purchase Agreement referred to herein.

Payments of principal of, and interest on, this Note are to be made in lawful money of the United States of America at the corporate headquarters of the Company in The Woodlands, Texas or at such other place as the Company shall have designated by written notice to the holder of this Note as provided in the Note Purchase Agreement referred to below.

This Note is one of the Senior Unsecured Notes (the **"Notes"**) issued pursuant to the Note Purchase Agreement dated as of March 19, 2018 (as from time to time amended, restated, supplemented, or otherwise modified from time to time, the **"Note Purchase Agreement"**), by and among the Company and the respective Purchasers named therein and is entitled to the benefits thereof. Each holder of this Note will be deemed, by its acceptance hereof, to have (i) agreed to the confidentiality provisions set forth in Section 18 of the Note Purchase Agreement and (ii) made the representations set forth in Section 6 of the Note Purchase Agreement. Unless otherwise indicated, capitalized terms used in this Note shall have the respective meanings ascribed to such terms in the Note Purchase Agreement.

This Note is a registered Note and, as provided in the Note Purchase Agreement, upon surrender of this Note for registration of transfer accompanied by a written instrument of transfer duly executed, by the registered holder hereof or such holder's attorney duly authorized in writing, a new Note for a like principal amount will be issued to, and registered in the name of, the transferee. Prior to due presentment for registration of transfer, the Company may treat the

Person in whose name this Note is registered as the owner hereof for the purpose of receiving payment and for all other purposes, and the Company will not be affected by any notice to the contrary.

The Company will make required prepayments of principal on the dates and in the amounts specified in the Note Purchase Agreement. This Note is also subject to optional and mandatory prepayment, in whole or from time to time in part, at the times and on the terms specified in the Note Purchase Agreement, but not otherwise.

If an Event of Default occurs and is continuing, the principal of this Note may be declared or otherwise become due and payable in the manner and with the effect provided in the Note Purchase Agreement.

This Note shall be construed and enforced in accordance with, and the rights of the Company and the holder of this Note shall be governed by, the law of the State of New York excluding choice-of-law principles of the law of such State that would permit the application of the laws of a jurisdiction other than such State.

LAYNE CHRISTENSEN COMPANY

By ______________________________
Name:
Title:

FORM OF OPINION OF SPECIAL COUNSEL
TO THE COMPANY

1. The Company is a corporation validly existing and in good standing under the laws of the State of Delaware, and has the entity power and authority to execute and deliver each Note Document and to perform its obligations thereunder.

2. The Note Documents have been duly authorized, executed and delivered by the Company and the Note Documents constitute legal, valid and binding agreements of the Company, enforceable against the Company in accordance with their respective terms.

3. No consent, approval or authorization of, or registration, filing or declaration with, any Governmental Authority under any Applicable Laws by the Company is required in connection with the execution, delivery or performance by the Company of the Note Documents, other than any such consents, approvals, notices or filings which have already been obtained or made, as applicable, and which remain in effect.

4. It is not necessary in connection with the offering, issuance, sale and delivery of the Notes purchased by you at the Closing, under the circumstances contemplated by the Note Purchase Agreement, to register the Notes under the Securities Act of 1933 or to qualify an indenture in respect of the Notes under the Trust Indenture Act of 1939.

5. The execution and delivery by the Company of each Note Document do not, and if the Company were to now perform all of its obligations under each Note Document such performance would not, (a) violate the Company's Organizational Documents, (b) violate or constitute a default under, or result in the creation of any Lien in respect of any property of the Company under, any agreement described in Schedule 1 to the legal opinion, (c) to our knowledge, violate any of the terms, conditions or provisions of any order, judgment, decree or ruling of any court, arbitrator or Governmental Authority applicable to the Company, or (d) violate any Applicable Law.

6. The Company is not an "investment company" or, to our actual knowledge, a Person directly or indirectly controlled by or acting on behalf of an "investment company," within the meaning of the Investment Company Act of 1940.

7. The issuance of the Notes and the use of the proceeds of the sale of the Notes in accordance with the provisions of the Note Purchase Agreement do not violate Regulation T, U or X of the Board of Governors of the Federal Reserve System, 12 CFR, Part 220, Part 221 and Part 224, respectively.

Schedule E

Unrestricted Subsidiaries

None

Schedule 8.14(b)

Permitted Asset Sales

1. The sale of the Company's Aurora, Colorado real property for approximately $4.3 million

2. The sale of the Company's Redlands, California real property for approximately $2.2 million

Exhibit 4.13

March 28, 2018

Layne Christensen Company
1800 Hughes Landing Boulevard
Suite 800
The Woodlands, TX 77380

Re: Note Purchase Agreement dated as of March 19, 2018, by and between Layne Christensen Company and each of the Purchasers listed in Schedule B thereto (the "Agreement") – Notice of Substitution

Reference is made to the above-captioned Agreement. Capitalized terms not otherwise defined here shall have the meanings assigned to them in the Agreement.

Pursuant to Section 19 of the Agreement, the undersigned Purchaser named as "Original Purchaser" hereby gives notice that it has substituted the undersigned existing Purchaser named as "Substitute Purchaser" as the purchaser of a portion of the Notes that the Original Purchaser has agreed to purchase under the Agreement. Following such substitution, the Original Purchaser and the Substitute Purchaser have the rights and obligations of Purchasers with respect to the following principal amounts of Notes:

Substitute Purchaser:
Corre Opportunities Qualified Master Fund, LP $50,088,689

Original Purchaser:
Corre Opportunities II Master Fund, LP $20,911,311

Total principal amount of Notes $71,000,000

As required by Section 19 of the Agreement, by execution of this notice the Substitute Purchaser agrees to be bound by the Agreement and confirms the accuracy with respect to Substitute Purchaser of the representations set forth in Section 6 of the Agreement.

Substitute Purchaser:
Corre Opportunities Qualified Master Fund, LP

By: Corre Partners Management, LLC,
as Investment Manager

By: _/s/ Eric Soderlund________

Original Purchaser:
Corre Opportunities II Master Fund, LP

By: Corre Partners Management, LLC,
as Investment Manager

By: _/s/ Eric Soderlund________

Eric

Soderlund

Eric Soderlund

Authorized

Signatory

Authorized Signatory

Exhibit 10.9

Layne Christensen Company
Executive Short-Term Incentive Plan

Amended and Restated by the Board of Directors as of February 1, 2017

Compensation Philosophy

Layne Christensen Company’s (“**Layne**”) compensation philosophy is to structure compensation to drive financial and strategic growth and build long-term stockholder value while attracting and retaining valued talent in the markets and industries Layne serves.

ESTI Plan Objective

The intent of the Layne Christensen Company Executive Short-Term Incentive Plan (the "**ESTI Plan**") is to provide competitive cash compensation ("**ESTI Bonuses**") to reward certain Corporate Executives and Division Presidents as selected by Layne (“**Participants**”) for their performance and their contributions to Layne's overall performance in any given fiscal year (a “**Performance Period**”). The ESTI Plan is an important component of a Participant's total compensation package, designed to communicate key annual corporate and individual objectives, reward efforts that achieve these objectives and align employee performance bonuses with Layne's shareholders' interests in a manner that motivates executives and employees to maximize shareholder value.

Eligibility

The Compensation Committee (the "**Compensation Committee**") of Layne's Board of Directors (the "**Board**"), in consultation with Layne's Chief Executive Officer ("**CEO**"), shall select and recommend to the Board the Participants in the ESTI Plan. An eligible employee will only become a Participant if the Board approves the Compensation Committee's recommendation. Participation in the ESTI Plan in one year does not automatically guarantee participation in a future year.

Establishment of Goals

For each Performance Period, the Compensation Committee shall, upon the recommendation of Layne, establish goals for the Participants based one or more financial performance criteria, safety, strategic and personal objectives. The goals shall be approved by the Board prior to the end of the first quarter of each Performance Period.

The goals will include:

- Specific, measurable consolidated and division level goal(s) for which determination as to whether such goal has been attained can be made solely by reference to Layne's and/or the division's performance during the Performance Period; and

- Individual level performance goals for which determination as to whether such goals have been attained and the level of such attainment (i.e., threshold, target, maximum or in between these levels) can be made solely by reference to the individual's performance during the Performance Period.

The applicable weighting for each goal for Participants is based on their job position and level as shown in Appendix A. The weighting among the individual-level goals shall be determined by the Participant's manager.

Targeted ESTI Opportunity and Payout of Performance Awards

Goal attainment will be assessed individually with the opportunity to pay out at between 0% and 200% of the Targeted ESTI Opportunity set forth in Appendix B. The eligible bonus amount for each goal shall be determined by multiplying (i) the Participant's Targeted ESTI Opportunity, (ii) the goal's applicable weighting percentage, (iii) the Participant's base salary as of the end of the performance period, and (iv) the applicable payout percentage determined through linear interpolation between the goal's threshold and target values or linear interpolation between the goal's target and maximum values. The eligible bonus amounts for each goal are then added to determine the Participant's total ESTI Bonus, subject to being increased or decreased as discussed below.

Attainment of performance awards is to be determined by the Compensation Committee after the end of the Performance Period and then recommended to the Board for approval. All payouts under the ESTI Plan will be based on the Executive's base salary during the Performance Period. Unless the Compensation Committee elects to make payments under the ESTI Plan in the form of bonus shares or another type of equity award granted under Layne's 2006 Equity Incentive Plan (or another shareholder-approved stock plan maintained by Layne), all payouts under the ESTI Plan will be made in cash. Once determined pursuant to the terms and conditions set forth herein, the Board has the ability to increase or decrease individual Participant bonuses by up to 50%. A Participant must be employed by Layne as of the date of payout of a performance award; provided, however, the Board may, in its sole discretion, agree to waive such employment requirement if in its judgment such waiver is warranted and/or such acceleration is in the best interests of the Company. Payout of performance awards will occur no later than two and one-half (2-1/2) months following the end of the Performance Period.

Illustration

To illustrate how ESTI Bonuses under the Plan are determined, assume (i) a Corporate Executive has a base salary of $300,000, (ii) a Target ESTI Opportunity of 60%, (iii) the consolidated EBITDA goal is achieved at 80%, (iv) the safety, strategic and individual goals are achieved at 100%, and (v) the Board does not elect to increase or decrease the Corporate Executive's ESTI Bonus.

Mechanically, the Corporate Executive's ESTI Bonus is determined by adding the applicable weighted bonus amounts for achievement of each goal as follows:

A. .60 (Target ESTI Opportunity) x .60 (60% goal weighting factor) x $300,000 (Participant's base salary) x .80 (determined payout percentage based on level of goal achievement)

(i.e., .6 x .6 x $300,000 x .8 = $86,400)

+

B. .60 (Target ESTI Opportunity) x .40 (40% goal weighting factor (Comprised of 20% for strategic, 10% safety, 10% individual) x $300,000 (Participant's base salary) x 1.0 (determined payout percentage based on level of goal achievement)

(i.e., .6 x .4 x $300,000 x 1.0 = $72,000)

For a total ESTI Bonus of $158,400 (i.e., $86,400+ $72,000).

Administration

The Compensation Committee is responsible for overseeing the administration of the ESTI Plan for Participants and reviewing and recommending to the Board the payments pursuant to the ESTI Plan. The Board shall have complete discretion over the ESTI Plan and shall determine the final ESTI Plan performance goals and performance awards for the CEO, based upon recommendations from the Compensation Committee. The Board shall have the sole authority to interpret and construe the ESTI Plan and decisions made by the Board shall be final and binding upon all parties concerned.

The Compensation Committee determines whether the applicable performance thresholds and performance goals have been attained, based upon audited financial results for the Performance Period and shall make recommendations as to such attainment to the Board for its approval. Where needed, the Compensation Committee will receive reports from Finance/Accounting and Corporate Health & Safety regarding the calculation and tracking of financial and safety performance relating to performance goals, and will receive reports from Layne's human resources department regarding individual and strategic performance goals that are not based upon financial measures.

The Board retains the right to reassess performance goals and performance awards in light of unanticipated extenuating circumstances, or other reasons, and to increase or decrease the conditions of a performance goal or the value of a performance award as the result of its reassessment.

The Board may amend or terminate the ESTI Plan at any time, in its sole discretion.

This ESTI Plan confers no right to continued employment or otherwise change a Participant's status as an "at-will" employee. No Participant in the ESTI Plan shall participate in any other Layne short term incentive compensation plans.

The law of the state of Delaware shall be controlling in all matters relating to the ESTI Plan, unless superseded by Federal law.

APPENDIX A – PERFORMANCE DRIVERS AND WEIGHTS

	Performance Drivers and Weights					
		Performance Drivers				
Title / Band	Level	Financial Cons.	Financial Division	Strategic Goals	Safety Goals	Individual Goals
CEO	0	60%		20%	10%	10%
Corporate Executives (CFO, GC)	1 Corp.	60%		20%	10%	10%
Division Presidents	1 Div.	0%	60%		20%	20%

APPENDIX B - TARGETED ESTI OPPORTUNITIES

	Financial - Corp				Financial - Division				Strategic			
	Weight	Threshold	Target	Max	Weight	Threshold	Target	Max	Weight	Threshold	Target	Max
CEO	60.0%	30.0%	60.0%	120.0%	N/A	N/A	N/A	N/A	20.0%	10.0%	20.0%	40.0%
CFO	60.0%	22.5%	45.0%	90.0%	N/A	N/A	N/A	N/A	20.0%	7.5%	15.00%	30.0%
Chief Legal Counsel	60.0%	18.0%	36.0%	72.0%	N/A	N/A	N/A	N/A	20.0%	6.0%	12.00%	24.0%
DP MIN/WRD	**N/A**	**N/A**	**N/A**	**N/A**	**60.0%**	**18.0%**	**36.0%**	**72.0%**	**N/A**	**N/A**	**N/A**	**N/A**
WRD	N/A	N/A	N/A	N/A	60.0%	10.8%	21.6%	43.2%	N/A	N/A	N/A	N/A
MIN	N/A	N/A	N/A	N/A	60.0%	7.2%	14.4%	28.8%	N/A	N/A	N/A	N/A
DP INL	N/A	N/A	N/A	N/A	60.0%	18.0%	36.0%	72.0%	N/A	N/A	N/A	N/A

	Safety				Individual				Total			
	Weight	Threshold	Target	Max	Weight	Threshold	Target	Max	Weight	Threshold	Target	Max
CEO	10.0%	5.0%	10.0%	20.0%	10.0%	5.0%	10.0%	20.0%	100.0%	50.0%	100.0%	200.0%
CFO	10.0%	3.8%	7.500%	15.0%	10.0%	3.8%	7.500%	15.0%	100.0%	37.5%	75.0%	150.0%
Chief Legal Counsel	10.0%	3.0%	6.00%	12.0%	10.0%	3.0%	6.00%	12.0%	100.0%	30.0%	60.0%	120.0%
DP MIN/WRD	**20.0%**	**6.0%**	**12.0%**	**24.0%**	**20.0%**	**6.0%**	**12.0%**	**24.0%**	**100.0%**	**30.0%**	**60.0%**	**120.0%**
WRD	20.0%	3.6%	7.2%	14.4%	20.0%	3.6%	7.2%	14.4%	100.0%	18.0%	36.0%	72.0%
MIN	20.0%	2.4%	4.8%	9.6%	20.0%	2.4%	4.8%	9.6%	100.0%	12.0%	24.0%	48.0%
DP INL	20.0%	6.0%	12.00%	24.0%	20.0%	6.0%	12.00%	24.0%	100.0%	30.0%	60.0%	120.0%

Exhibit 10.19

RETENTION BONUS AGREEMENT

THIS AGREEMENT ("Agreement"), dated as of this 5th day of February, 2018, is by and between Layne Christensen Company, a Delaware corporation ("Layne") and Kevin Maher ("Employee").

RECITALS

Layne anticipates entering into a merger agreement (the "Merger Agreement") with a purchaser that has been separately identified to you (the "Purchaser") relating the acquisition of substantially all the stock of Layne (the "Transaction").

To encourage Employee to remain employed with Company through the anticipated Closing Date of the Transaction, Layne and Employee are willing to enter into this Agreement.

AGREEMENT

Layne and Employee agree as follows:

Article 1
Definitions

Whenever used in this Agreement, the following words and phrases have the meanings specified below:

"Closing" will be defined in the Merger Agreement.

"Closing Date" will be defined in the Merger Agreement.

"Company" means Layne Christensen Company and any corporation, trade or business that together with Layne, is treated as a single employer under Internal Revenue Code Section 414.

"Retention Payment" means that payment eligible to be made under Article 2 of this Agreement.

"Section 409A" means Section 409A of the Internal Revenue Code of 1986 and the regulations promulgated thereunder.

"Separation from Service" or "Separates from Service" means Employee's death, retirement or other termination of employment or service from Company (at any time on or before the Closing Date). A Separation from Service will not occur if Employee is on military leave, sick leave or other bona fide leave of absence (such as temporary employment by the government) if the period of such leave does not exceed six months, or if longer, as long as Employee's right to reemployment with Company is provided either by statute or by contract. "Separation from Service" will be interpreted in a manner

consistent with Code Section 409A(a)(2)(A)(i) and the applicable Treasury regulations issued thereunder. No Separation from Service shall have occurred solely in connection with the Transaction.

Article 2
Retention Payment

2.1. Retention Payment.

2.1.1 If:

(i) Employee is continuously employed by Company from the date of this Agreement through the six-month anniversary of the Closing Date ("CIC Retention Date");

(ii) Company terminates Employee's employment other than for "Cause" (as defined below) (the date of such termination the "Involuntary Termination Date") before the Closing Date and the Closing Date occurs; or

(iii) Company terminates Employee's employment other than for Cause and the Involuntary Termination Date is before the CIC Retention Date,

then Layne shall pay Employee $50,000 (the "Retention Payment") in a lump sum at the time set forth in Section 2.1.2.

2.1.2. If Employee becomes entitled to receive a Retention Payment pursuant to Section 2.1.1., Layne shall make such payment to Employee within twenty business days following (i) the earlier of the CIC Retention Date or the Involuntary Termination Date if such Involuntary Termination Date occurs after the Closing Date or (ii) the Closing Date if an Involuntary Termination Date occurs before the Closing Date.

2.1.3. If Employee Separates from Service with Company by reason of voluntary resignation, death, disability or dismissal for "Cause" before the CIC Retention Date, Employee shall forfeit his or her right to the Retention Payment under this Agreement. For purposes of this Agreement, "Cause" shall mean: (a) dishonesty, misconduct, fraud or breach of fiduciary duty on the part of Employee; (b) repeated failure to perform assigned duties or responsibilities; (c) violation of any Company policy; or (d) a conviction, guilty plea, or no contest plea, for any felony or any misdemeanor involving moral turpitude.

2.2. Exemption from Internal Revenue Code Section 409A. It is the intent of Company that any payment made under this Agreement will be exempt from Section 409A pursuant to the “short-term deferral” exemption. Notwithstanding any provision of this Agreement to the contrary, (i) this Agreement shall not be amended in any manner that would cause any amounts eligible to be payable hereunder to become subject to Section 409A (unless they also are in compliance therewith), and the provisions of any purported amendment that may reasonably be expected to result in such non-compliance shall be of no force or effect with respect to this Agreement and (ii) to the extent deemed necessary or advisable in its sole discretion, Layne reserves the right, but shall not be required, to unilaterally amend or modify this Agreement to reflect the intention that the Agreement qualifies for an exemption from or complies with Section 409A in a manner that as closely as practicable achieves

the original intent of this Agreement and with the least reduction, if any, in overall benefit to the Employee to comply with Section 409A on a timely basis, which may be made on a retroactive basis, in accordance with regulations and other guidance issued under Section 409A. Company makes no representation that this Agreement shall be exempt from or comply with Section 409A and makes no undertaking to preclude Section 409A from applying to this Agreement.

Article 3
Amendments and Termination

3.1. This Agreement may be amended or terminated only by a written agreement signed by Layne and Employee. Notwithstanding the foregoing, Layne may amend or terminate this Agreement at any time if, pursuant to legislative, judicial or regulatory action, continuation of the Agreement would (i) cause benefits to be taxable to Employee prior to actual receipt, or (ii) result in significant financial penalties or other significantly detrimental ramifications to Company (other than the financial impact of paying the benefits).

3.2. In addition to the termination of this Agreement as set forth in Section 4.8, this Agreement shall terminate without any payment being made to Employee or any liability on Company to make any payment to Employee as of the earliest date that (i) the Transaction is terminated or fails to occur or (ii) Employee forfeits his rights to the Retention Payment under Section 2.1.3.

Article 4
Miscellaneous

4.1. No Guarantee of Employment. This Agreement is not an employment policy or contract. It does not give Employee the right to remain an employee of Company, nor does it interfere with Company's right to discharge Employee. It also does not require Employee to remain an employee nor interfere with Employee's right to terminate employment at any time.

4.2. Binding Effect. This Agreement shall bind Employee, Layne, and their beneficiaries, survivors, executors, successors, assigns, administrators and transferees.

4.3. Termination of Employment. For purposes of this Agreement, if there is any dispute over the employment status of Employee or the date of Employee's Separation from Service, Company has the sole and absolute right to decide the dispute.

4.4. Non-Transferability. Benefits under this Agreement cannot be sold, transferred, assigned, pledged, attached or encumbered in any manner.

4.5. Tax Withholding. Company shall withhold any taxes that are required to be withheld from the benefits provided under this Agreement.

4.6. Applicable Law. The Agreement and all rights hereunder shall be governed by the laws of the State of Delaware.

4.7. Entire Agreement. Except as provided in Section 2.1.4, this Agreement constitutes the entire agreement between Layne (or Company) and Employee, as to the subject matter hereof and supersedes all prior agreements between the parties hereto relating directly to the subject matter hereof including

any prior retention payments or agreements relating to the Transaction. No rights are granted to Employee by virtue of this Agreement other than those specifically set forth herein.

4.8 Termination. This Agreement shall terminate on the date that is twelve (12) months from the date hereof if the Closing Date has not occurred prior to such date.

Employee and Layne have signed this Agreement effective as of the date stated above in the preamble to this Agreement.

Employee

/s/ Kevin Maher
Kevin Maher

Layne Christensen Company

/s/ Michael J. Caliel
By: Michael J. Caliel
Title: President & CEO

Exhibit 10.20

RETENTION BONUS AGREEMENT

THIS AGREEMENT ("Agreement"), dated as of this 31st day of January, 2018, is by and between Layne Christensen Company, a Delaware corporation ("Layne") and Larry Purlee ("Employee").

RECITALS

Layne anticipates entering into a merger agreement (the "Merger Agreement") with a purchaser that has been separately identified to you (the "Purchaser") relating to the acquisition of all or substantially all the stock of Layne (the "Transaction").

To encourage Employee to remain employed with Company through the anticipated Closing Date of the Transaction, Layne and Employee are willing to enter into this Agreement.

AGREEMENT

Layne and Employee agree as follows:

Article 1
Definitions

Whenever used in this Agreement, the following words and phrases have the meanings specified below:

"Closing" will be defined in the Merger Agreement.

"Closing Date" will be defined in the Merger Agreement.

"Company" means Layne Christensen Company and any corporation, trade or business that together with Layne, is treated as a single employer under Internal Revenue Code Section 414.

"Retention Payment" means that payment eligible to be made under Article 2 of this Agreement.

"Section 409A" means Section 409A of the Internal Revenue Code of 1986 and the regulations promulgated thereunder.

"Separation from Service" or "Separates from Service" means Employee's death, retirement or other termination of employment or service from Company (at any time on or before the Closing Date). A Separation from Service will not occur if Employee is on military leave, sick leave or other bona fide leave of absence (such as temporary employment by the government) if the period of such leave does not exceed six months, or if longer, as long as Employee's right to reemployment with Company is provided either by statute or by contract. "Separation from Service" will be interpreted in a manner consistent with Code Section 409A(a)(2)(A)(i) and the applicable Treasury regulations issued thereunder. No Separation from Service shall have occurred solely in connection with the Transaction.

Article 2
Retention Payment

2.1. Retention Payment.

2.1.1 If:

(i) Employee is continuously employed by Company from the date of this Agreement through the six-month anniversary of the Closing Date ("CIC Retention Date");

(ii) Company terminates Employee's employment other than for "Cause" (as defined below) (the date of such termination the "Involuntary Termination Date") before the Closing Date and the Closing Date occurs; or

(iii) Company terminates Employee's employment other than for Cause and the Involuntary Termination Date is before the CIC Retention Date,

then Layne shall pay Employee $100,000 (the "Retention Payment") in a lump sum at the time set forth in Section 2.1.2.

2.1.2. If Employee becomes entitled to receive a Retention Payment pursuant to Section 2.1.1., Layne shall make such payment to Employee within twenty business days following (i) the earlier of the CIC Retention Date or the Involuntary Termination Date if such Involuntary Termination Date occurs after the Closing Date or (ii) the Closing Date if an Involuntary Termination Date occurs before the Closing Date.

2.1.3. If Employee Separates from Service with Company by reason of voluntary resignation, death, disability or dismissal for "Cause" before the CIC Retention Date, Employee shall forfeit his or her right to the Retention Payment under this Agreement. For purposes of this Agreement, "Cause" shall mean: (a) dishonesty, misconduct, fraud or breach of fiduciary duty on the part of Employee; (b) repeated failure to perform assigned duties or responsibilities; (c) violation of any Company policy; or (d) a conviction, guilty plea, or no contest plea, for any felony or any misdemeanor involving moral turpitude.

2.2. Exemption from Internal Revenue Code Section 409A. It is the intent of Company that any payment made under this Agreement will be exempt from Section 409A pursuant to the "short-term deferral" exemption. Notwithstanding any provision of this Agreement to the contrary, (i) this Agreement shall not be amended in any manner that would cause any amounts eligible to be payable hereunder to become subject to Section 409A (unless they also are in compliance therewith), and the provisions of any purported amendment that may reasonably be expected to result in such non-compliance shall be of no force or effect with respect to this Agreement and (ii) to the extent deemed necessary or advisable in its sole discretion, Layne reserves the right, but shall not be required, to unilaterally amend or modify this Agreement to reflect the intention that the Agreement qualifies for an exemption from or complies with Section 409A in a manner that as closely as practicable achieves the original intent of this Agreement and with the least reduction, if any, in overall benefit to the Employee to comply with Section 409A on a timely basis, which may be made on a retroactive basis, in accordance with regulations and other guidance issued under Section 409A. Company makes no

representation that this Agreement shall be exempt from or comply with Section 409A and makes no undertaking to preclude Section 409A from applying to this Agreement.

Article 3
Amendments and Termination

3.1. This Agreement may be amended or terminated only by a written agreement signed by Layne and Employee. Notwithstanding the foregoing, Layne may amend or terminate this Agreement at any time if, pursuant to legislative, judicial or regulatory action, continuation of the Agreement would (i) cause benefits to be taxable to Employee prior to actual receipt, or (ii) result in significant financial penalties or other significantly detrimental ramifications to Company (other than the financial impact of paying the benefits).

3.2. In addition to the termination of this Agreement as set forth in Section 4.8, this Agreement shall terminate without any payment being made to Employee or any liability on Company to make any payment to Employee as of the earliest date that (i) the Transaction is terminated or fails to occur or (ii) Employee forfeits his rights to the Retention Payment under Section 2.1.3.

Article 4
Miscellaneous

4.1. No Guarantee of Employment. This Agreement is not an employment policy or contract. It does not give Employee the right to remain an employee of Company, nor does it interfere with Company's right to discharge Employee. It also does not require Employee to remain an employee nor interfere with Employee's right to terminate employment at any time.

4.2. Binding Effect. This Agreement shall bind Employee, Layne, and their beneficiaries, survivors, executors, successors, assigns, administrators and transferees.

4.3. Termination of Employment. For purposes of this Agreement, if there is any dispute over the employment status of Employee or the date of Employee's Separation from Service, Company has the sole and absolute right to decide the dispute.

4.4. Non-Transferability. Benefits under this Agreement cannot be sold, transferred, assigned, pledged, attached or encumbered in any manner.

4.5. Tax Withholding. Company shall withhold any taxes that are required to be withheld from the benefits provided under this Agreement.

4.6. Applicable Law. The Agreement and all rights hereunder shall be governed by the laws of the State of Delaware.

4.7. Entire Agreement. This Agreement constitutes the entire agreement between Layne (or Company) and Employee, as to the subject matter hereof and supersedes all prior agreements between the parties hereto relating directly to the subject matter hereof including any prior retention payments or agreements relating to the Transaction. No rights are granted to Employee by virtue of this Agreement other than those specifically set forth herein.

4.8 Termination. This Agreement shall terminate on the date that is twelve (12) months from the date hereof if the Closing Date has not occurred prior to such date.

Employee and Layne have signed this Agreement effective as of the date stated above in the preamble to this Agreement.

Employee

/s/ Larry Purlee
Larry Purlee

Layne Christensen Company

/s/ Michael J. Caliel
By: Michael J. Caliel
Title: President & Chief Executive Officer

Exhibit 10.22

SEVERANCE AGREEMENT

This Severance Agreement (the "***Agreement***") is made as of March 29, 2016 (the "***Effective Date***") by and between Layne Christensen Company, a Delaware corporation ("***Company***"), and Kevin Maher ("***Employee***").

RECITALS

WHEREAS, Employee serves as a key employee of Company and the services and knowledge of Employee are valuable to Company in connection with the management of Company's business;

WHEREAS, Company's Board of Directors (the "***Board***") has determined that it is in the best interest of Company and its stockholders to secure Employee's service and to ensure Employee's dedication and objectivity by providing Employee with certain severance benefits if Company were to actually or constructively terminate Employee's employment.

NOW, THEREFORE, in consideration of the premises and the mutual covenants and agreements contained herein, and for other good and valuable consideration, the adequacy of which is hereby acknowledged, Company and Employee, each intending to be legally bound, agree as follows:

1.Term. The term of this Agreement (the "***Term***") commences on the Effective Date and, except as otherwise provided in Section 11, the Term and the provisions of this Agreement shall continue until the earlier of (i) the date on which Employee's employment with Company terminates or (ii) twelve (12) months following the date of delivery to Employee of written notice by Company of its intent to terminate this Agreement. Notwithstanding the foregoing, however, and regardless of whether written notice by Company of its intent to terminate this Agreement has already been provided, this Agreement may not be terminated by Company during the One-Year Period (as defined in Section 4(b) hereof).

2.Restrictions on Employee's Conduct.

(a)Exclusive Services. During his employment by Company, Employee shall at all times devote Employee's full-time attention, energies, efforts and skills to the business of Company (which term shall hereinafter include each of Company's subsidiaries) and may not, directly or indirectly, engage in any other business activity, whether or not for profit, gain or other pecuniary advantages, without Company's written consent, provided that such prior consent shall not be required with respect to: (i) business interests that neither compete with Company nor interfere with the performance of Employee's duties and obligations under this Agreement; or (ii) Employee's charitable, philanthropic or professional association activities which do not interfere with the performance of Employee's duties and obligations under this Agreement.

(b)Confidential Information. During his employment by Company and after any termination of his employment, Employee shall not disclose or use, directly or indirectly, any Confidential Information. For the purposes of this Agreement,

"***Confidential Information***" means all information disclosed to Employee, or known by him as a consequence of or through Employee's employment with Company where such information (i) is not generally known in the trade or industry or (ii) was regarded or treated as confidential by Company, and where such information refers or relates in any manner whatsoever to the business activities, processes, services or products of Company. Confidential Information includes business and development plans (whether contemplated, initiated or completed), information with respect to the development of technical and management services, business contacts, methods of operation, results of analysis, business forecasts, financial data, costs, revenues, and similar information. Upon termination of the Term, Employee shall immediately return to Company all property of Company and all Confidential Information, which is in tangible form, including all copies, extracts, and summaries thereof and any Confidential Information stored electronically on tapes computer disks or in any other manner.

(c)Business Opportunities and Conflicts of Interests.

(i) During his employment by Company, Employee shall promptly disclose to Company each business opportunity of a type which, based upon its prospects and relationship to the existing businesses of Company, Company might reasonably consider pursuing. After termination of this Agreement, regardless of the circumstances thereof, Company shall have the exclusive right to participate in or undertake any such opportunity on its own behalf without any involvement of Employee.

(ii) During his employment by Company, Employee shall refrain from engaging in any activity, practice or act which conflicts with, or has the potential to conflict with, the interests of Company, and he shall avoid any acts or omissions which are disloyal to, or competitive with Company.

(d)Non-Solicitation. During his employment by Company and for a period of twelve (12) months following any termination of his employment with Company, Employee shall not, except in the course of Employee's duties under this Agreement, directly or indirectly, induce or attempt to induce or otherwise counsel, advise, ask or encourage any person to leave the employ of Company, or solicit or offer employment to any person who was employed by Company at any time during the twelve-month period preceding the solicitation or offer.

(e)Covenant Not to Compete.

(i) During his employment by Company and, (A) if Employee shall receive any severance benefits under Section 3(c) or 4(e) of this Agreement or (B) Employee is terminated for Cause, during the Severance Period (as defined in Section 3(c)(iii)(A)) and regardless of whether any severance benefits are provided to Employee, Employee shall not, without Company's prior written consent, directly or indirectly, either as an officer, director, employee, agent, advisor, consultant, principal, stockholder, partner, owner or in any other capacity, on Employee's own behalf or otherwise, in any way engage in, represent, be connected

with or have a financial interest in, any business which is, or to Employee's knowledge, is about to become, engaged in any business with which Company is currently or has previously done business or any subsequent line of business developed by Company or any business planned during the Term to be established by Company. Notwithstanding the foregoing, Employee shall be permitted to own passive investments in publicly held companies provided that such investments do not exceed two percent (2%) of any such company's outstanding equity.

(ii) During his employment by Company and, if Employee shall receive any severance benefits under Section 3(c) or 4(e) of this Agreement, during the Severance Period (as defined in Section 3(c)(iii)(A)), Employee shall not, engage in competition with Company, or solicit, from any person or entity who purchased any product or service from Company during Employee's employment hereunder, the purchase of any product or service in competition with then existing products or services of Company.

(iii) For purposes of this Agreement, Employee shall be deemed to engage in competition with Company if he shall, directly or indirectly, either individually or as a stockholder, director, officer, partner, consultant, owner, employee, agent, or in any other capacity, consult with or otherwise assist any person or entity engaged in services similar to those provided by Company or any member of Company's group of companies. The provisions of this Section 2(e) shall apply in any location in which Company has established, or is in the process of establishing, a business presence.

(f)Employee Acknowledgment. Employee hereby agrees and acknowledges that the restrictions imposed upon him by the provisions of this Section 2 are fair and reasonable considering the nature of Company's business, and are reasonably required for Company's protection.

(g)Invalidity. If a court of competent jurisdiction or an arbitrator shall declare any provision or restriction contained in this Section 2 as unenforceable or void, the provisions of this Section 2 shall remain in full force and effect to the extent not so declared to be unenforceable or void, and the court may modify the invalid provision to make it enforceable to the maximum extent permitted by law.

(h)Specific Performance. Employee agrees that if he breaches any of the provisions of this Section 2, the remedies available at law to Company would be inadequate and in lieu thereof, or in addition thereto, Company shall be entitled to appropriate equitable remedies, including specific performance and injunctive relief. Employee agrees not to enter into any agreement, either written or oral, which may conflict with this Agreement, and Employee authorizes Company to make known the terms of this Section 2 to any person, including future employers of Employee.

(i)Notice and Opportunity to Cure. If Company believes that Employee has breached Section 2(a), Section 2(c), Section 2(d) or Section 2(e), Company shall provide a reasonably detailed written notice to Employee of the activity or conduct by Employee that

Company believes is in violation of such Section(s). Employee shall be deemed to be in breach of such Section(s) only if he fails to cease such activities or conduct within five (5) days following receipt of such notice from Company; *provided further, however*, that a repeated breach after such notice involving the same or substantially similar activity or conduct shall be a breach of this Agreement without any additional notice from Company.

(j)Non-Disparagement. Employee hereby agrees not to directly or indirectly disparage or otherwise make adverse references to Company or any of its officers, directors, employees or Affiliates (as defined in Section 4(d)(iii)) at any time during or after Employee's employment by Company.

3.Termination.

(a)Termination by Company for Cause. Subject to Section 3(b), at any time during the Term of this Agreement, Company may terminate Employee's employment for Cause, as defined in Section 3(b), upon at least fourteen (14) days written notice setting forth a description of the conduct constituting Cause. If Employee's employment is terminated for Cause, he shall be entitled to:

(i) payment of any earned and accrued but unpaid portion of Employee's (A) annual base salary as in effect from time to time ("***Base Salary***") through the effective date of such termination and (B) benefits, as required by the terms of any employee benefit plan or program of Company (collectively (A) and (B), the "***Accrued Compensation***");

(ii) reimbursement for any reasonable, unreimbursed and documented business expense he has incurred in performing Employee's duties hereunder; and

(iii) the right to elect continuation coverage of insurance benefits to the extent required by law.

(b)Definition of Cause. For purposes of this Agreement, "***Cause***" means:

(i) indictment for or conviction of Employee of, or the entry of a plea of guilty or nolo contendere by Employee to, any felony, or any misdemeanor involving moral turpitude;

(ii)fraud, misappropriation or embezzlement by Employee;

(iii)Employee's breach or violation of any of the restrictive covenants set forth in Section 2;

(iv)Employee's willful failure, gross negligence or gross misconduct in the performance of Employee's assigned duties for Company; and

(v)willful failure by Employee to follow reasonable instructions of the Board;

provided, however, no event or condition described in clauses (iii), (iv) or (v) shall constitute Cause unless (x) within 90 days from Company first acquiring actual knowledge of the existence of the Cause condition, Company provides Employee written notice of its intention to terminate his employment for Cause and the grounds for such termination; (y) such grounds for termination (f susceptible to correction) are not corrected by Employee within 30 days of his receipt of such notice (or, in the event that such grounds cannot be corrected within such 30-day period, Employee has not taken all reasonable steps within such 30-day period to correct such grounds as promptly as practicable thereafter); and (z) Company terminates Employee's employment immediately following expiration of such 30-day period. For purposes of the foregoing, any attempt by Employee to correct a stated Cause shall not be deemed an admission by Employee that Company's assertion of Cause is valid.

(c)Termination by Company Without Cause or Resignation for Good Reason Not in Connection with a Change of Control. If at any time before a Change of Control or after the one-year period following a Change of Control (x) Company terminates Employee's employment "without Cause," which for purposes of this Agreement means any involuntary termination of employment, at the direction of Company, in the absence of "Cause" as defined above, by giving written notice of termination, or (y) Employee resigns with "Good Reason," as defined below (collectively, a termination by Company without Cause or resignation by Employee with Good Reason a "***Qualifying Involuntary Termination***"), Employee shall, subject to satisfaction of the release requirements described in Section 8, be entitled to receive from Company the following:

(i) payment of the Accrued Compensation;

(ii) reimbursement for any reasonable, unreimbursed and documented business expense Employee has incurred in performing his duties hereunder during the Term;

(iii) the following severance benefits:

(A)payment of the then current Base Salary for a severance Period of 12-months commencing on the effective date of Employee's termination (the "***Severance Period***"), payable in a lump sum on the 30th day after Employee's termination;

(B)for any outstanding stock option, restricted stock, restricted stock unit or other equity award (an "***Equity Award***") for which the vesting thereof is all or partially dependent upon on the Employee's continued service with Company (a "***Service-Based Vesting***") continued vesting during the Severance Period in the same manner that such Service-Based Vesting would have occurred if Employee was continually employed by Company during the Severance Period;

(C)for any Equity Award for which the vesting thereof is all or partially dependent upon Company's achievement of one or more performance criteria (a "***Performance-Based Vesting***"), complete or pro rata vesting during the Severance Period, only if and to the extent that the underlying performance criteria are satisfied, as follows:

(I) if the performance period for the Performance-Based Vesting ends during the Severance Period, the Performance-Based Vesting portion of the Equity Award shall be satisfied at the same level of achievement that the performance goals or conditions were met;

(II) if the performance period for the Performance-Based Vesting ends after the Severance Period, the Performance-Based Vesting portion of the Equity Award shall be a pro-rata portion of the level of achievement that the performance goals or conditions were met, such pro-rata portion determined by multiplying the total amount of payment or vesting Employee would have earned based on the level of achievement assuming he had not terminated employment by a fraction, the numerator of which is the number of calendar days Employee was employed during the performance period before his termination plus 365 (the number of days in the Severance Period), and the denominator of which is the total number of calendar days in the performance period;

(D)for any vested stock option, Employee's continued right to exercise the option until the earlier of the end of the Severance Period or the Equity Award's original expiration date; provided, however, for any stock option with Performance-Based Vesting which first becomes exercisable after the end of the Severance Period, such option will remain exercisable until the earlier of the award’s original expiration date or 90 days after the first date that such option becomes exercisable, and, provided, further, that the extension of Employee’s rights to exercise any vested stock option until the end of the Severance Period shall be in lieu of any other post-employment exercise period provided under any equity-based award agreement. *For example, if Employee dies during the Severance Period, Employee's death does not extend an option's exercise period to a date later than the end of the Severance Period*;

(E)A lump sum payment equal to 12 times the monthly amount of Company's total premium cost to cover the Employee under Company's health, vision and dental plans, and his eligible dependents in effect as of the date of the Qualifying Involuntary Termination. Such amount will include Company-paid portion of the cost of the premiums for coverage of the Employee's dependents if, and only to the extent that, such dependents

were enrolled in Company's health, vision or dental plan at the time of the Qualifying Involuntary Termination. The lump sum payment under this paragraph (E) shall be made on the 30th day after the Qualifying Involuntary Termination; and

(iv) the right to elect continuation coverage of insurance benefits to the extent required by law.

(d)Definition of Good Reason. For purposes of this Agreement, Employee's resignation for "Good Reason" means a termination of Employee at Employee’s own initiative within one year following the occurrence, without Employee’s prior written consent, of one or more of the following events not on account of Cause (each a "***Good Reason Event***"):

(i) a material diminution in the nature or scope of Employee’s authority, title, responsibilities or duties, unless Employee is given new authority or duties that are substantially comparable to Employee’s previous authority or duties;

(i) a material reduction in Employee’s then-current Base Salary; or

(ii) a relocation of your position with Company to a location that is greater than 50 miles from The Woodlands, Texas and that is also further from your principal place of residence.

Notwithstanding anything in this Section 3(d) to the contrary, no event or condition described in this Section shall constitute Good Reason unless, (x) within 90 days from Employee first acquiring actual knowledge of the existence of the Good Reason condition described in this Section, Employee provides Company written notice of his intention to terminate his employment for Good Reason and the grounds for such termination; (y) such grounds for termination (if susceptible to correction) are not corrected by Company within 30 days of Company’s receipt of such notice (or, in the event that such grounds cannot be corrected within such 30-day period, Company has not taken all reasonable steps within such 30-day period to correct such grounds as promptly as practicable thereafter); and (z) Employee terminates his services with Company immediately following expiration of such 30-day period. For purposes of this Section 3(d), any attempt by Company to correct a stated Good Reason shall not be deemed an admission by Company that Employee’s assertion of Good Reason is valid.

(e)Voluntary Termination by Employee . Employee may terminate this Agreement at any time by giving 60 days’ written notice to Company. If Employee voluntarily terminates his employment for reasons other than Employee’s death, disability, or resignation for Good Reason, he shall be entitled to:

(i) payment of the Accrued Compensation;

(ii) reimbursement of any reasonable, unreimbursed and documented business expense Employee has incurred in performing Employee's duties hereunder; and

(iii) the right to elect continuation coverage of insurance benefits to the extent required by law.

Any payments made under this Section 3(e) shall be made within 30 days of Employee's termination of employment.

(f) Termination Due to Death. Employee's employment and this Agreement shall terminate immediately upon Employee's death. If Employee's employment is terminated because of Employee's death, Employee's estate or Employee's beneficiaries, as the case may be, shall be entitled to:

(i) payment of the Accrued Compensation;

(ii) reimbursement for any reasonable, unreimbursed and documented business expense Employee incurred in performing Employee's duties hereunder;

(iii) any pension survivor benefits that may become due pursuant to any employee benefit plan or program of Company,

(iv) for any portion of an unvested Equity Award with Service-Based Vesting, immediate acceleration of such Service-Based Vesting;

(v) for any portion of an unvested Equity Award with Performance-Based Vesting, such Equity Award shall remain outstanding until the last day of the Performance-Based Vesting schedule, and then shall vest, if at all, only to the extent the Performance-Based Vesting schedule becomes satisfied, and the remainder shall immediately forfeit;

(vi) for any Equity Award that is a stock option, such option will remain exercisable until the earlier of (A) the Equity Award's original expiration date or (B) the later of 12 months following the date the option first becomes exercisable or 12 months after Employee's death;

(vii) payment of a pro-rata portion of any annual incentive bonus Employee was eligible to receive during the year of Employee's death, to the extent that the underlying performance criteria for such annual incentive bonus are satisfied, such pro-rata portion determined by multiplying (A) the actual amount Employee would have been entitled to be paid if his employment had continued by (B) a fraction, the numerator of which is the number of days Employee worked during the performance period before his death and the denominator of which is the total number of days in the performance period. Any such pro-rata portion of the annual incentive bonus shall be paid at the same time as the annual incentive bonus is paid to other Company employees; and

(viii) the right to elect continuation coverage of insurance benefits to the extent required by law.

Any payment described above in Sections 3(f)(i), (ii) and (iv) shall be made within 30 days of Employee's death.

(g)Termination Due to Disability. Company may terminate Employee's employment at any time if Employee becomes disabled, upon written notice by Company to Employee. "Disability," as used in this paragraph, means a physical or mental illness, injury, or condition that (i) prevents, or is likely to prevent, as certified by a physician, Employee from performing one or more of the essential functions of Employee's position, for at least 120 consecutive calendar days or for at least 150 calendar days, whether or not consecutive, in any 365 calendar day period, and (ii) which cannot be accommodated with a reasonable accommodation, without undue hardship on Company, as specified in the Americans with Disabilities Act. If Employee's employment is terminated because of Employee's disability, he shall, subject to satisfaction of the release requirements described in Section 8, be entitled to:

(i) payment of Accrued Compensation;

(ii) payment of a lump-sum disability benefit equal to 12 months' then current Base Salary payable on the 30th day after Employee's termination;

(iii) for any portion of an unvested Equity Award with Service-Based Vesting, immediate acceleration of such Service-Based Vesting;

(iv) for any portion of an unvested Equity Award with Performance-Based Vesting, such Equity Award shall remain outstanding until the last day of the Performance-Based Vesting schedule, and then shall vest, if at all, only to the extent the Performance-Based Vesting schedule becomes satisfied, and the remainder shall immediately forfeit;

(v) for any Equity Award that is a stock option, such option will remain exercisable until the earlier of (A) the Equity Award's original expiration date or (B) the later of 12 months following the date the option first becomes exercisable or 12 months after Employee's termination due to Disability;

(vi) payment of a pro-rata portion of any annual incentive bonus Employee was eligible to receive during the year of Employee's termination due to Disability to the extent that the underlying performance criteria for the annual incentive bonus are satisfied, such pro-rata portion determined by multiplying (A) the actual amount Employee would have been entitled to be paid if his employment had continued by (B) a fraction, the numerator of which is the number of days Employee worked during the performance period before his termination of employment and the denominator of which is the total number of days in the performance period. Any such pro-rata portion of the annual incentive bonus shall

be paid at the same time as the annual incentive bonus is paid to other Company employees; and

(vii) reimbursement for any reasonable, unreimbursed and documented business expense he has incurred in performing Employee's duties hereunder; and

(viii) the right to elect continuation coverage of insurance benefits to the extent required by law.

(h)Payments Terminated. If the Board or Company has determined in good faith that the Employee has failed to comply with the requirements of the Confidentiality, Non-Solicitation and Non-Competition provisions referenced in Section 2 hereof at any time following any termination, then Company shall have no further obligation to pay any amounts or provide any benefits under this Agreement.

(i)All Payments Subject to Code Section 409A. Notwithstanding any provisions to the contrary, all payments made to under this Section 3 to Employee are subject to the provisions of Section 17, including, without limitation, a mandatory delay in any payment that constitutes "nonqualified deferred compensation" under Code section 409A if Employee is a "specified employee" (as defined in Code section 409A(a)(2)(B)(i)).

4.Impact of Change of Control; Continuation of Employment Upon Change of Control.

(a)No Automatic Acceleration of Equity Awards . Notwithstanding any other automatic accelerated vesting right Employee may have under the Company's equity award plan, but subject to the specific terms of any Equity Award agreement, no outstanding Equity Award held by Employee on the Control Change Date (as defined in Section 4(b) below), shall become immediately vested, exercisable or payable, as the case may be, as a result of a Change of Control and any such Equity Award shall only be subject to such accelerated vesting as provided below in Section 4(e) or as otherwise specifically provided under an Equity Award agreement.

(b)Continuation of Employment. Subject to the terms and conditions of this Section 4, in the event of a Change of Control of Company (as defined in Section 4(d)) at any time during Employee's employment hereunder, Company shall, for the one year period (the "***One-Year Period***") immediately following the date of such Change of Control (the "***Control Change Date***") continue to employ Employee in a position without substantial adverse alteration in the nature or status of Employee's authority, duties or responsibility as compared with the position Employee held immediately prior to the Change of Control. During the One-Year Period, Company shall continue to pay Employee salary on the same basis, at the same intervals and at a rate not less than, that paid to Employee at the Control Change Date. Any termination of employment by Company following a Control Change Date and during the One-Year Period shall be governed by this Section 4 rather than the provisions of Section 3.

(c)Benefits. During the One-Year Period, Employee shall be entitled to receive the following benefits and participate, on the basis of his employment position, in each of the following plans (collectively, the "***Specified Benefits***") in existence, and in accordance with the terms thereof, at the Control Change Date:

(i) any incentive compensation plans including eligibility to receive grants under any Company equity compensation plans;

(ii) any benefit plan and trust fund associated therewith, related to life, health, dental, disability, or accidental death and dismemberment insurance, and

(iii) any other benefit plans hereafter made generally available to employees at Employee's level or to the employees of Company generally.

(d)Definition of Change of Control. For purposes of this Section, a "***Change of Control***" means the first to occur of the following events:

(i) Any person is or becomes the Beneficial Owner (within the meaning set forth in Rule 13d-3 under the Securities Exchange Act of 1934), directly or indirectly, of securities of Company (not including in the securities beneficially owned by such Person any securities acquired directly from Company or its Affiliates (as defined in Section 4(d)(iii)) representing 50% or more of the combined voting power of Company's then outstanding securities, excluding any person who becomes such a Beneficial Owner in connection with a transaction described in clause (x) of paragraph (iii) of this Section 4(d); or

(ii) During any 12-month period, the following individuals cease for any reason to constitute a majority of the number of directors then serving: individuals who, on the Effective Date, constitute the Board and any new director (other than a director whose initial assumption of office is in connection with an actual or threatened election contest, including but not limited to a consent solicitation, relating to the election of directors of Company) whose appointment or election by the Board or nomination for election by Company's stockholders was approved by a vote of at least two-thirds of the directors then still in office who either were directors on the date hereof or whose appointment, election or nomination for election was previously so approved or recommended; or

(iii) There is consummated a merger or consolidation of Company with any other corporation, OTHER THAN (x) a merger or consolidation which would result in the voting securities of Company outstanding immediately prior to such merger or consolidation continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or any parent thereof), in combination with the ownership of any trustee or other fiduciary holding securities under an employee benefit plan of Company at least 50% of the combined voting power of the securities of Company or such surviving entity or any parent thereof outstanding immediately after such merger or consolidation, or (y) a merger or consolidation effected to implement a recapitalization of Company

(or similar transaction) in which no person is or becomes the Beneficial Owner, directly or indirectly, of securities of Company (not including in the securities beneficially owned by such person any securities acquired directly from Company or any person (an "***Affiliate***") that directly, or indirectly through one or more intermediaries, controls or is controlled by, or is under common control with Company other than in connection with the acquisition by Company or its Affiliates of a business) representing 50% or more of the combined voting power of Company's then outstanding securities; or

(iv) The stockholders of Company approve a plan of complete liquidation or dissolution of Company or there is consummated an agreement for the sale or disposition by Company of all or substantially all of Company's assets, other than a sale or disposition by Company of all or substantially all of Company's assets to an entity, at least 50% of the combined voting power of the voting securities of which are owned by stockholders of Company in substantially the same proportions as their ownership of Company immediately prior to such sale.

Notwithstanding the foregoing, a "Change of Control" shall not be deemed to have occurred by virtue of the consummation of any transaction or series of integrated transactions immediately following which the record holders of Company's common stock immediately prior to such transaction or series of transactions continue to have substantially the same proportionate ownership in an entity which owns all or substantially all of Company's assets immediately following such transaction or series of transactions.

(e)Termination Without Cause or Resignation for Good Reason After Change of Control. Notwithstanding any other provision of this Section 4, at any time after the Control Change Date, Company may terminate the employment of Employee with or without Cause. If Employee's employment is terminated without Cause, or if Employee resigns with "Good Reason," as defined in Section 3(d), within the One-Year Period, Employee shall, subject to satisfaction of the release requirements described in Section 8, receive from Company the following:

(i) accelerated vesting, payment, or exercisability, as the case may be, of any outstanding Equity Award;

(ii) payment of the Accrued Compensation;

(iii) reimbursement for any reasonable, unreimbursed and documented business expense Employee has incurred in performing his duties hereunder during the Term;

(iv)a lump sum payment equal to one times Employee's then current Base Salary payable on the 30th day after Employee's termination of employment;

(v) A lump sum payment equal to 12 times the monthly amount of Company's total premium cost to cover the Employee under Company's health, vision and dental plans, and his eligible dependents in effect as of the date of the

Qualifying Involuntary Termination. Such amount will include Company-paid portion of the cost of the premiums for coverage of the Employee's dependents if, and only to the extent that, such dependents were enrolled in Company's health, vision or dental plan at the time of the Qualifying Involuntary Termination. The lump sum payment under this paragraph (iv) shall be made in a lump sum on the 30th day Employee's termination of employment; and

(vi) the right to elect continuation coverage of insurance benefits to the extent required by law.

(f)Expenses. If any dispute should arise under this Agreement after the Control Change Date involving an effort by Employee to protect, enforce or secure rights or benefits claimed by Employee hereunder, Company shall pay (promptly upon demand by Employee accompanied by reasonable evidence of incurrence) all reasonable expenses (including attorney's fees) incurred by Employee in connection with such dispute, without regard to whether Employee prevails in such dispute except that Employee shall repay Company any amounts so received if a court having jurisdiction shall make a final, non-appealable determination that Employee acted frivolously or in bad faith by such dispute.

(g)Successors in Interest. The rights and obligations of Company and Employee under this Section 4 shall inure to the benefit of and be binding in each and every respect upon the direct and indirect successors and assigns of Company and Employee, regardless of the manner in which such successors or assigns shall succeed to the interest of Company or Employee hereunder and this Section 4 shall not be terminated by the voluntary or involuntary dissolution of Company or any merger or consolidation or acquisition involving Company, or upon any transfer of all or substantially all of Company's assets, or terminated otherwise than in accordance with its terms. In the event of any such merger or consolidation or transfer of assets, the provision of this Section 4 shall be binding upon and shall inure to the benefit of the surviving corporation or the corporation or other person to which such assets shall be transferred.

(h)All Payments Subject to Code Section 409A. Notwithstanding any provisions to the contrary, all payments made to under this Section 4 to Employee are subject to the provisions of Section 17, including, without limitation, a mandatory delay in any payment that constitutes "nonqualified deferred compensation" under Code section 409A if Employee is a "specified employee" (as defined in Code section 409A(a)(2)(B)(i)).

5.Deductions and Withholding. Employee agrees that Company may withhold from any and all payments required to be made by Company to Employee under this Agreement all taxes or other amounts that Company is required by law to withhold in accordance with applicable laws or regulations from time to time in effect.

6.Section 280G Golden Parachute.

(a)Modified Carve-Back (Best Net). Notwithstanding anything in this Agreement to the contrary, if Employee is a "disqualified individual" (as defined in Section 280G(c) of the Code), and the payments and benefits provided for in this

Agreement, together with any other payments and benefits which Employee has the right to receive from Company or any other person, would constitute a "parachute payment" (as defined in Section 280G(b)(2) of the Code), then the payments and benefits provided for in this Agreement shall be either (a) reduced (but not below zero) so that the present value of such total amounts and benefits received by Employee from Company and/or such person(s) will be $1.00 less than three (3) times Employee's "base amount" (as defined in Section 280G(b)(3) of the Code) and so that no portion of such amounts and benefits received by Employee shall be subject to the excise tax imposed by Section 4999 of the Code or (b) paid in full, whichever produces the better "net after-tax position" to Employee (taking into account any applicable excise tax under Section 4999 of the Code and any other applicable taxes). The reduction of payments and benefits hereunder, if applicable, shall be made by reducing, first, payments or benefits to be paid in cash hereunder in the order in which such payment or benefit would be paid or provided (beginning with such payment or benefit that would be made last in time and continuing, to the extent necessary, through to such payment or benefit that would be made first in time) and, then, reducing any benefit to be provided in-kind hereunder in a similar order. The determination as to whether any such reduction in the amount of the payments and benefits provided hereunder is necessary shall be made by Company in good faith. If a reduced payment or benefit is made or provided and through error or otherwise that payment or benefit, when aggregated with other payments and benefits from Company (or its affiliates) used in determining if a "parachute payment" exists, exceeds $1.00 less than three (3) times Employee's base amount, then Employee shall immediately repay such excess to Company upon notification that an overpayment has been made. Nothing in this paragraph shall require Company to be responsible for, or have any liability or obligation with respect to, Employee's excise tax liabilities under Section 4999 of the Code.

(b)Rebutting Presumption that Payment is Contingent on a Change of Control. Notwithstanding this Section 6 to the contrary, Company shall not treat any payment or portion thereof as a parachute payment if there is a reasonably sufficient basis to rebut any presumption that such payment is contingent on a Change of Control, within the meaning of Section 280G of the Code and any final, temporary or most recently proposed regulations thereunder, as applicable. In connection with any Change of Control, Company shall duly and timely (with a view to making all payments to Employee required by the provisions of this Agreement as determined without regard to this Section 6 without delay, interruption or reduction), investigate, afford Employee full opportunity to demonstrate, and make a reasonable determination, whether there is a reasonably sufficient basis to so rebut any such presumption.

(c)No Parachute Payment or Excess Parachute Payment to the Extent Concluded by Tax Opinion. Company shall not treat any payment or portion thereof as a parachute payment if Company shall have received an opinion, addressed to Company, of a recognized law firm or certified public accounting firm ("***Tax Opinion***"), to the effect that, if made, either (i) such payment or portion thereof would not be a parachute payment or (ii) such payment or portion thereof would not be an excess parachute payment. A Tax Opinion may be based upon reasonable assumptions, limitations and qualifications, including without limitation assumptions as to matters that reasonably can be expected to be provided or certified by Employee, Company, persons considered to be shareholders of

Company for purposes of Section 280G or Section 1361 of the Code, public officials, and other persons that such law firm or certified public accounting firm reasonably believes to be competent to provide or certify such matters. Company shall use its best efforts to cooperate with Employee and such law firm or certified public accounting firm in connection with the Tax Opinion.

7.Arbitration. Whenever a dispute arises between the Parties concerning this Agreement or any of the obligations hereunder, or Employee's employment generally, Company and Employee shall use their best efforts to resolve the dispute by mutual agreement. If any dispute cannot be resolved by Company and Employee, it shall be submitted to arbitration to the exclusion of all other avenues of relief and adjudicated pursuant to the American Arbitration Association's Rules for Employment Dispute Resolution then in effect. The decision of the arbitrator must be in writing and shall be final and binding on the Parties, and judgment may be entered on the arbitrator's award in any court having jurisdiction thereof. The expenses of the arbitration will be split equally between the parties, except that Company will bear the cost of the arbitrator's fee and any other type of expense or cost that Employee would not otherwise be required to bear if Employee were to bring the dispute or claim in court. Additionally, if there is any suit, action, or proceeding (whether in court or in arbitration) alleging a breach of this Agreement, then the prevailing party in any such suit, action or proceeding, during arbitration, on trial or appeal, shall be entitled to recover from the non-prevailing party, in addition to any other relief awarded, its reasonable and necessary attorneys' fees, costs and expenses incurred in such suit, action or proceeding. If there is no prevailing party, each party will pay its own attorneys' fees, costs and expenses. Whether a prevailing party exists shall be determined solely by the court or arbitrator (as applicable), on a claim-by-claim basis and the court or arbitrator (as applicable), shall determine the amount of reasonable and necessary attorneys' fees, costs and/or expenses, if any, for which a party is entitled.

8.Release. In consideration of and as a condition precedent to receiving any severance benefits under this Agreement, Employee shall (i) execute and deliver to Company a release of all claims in such form as requested by Company (which form will be substantially similar to the form of release set forth in Appendix A) within twenty-two (22) days following Employee's termination date (or any such longer period if required by applicable law and communicated to Employee) and (ii) not revoke the release during the seven (7) day period following the date that Employee executed the release. Such release shall be substantially in the form attached hereto as an exhibit to this Agreement. Such release may include the restrictive covenants, each of which may apply for a period of time after the termination of Employee's employment as described therein.

9.Non-Waiver. It is understood and agreed that one party's failure at any time to require the performance by the other party of any of the terms, provisions, covenants or conditions hereof shall in no way affect the first party's right thereafter to enforce the same, nor shall the waiver by either party of the breach of any term, provision, covenant or condition hereof be taken or held to be a waiver of any succeeding breach.

10.Severability. If any provision of this Agreement conflicts with the law under which this Agreement is to be construed, or if any such provision is held invalid or unenforceable by a court of competent jurisdiction or any arbitrator, such provision shall be deleted from this

Agreement and the Agreement shall be construed to give full effect to the remaining provisions thereof.

11.Survivability. Unless otherwise provided herein, upon termination or expiration of the Term, the provisions of Section 2 and Sections 5 through 18 (inclusive) above shall nevertheless remain in full force and effect but shall under no circumstance extend the Term of this Agreement (or the Executive's right to accrue additional benefits beyond the expiration of the Term as determined in accordance with Section 1 but without regard to this Section).

12.Governing Law. This Agreement shall be interpreted, construed and governed according to the laws of the State of Texas without regard to the conflict of law provisions thereof.

13.Construction. The Section headings and captions contained in this Agreement are for convenience only and shall not be construed to define, limit or affect the scope or meaning of the provisions hereof. All references herein to Sections shall be deemed to refer to numbered sections of this Agreement.

14.Entire Agreement. This Agreement and its exhibit represents the entire agreement of Company and Employee and supersedes all prior agreements, representations or understandings, oral or written, express or implied with respect to the subject matter hereof. This Agreement may not be modified or amended in any way unless in writing signed by each of Company and Employee. No representation, promise or inducement has been made by either Company or Employee that is not embodied in this Agreement, and neither Company nor Employee shall be bound by or liable for any alleged representation, promise or inducement not specifically set forth herein.

15.Assignability. Neither this Agreement nor any rights or obligations of Company or Employee hereunder may be assigned by Company or Employee without the other Party's prior written consent. Subject to the foregoing, this Agreement shall be binding upon and inure to the benefit of Company and Employee and their heirs, successors and assigns.

16.No Obligation to Mitigate. Following any termination of employment under Section 3 or Section 4, Employee shall not be required to mitigate the amount of any payment provided for in this Agreement by seeking other employment or otherwise and except as expressly set forth herein no such other employment, if obtained, or compensation or benefits payable in connection therewith shall reduce any amounts or benefits to which Employee is entitled under this Agreement.

17.Code Section 409A.

(a)This Agreement is intended to comply with Code section 409A or an exemption thereunder and shall be construed and administered in accordance with Code section 409A. Notwithstanding any other provision of this Agreement, payments provided under this Agreement may only be made upon an event and in a manner that complies with Code section 409A or an applicable exemption. Any payments under this Agreement that may be excluded from Code section 409A either as separation pay due to an involuntary separation from service or as a short-term deferral shall be excluded from Code section

409A to the maximum extent possible. For purposes of Code section 409A, each installment payment provided under this Agreement shall be treated as a separate payment. Any payments to be made under this Agreement upon a termination of employment shall only be made upon a "separation from service" under Code section 409A. Notwithstanding the foregoing, Company makes no representations that the payments and benefits provided under this Agreement comply with Code section 409A and in no event shall Company be liable for all or any portion of any taxes, penalties, interest or other expenses that may be incurred by the Executive on account of non-compliance with Section 409A.

(b)Notwithstanding any other provision of this Agreement, if any payment or benefit provided to Employee in connection with his termination of employment is determined to constitute "nonqualified deferred compensation" within the meaning of Section 409A and Employee is determined to be a "specified employee" as defined in Section 409A(a)(2)(b)(i), then such payment or benefit shall not be paid until the first payroll date to occur following the six-month anniversary of Employee's termination date (the "***Specified Employee Payment Date***"). The aggregate of any payments that would otherwise have been paid before the Specified Employee Payment Date shall be paid to Employee in a lump sum on the Specified Employee Payment Date and thereafter, any remaining payments shall be paid without delay in accordance with their original schedule.

18.Notices. All notices required or permitted hereunder shall be in writing and shall be deemed properly given if delivered personally or sent by certified or registered mail, postage prepaid, return receipt requested, or sent by telegram, telex, telecopy or similar form of telecommunication, and shall be deemed to have been given when received. Any such notice or communication shall be addressed:

if to Company, to

Layne Christensen Company
Attention: General Counsel
1800 Hughes Landing Boulevard, Ste. 700
The Woodlands, Texas 77380

if to Employee, to

Kevin Maher
7 Strawberry Canyon Place
The Woodlands, TX 77382

or to such other address as Company or Employee shall have furnished to the other in writing.

[Signature page follows.]

IN WITNESS WHEREOF, the Parties have duly executed this Agreement, to be effective as of the date first above written.

By: /s/ Kevin Maher
Kevin Maher

LAYNE CHRISTENSEN COMPANY

By: /s/ Michael J. Caliel
Michael J. Caliel
President & Chief Executive Officer

APPENDIX A

RELEASE AGREEMENT

In consideration of Layne Christensen Company (the “Company”) providing to me the payments and benefits described in paragraph 2 herein,

I, KEVIN MAHER, agree to the following:

Separation of Employment

1.I understand that my resignation from my employment with the Company (including its subsidiaries or affiliates) is effective ___________ ("Separation Date").

Consideration

2.I acknowledge that in consideration for my commitments set forth herein, the Company will provide me the payments and benefits described in that certain Severance Agreement dated March __, 2016 between the Company and me (the "Severance Agreement"). I understand and acknowledge that payments and benefits referenced in this paragraph include consideration to which I am entitled only as a result of my execution of this Release Agreement and not otherwise.

General Release

3.I release the Company and all of its current and former parents, subsidiaries, joint venturers, affiliates, assigns and successors, and all of their past, present and future officers, directors, agents, employees, representatives, insurers and attorneys (referred to in this document as the "Released Parties") from any and all claims, debts, damages, lawsuits, injuries, liabilities and causes of action that I may have, whether known to me or not. To the fullest extent permitted by law, I agree not to file any claim or lawsuit against the Company (except to enforce this Release Agreement). I further agree that, to the extent any action may be brought by any third party, I waive any claim to any monetary damages or other form of recovery or relief in connection with such action. Notwithstanding this Section 3, nothing in this Release Agreement is intended to release any claims that cannot be released as a matter of law.

Release of All Employment Law Claims

4.I understand and agree that I am releasing the Released Parties from any and all claims, damages, lawsuits, injuries, liabilities and causes of action that I may have under any city ordinance or state, federal or common law meant to protect workers in their employment relationships including, without limitation, claims relating to employment discrimination based on race, religion, sex, disability, equal pay, age, national origin, creed, color and retaliation discrimination and including claims under Title VII of the Civil Rights Act of 1964, Civil Rights Act of 1991, the Americans with Disabilities Act, the Equal Pay Act, 42 U.S.C. §§ 1981, 1983 and 1985, the Family & Medical Leave Act, the Employee Retirement Income Security Act, the Fair Labor Standards Act, the Labor Management Relations Act, the Texas Labor Code et. seq., including claims for wages or other compensation, and under which I may have rights and claims, whether known to me or not, arising, directly or indirectly out of my employment by the Company,

and/or the termination of my employment with the Company. Notwithstanding this Section 4, nothing in this Release Agreement is intended to release any claims that cannot be released as a matter of law.

Release of Any Age Discrimination Claims

5.I understand and agree that I am releasing the Released Parties from any and all claims, damages, lawsuits, injuries, liabilities and causes of action that I may have, under the Age Discrimination in Employment Act and related laws under the State of Texas, and any other federal, state or local laws prohibiting age discrimination in employment, whether known to me or not, arising, directly or indirectly out of my employment by the Company, and/or the termination of my employment with the Company.

No Release and Retention of Rights

6.Notwithstanding the foregoing and anything in this Release Agreement to the contrary, I do not release and expressly retain (a) all rights to payment or providing for post-employment benefits under the Severance Agreement and qualified retirement plans or health plans sponsored by the Company, (b) all rights to indemnity, contribution, and a defense of directors and officers and other liability coverage that I may have under any statute, Company policy or by this or any other agreement; and (c) the right to any, unpaid reasonable business expenses and any accrued benefits payable under any Company welfare plan or tax-qualified plan.

Will Not File Claims

7.I understand and represent that I intend this Release Agreement to be complete and not subject to any claim of mistake, and, except as otherwise provide in 6, above, that the release herein expresses a full and complete release of all claims known and unknown, suspected or unsuspected, and that I intend the release set forth herein to be final and complete. I further agree that I will not prosecute or allow to be prosecuted on my behalf, in any administrative agency or court, whether state or federal, or in any arbitration proceeding, any claim or demand of any type related to the matters released above, it being my intention that, with the execution of this Release Agreement, Released Parties will be absolutely, unconditionally and forever discharged of and from all obligations to me. I understand that nothing in this Release Agreement shall preclude me filing a charge of discrimination, or participating in an investigation, with the Equal Employment Opportunity Commission or comparable agency. However, I further agree that I cannot and will not seek or accept any personal benefit from the Company, whether in monetary or other form, as part of or related to any proceeding initiated by any other person, agency or other governmental body of the United States or any other jurisdiction. Notwithstanding any of the provisions of this Agreement, I am not releasing any rights that I may have under the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended or as that Act is more popularly known, "COBRA," or any of my vested rights in the Company's 401(k) plan, or any other claim that cannot be released pursuant to applicable law.

Return of All Company Property

8.I agree immediately to return any and all property of the Company that is in my possession (including, but not limited to, all keys, computers, telephones, credit cards and Company files, documents and data documents and all copies, whether in paper or electronic form).

Cooperation

9.I agree to reasonably cooperate with the Company and its legal counsel in any litigation or disputes in which the Company or any Released Party is, or may become, involved, including but not limited to providing information I may have concerning any such dispute and appearing as a witness for the Company or any Released Party; provided that Company shall reimburse me for any out-of-pocket expenses incurred by me in connection therewith.

Non-Admission of Liability

10.I understand and agree that the Released Parties deny that I have any legally cognizable claims against them but that the Released Parties desire to terminate my employment amicably, assist me in this transition, and settle any and all disputes they now may have with me. I further understand and agree that neither this Release Agreement nor any action taken hereunder is to be construed as an admission by the Released Parties of violation of any local, state, federal, or common law — in fact, I understand that the Released Parties expressly deny any such violation.

Confidentiality

11.I acknowledge that during the course of my employment with the Company I had access to and knowledge of certain information and data that the Company, or any of its affiliates, considers confidential and that the release of such information or data to any unauthorized person or entity would be extremely detrimental to the Company. As a consequence, I hereby agree and acknowledge that I owe a continuing duty to the Company not to disclose, and agree that, without the prior written consent of the Company, I will not communicate, publish or disclose, to any person or entity anywhere or use (for my own benefit or the benefit of others) any Confidential Information (as defined below) for any purpose. I will not permit any Confidential Information to be read, duplicated or copied. The term "Confidential Information" has the meaning given to such term in the Severance Agreement.

Continuing Obligations Under Severance Agreement

12.I understand and agree that I have continuing obligations under Section 2 of the Severance Agreement and that those obligations remain in full force and effect.

Time to Consider this Agreement and 7 Day Revocation Period

13.I acknowledge that I have been given the option to consider this Release Agreement for up to twenty-one (21) days before signing it. I further acknowledge that I was advised of my right to consult with an attorney prior to signing this Release Agreement.

14. I understand that after signing this Release Agreement, I have seven (7) days in which to consider it and, if desired, to revoke it by immediately giving written notice of such revocation to the Company in care General Counsel, 1800 Hughes Landing Boulevard, Ste. 700, The Woodlands Texas 77380, email: Steve.Crooke@Layne.com, but that upon such revocation, I shall forfeit any and all rights to all consideration otherwise to be provided to me under the terms of this Release Agreement. I also understand that this Release Agreement shall not become effective or enforceable until the expiration of the seven-day revocation period.

Taxation

15.I understand and agree that none of the Released Parties, including their attorneys, have made any express or implied representations to me with respect to the tax implications of any settlement payment made herein.

Use of Headings

16.I understand and agree that the headings in this Release Agreement have been inserted for convenience of reference only and do not in any way restrict or modify any of its terms or provisions.

Arbitration

17. Whenever a dispute arises concerning this Release Agreement or any of the obligations hereunder, I shall use my best efforts to resolve the dispute with the Company by mutual agreement. If any dispute cannot be resolved by me and the Company, it shall be submitted to arbitration to the exclusion of all other avenues of relief and adjudicated pursuant to the American Arbitration Association's Rules for Employment Dispute Resolution then in effect. The decision of the arbitrator must be in writing and shall be final and binding on me and the Company and judgment may be entered on the arbitrator's award in any court having jurisdiction thereof. The expenses of the arbitration will be split equally between me and the Company, except that Company will bear the cost of the arbitrator's fee and any other type of expense or cost that I would not otherwise be required to bear if I were to bring the dispute or claim in court. Additionally, if there is any suit, action, or proceeding (whether in court or in arbitration) alleging a breach of this Release Agreement, then the prevailing party in any such suit, action or proceeding, during arbitration, on trial or appeal, shall be entitled to recover from the non-prevailing party, in addition to any other relief awarded, its reasonable and necessary attorneys' fees, costs and expenses incurred in such suit, action or proceeding. If there is no prevailing party, the Company and I will pay our own attorneys' fees, costs and expenses. Whether a prevailing party exists shall be determined solely by the court or arbitrator (as applicable), on a claim-by-claim basis and the court or arbitrator (as applicable), shall determine the amount of reasonable and necessary attorneys' fees, costs and/or expenses, if any, for which a party is entitled.

Governing Law

18. This Release Agreement shall be interpreted, construed and governed according to the laws of the State of Texas without regard to the conflict of law provisions thereof.

Agreement May Not Be Modified

19.I understand and agree that no provision of this Release Agreement may be waived, modified, altered or amended except upon the express written consent of the Released Parties and me.

Binding on Successors

20.I understand and agree this Release Agreement is binding upon me and my successors, assigns, heirs, executors, administrators and legal representatives.

Full Agreement

21.I understand this Release Agreement and the Severance Agreement and its exhibits set forth the entire terms of the agreement between the Company and me. I affirm that in making this agreement I am relying upon my own counsel and I am not relying upon any representations not set forth in this Release Agreement.

Invalidity of Any Provision Affects Only that Provision

22.I understand and agree that if, for any reason, any term or provision of this Release Agreement is construed to be unenforceable or void, the balance of it will yet be effective and enforceable.

No Waiver of Breach

23. Failure of the Company to demand strict compliance with any of the terms, covenants or conditions of this Release Agreement will not be deemed a waiver of the term, covenant or condition, nor will any waiver or relinquishment by the Company of any right or power under this Release Agreement at any one time or more times be deemed a waiver or relinquishment of the right or power at any other time or times.

Have Read, Understand and Have Voluntarily Signed Release Agreement

24.I have read this Release Agreement, and I understand its contents. I have signed this Release Agreement voluntarily and knowingly and have an opportunity to consult legal counsel if I so desire.

Signed and Dated

I have signed this Release on this _____ day of ___________________, 20__.

Kevin Maher

Witnessed by:

Signature

Printed Name

Exhibit 10.24

LAYNE CHRISTENSEN COMPANY
2006 EQUITY INCENTIVE PLAN

Performance Shares Agreement

Date of Grant: _____________, 2017

Number of Performance Shares Granted: _______________

ıis Award Agreement dated ___________, 2017, is made by and between Layne Christensen Company, a Delaware corporation (the "Company"), and ___________________ ("Participant").

RECITALS:

ɾe June 8, 2006, the Company's stockholders approved the Layne Christensen Company 2006 Equity Incentive Plan (the "Plan") pursuant to which the Company may, from time to time, grant Performance Shares to eligible Service Providers of the Company.

The Plan has been amended and restated several times and was most recently restated effective June 6, 2014.

Participant is a Service Provider of the Company or one of its Affiliates and the Company desires to encourage him/her to own Shares and to give him/her added incentive to advance the interests of the Company, and desires to grant Participant Performance Shares under the terms and conditions established by the Committee.

Any Performance Shares granted under this Award Agreement which become eligible to be settled may be settled in cash instead of through the issuance of Shares if, as determined by the Committee, there are not enough Shares available under the Plan's Maximum Share Limit for the Award to be settled in Shares.

AGREEMENT:

consideration of the mutual covenants contained herein and other good and valuable consideration, the receipt of which is hereby acknowledged, the parties agree as follows:

1.Incorporation of Plan. All provisions of this Award Agreement and the rights of Participant hereunder are subject in all respects to the provisions of the Plan and the powers of the Committee therein provided. Capitalized terms used in this Award Agreement but not defined shall have the meaning set forth in the Plan.

2.Grant of Performance Shares. Subject to the conditions and restrictions set forth in this Award Agreement and in the Plan, the Company hereby grants to Participant and credits to a separate account maintained on the books of the Company ("Account") that number of Performance Shares identified above opposite the heading "Number of Performance Shares Granted" (the "Performance Shares"). Each Performance Share shall represent Participant's conditional right to receive one Share (or, as described below, an amount of cash equal to the Fair Market Value of one Share) on the Performance Shares' "Settlement Date" if the applicable performance and time-vesting requirements set forth in this Award Agreement are satisfied. Participant's interest in the

Account shall make him/her only a general, unsecured creditor of the Company. Neither the Performance Shares nor Participant's rights thereto may be sold, transferred, gifted, bequeathed, pledged, assigned, or otherwise alienated or hypothecated, voluntarily or involuntarily. The rights of Participant with respect to each Performance Share shall remain forfeitable at all times prior to the Settlement Date of such Performance Share.

3. Settlement of Performance Shares.

(i) *General.* Except as provided below, the Performance Shares shall be settled by delivering to Participant or his/her beneficiary, as applicable, a number of Shares equal to the Performance Shares then held by Participant which are vested in accordance with this Section 3.

(ii) *Cash-Settled Performance Shares*. If, as determined by the Committee, there are not enough Shares available under the Plan's Maximum Share Limit for the Award to be settled in Shares, the Performance Shares may be settled through the payment of cash in which case each Performance Share represents Participant's conditional right to receive a cash payment on the Performance Share's Settlement Date if the applicable vesting requirements or other conditions set forth in this Award Agreement are satisfied. The amount of any cash payment will be equal to the product of (a) the total number of Performance Shares vesting on the Settlement Date and being settled for cash and (b) the Fair Market Value of a Share on the Settlement Date.

(iii) *Applicable Vesting Terms*. Except as specifically provided elsewhere under the Plan, the Performance Shares subject to this Award Agreement shall become vested and be settled on (or within the 60-day period following) _______________, 2020[1] (the "Settlement Date"), but only if, as of the Settlement Date (i) except in the case of the Participant's "Retirement" (as defined below), death, Disability or termination of employment following a Change in Control, Participant has, at all times from the Date of Grant, been a Service Provider to the Company, or one of its Affiliates, and (ii) the Performance Shares have not otherwise been cancelled. If, as of the Settlement Date, the conditions set forth herein have been satisfied, the Performance Shares shall be eligible to vest and be settled on the Settlement Date as provided below.

Performance Shares' Vesting Conditions ("Stock Price Goals")

- 33% of the Performance Shares shall vest on the Settlement Date if, during the three-year period commencing on the Date of Grant and ending on the Settlement Date, the trailing average closing price of the Company's common stock during any thirty (30) consecutive trading day period has been $__________ or greater;
- 67% of the Performance Shares shall vest on the Settlement Date if, during the three-year period commencing on the Date of Grant and ending on the Settlement Date, the trailing average closing price of the Company's common stock during any thirty (30) consecutive trading day period has been $________ or greater; and
- 100% of the Performance Shares shall vest on the Settlement Date if, during the three-year period commencing on the Date of Grant and ending on the Settlement Date, the trailing average closing price of the Company's common stock during any thirty (30) consecutive trading day period has been $______ or greater.

11 Third anniversary of Grant Date.

Except as provided below in Sections 4, 5 and 6, all Performance Shares are subject to cliff-vesting only and will vest, if at all and only in the above-described vesting percentages, on the Settlement Date. If, during the three-year period commencing on the Date of Grant and ending on the Settlement Date, the trailing average closing price of the Company's common stock during any thirty (30) consecutive trading day period has never exceeded $_______, then all Performance Shares shall be forfeited on the Settlement Date.

4. Pro-Rata Vesting Upon Retirement or Termination by Company without Cause. If, prior to the Settlement Date, Participant's position as a Service Provider to the Company or any of its Affiliates is terminated on account of the Participant's Retirement or on account of the Participant's employment with the Company being terminated without Cause, then none of the Performance Shares shall be forfeited upon such Retirement or termination without Cause, and, provided that one or more of the above Stock Price Goals is satisfied, on the Settlement Date, a number of Performance Shares equal to the Vesting Fraction (as defined below) multiplied by the number of Performance Shares that ultimately would have been settled on the Settlement Date if Participant had remained employed through the Settlement Date (rounded up to the nearest whole share) shall be settled and the remaining Performance Shares will be forfeited. The "Vesting Fraction" shall be a fraction, the numerator of which shall be the number of days from the Date of Grant to the date of the Participant's Retirement or termination without Cause and the denominator of which shall be 1,095. For purposes of this Agreement, "Retirement" means the Participant's termination from all employment after attaining the age of 60 and after having been employed by the Company or one of its Affiliates for five years or more.

5. Accelerated Settlement Upon Death or Disability. If, prior to the Settlement Date, Participant's position as a Service Provider to the Company or any of its Affiliates is terminated on account of the Participant's death or Disability, then within 60 days of the Participant's death or Disability, a number of Performance Shares equal to the Vesting Fraction (as defined below) multiplied by 67% (Target) (rounded up to the nearest whole share) shall be settled and the remaining Performance Shares will be forfeited. The "Vesting Fraction" shall be a fraction, the numerator of which shall be the number of days from the Date of Grant to the date of the Participant's death or Disability and the denominator of which shall be 1,095.

6. Settlement Upon Termination by Company following a Change in Control. If, prior to the Settlement Date, Participant's position as a Service Provider to the Company or any of its Affiliates is terminated by the Company without Cause within the two year period following a Change in Control, then none of the Performance Shares shall be forfeited upon such termination and all of the Performance Shares that ultimately would have been settled on the Settlement Date if Participant had remained employed through the Settlement Date (rounded up to the nearest whole share) shall be settled (without any Vesting Fraction applied based on service during the performance period) and the remaining Performance Shares will be forfeited.

7. Timing of Payment or Delivery of Shares. Any payment of cash or delivery of Shares following the Settlement Date shall be made by the Company to Participant within the 60-day period following the Settlement Date.

8. Cancellation of Performance Shares. Unless otherwise provided in Section 4, 5, or 6 above or in the Plan, if, prior to the Settlement Date, Participant's position as a Service Provider to the Company or any of its Affiliates is terminated for any other reason, including termination for Cause, Participant shall thereupon immediately forfeit any and all unsettled Performance Shares and Participant shall have no further rights under this Award Agreement. For purposes of this Award

Agreement, the transfer of employment between the Company and any of its Affiliates (or between Affiliates) shall not constitute a termination of Participant's position as a Service Provider.

9.Dividends and Voting. Before any Performance Shares' Settlement Date, Participant shall be entitled to receive dividend equivalent payments for any dividends paid by the Company on Shares, whether payable in stock, in cash or in kind, or other distributions, declared as of a record date that occurs on or after the Date of Grant hereunder and prior to any cancellation of such Performance Shares, provided, however, that any such dividend equivalent payments shall be held in escrow by the Company and, be subject to the same rights, restrictions on transfer and vesting conditions applicable to the underlying Performance Shares. Participant shall only be entitled to receive a payment of any accrued dividend equivalent payments on those Performance Shares that ultimately vest and are settled. Any other dividend equivalent payments accrued will be forfeited. Participant will have no voting rights with respect to any of the Performance Shares. Any payment relating to accrued dividend equivalent payments will be paid at the same time as the Shares are delivered pursuant to the settlement of the underlying Performance Shares.

ılding with Stock. Unless specifically denied by the Committee, Participant may elect to have applicable tax withholding liabilities, or any part thereof, satisfied by electing that the Company withhold from the settlement of Shares otherwise eligible to be issued pursuant to this Award Agreement, Shares having a value equal to applicable withholding liabilities, or portion thereof. The value of Shares to be withheld by the Company shall be based on the Fair Market Value of the Stock on the date that the amount of tax to be withheld is to be determined (the "Tax Date"), as determined by the Committee. Any such elections by Participant to have Shares withheld for this purpose will be subject to the following restrictions:

)All elections must be made prior to the Tax Date;

)All elections shall be irrevocable; and

(c) If Participant is an officer or director of the Company within the meaning of Section 16 of the 1934 Act ("Section 16"), Participant must satisfy the requirements of such Section 16 and any applicable rules thereunder with respect to the use of Stock to satisfy such tax withholding obligation.

. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Award Agreement.

ıment. Subject to Section 14, this Award Agreement may be amended only by a writing executed by the parties hereto which specifically states that it is amending this Award Agreement.

ıing Law. The laws of the State of Delaware will govern the interpretation, validity and performance of this Award Agreement regardless of the law that might be applied under principles of conflicts of laws.

ı 409A Compliance. It is the intent of the Company that all payments made under this Award Agreement will either be exempt from Section 409A of the Code and the Treasury regulations and guidance issued thereunder ("Section 409A") pursuant to the "short-term deferral" exemption or compliant with Section 409A. Notwithstanding any provision of the Plan or this Award Agreement to the contrary, (i) this Award Agreement shall not be amended in any manner that would cause any amounts payable hereunder that are not subject to Section 409A to become subject thereto (unless they also are in compliance therewith), and the provisions of any purported amendment that may reasonably be expected to result in such non-compliance shall be of no force or effect with respect to this Award Agreement and (ii) the Company, to the extent it deems necessary

or advisable in its sole discretion, reserves the right, but shall not be required, to unilaterally amend or modify this Award Agreement to reflect the intention that all payments pursuant hereto qualify for exemption from or complies with Section 409A in a manner that as closely as practicable achieves the original intent of this Award Agreement and with the least reduction, if any, in overall benefit to a Participant to comply with Section 409A on a timely basis, which may be made on a retroactive basis, in accordance with regulations and other guidance issued under Section 409A. Neither the Company nor the Board makes any representation that this Award Agreement shall be exempt from or comply with Section 409A and makes no undertaking to preclude Section 409A from applying to this Award Agreement.

g Effect. Except as expressly stated herein to the contrary, this Award Agreement will be binding upon and inure to the benefit of the respective heirs, legal representatives, successors and assigns of the parties hereto.

ıis Award Agreement has been executed and delivered by the parties hereto.

The Company: Participant:

Layne Christensen Company

By:
Michael J. Caliel, President and CEO

____

Address of Participant:

Exhibit 10.25

Layne Christensen Company
Long-Term Incentive Plan

SECTION I. EFFECTIVE DATE.

ne Christensen Company Long-Term Incentive Plan (the "**LTI Plan**" or "**Plan**") is effective as of February 1, 2017. This Plan supersedes and replaces the Layne Christensen Company Long-Term Incentive Compensation Plan in effect on February 1, 2015.

SECTION II. PURPOSE OF PLAN AND PLAN OVERVIEW.

ristensen Company ("**Company**") has created the LTI Plan to provide a general framework for the Company's Compensation Committee to use in determining annual equity incentive awards to selected employees ("**Participants**"). The LTI Plan is structured to provide incentive compensation consistent with the Company's pay philosophy. Awards of equity under the LTI Plan relate to the Company's common stock ("**Company Stock**"), and are made pursuant to a separate, shareholder-approved Company equity plan (the "**Company Equity Plan**").

e first 90 days of each fiscal year (the "**Award Year**") the Company's Board of Directors (the "**Board**") will establish an annual equity pool ("**Annual Equity Pool**") for the LTI Plan. The Annual Equity Pool represents the total value of awards for the Award Year to be granted to LTI Plan participants. The total value of each Annual Equity Pool may be based on and expressed as a percentage of the Company's market capitalization. The Annual Equity Pool is allocated among eligible Participants based on each eligible Participant's long-term incentive target percentage ("**LTI Percentage**"), which is a percentage of a Participant's base salary in effect on LTI award determination date. The product of each eligible Participant's LTI Percentage and base salary is that Participant's "**LTI Target Opportunity**." Each eligible Participant receives a grant from the Annual Equity Pool with an approximate value equal to that Participant's LTI Target Opportunity. Such equity grant will be composed of a mix of one or more of the following equity awards, each in percentages as determined by the Committee: time-vested nonqualified stock option awards (a "**Time-Vested Options**"); time-vested restricted stock unit awards ("**Time-Vested RSUs**"); and performance-vested performance shares award ("**Performance Shares**"). The Committee may elect for the equity grant to not have any of one type of equity award (e.g., no Time-Vested Options) for a particular year but, collectively, the applicable Time-Vested Options, Time-Vested RSUs and Performance Shares award percentages shall total 100% of the Participant's LTI Target Opportunity and collectively, all such awards are referred to herein as the "**LTI Awards** ." The term "**Grant**" or "**Granting**" as used herein shall refer to the Committee's act of issuing or Granting the LTI Awards under the Company Equity Plan.

SECTION III. ADMINISTRATION.

nistration of this Plan shall be established and overseen by the Compensation Committee (the "**Committee**") of the Board. Subject to the terms of the

Company Equity Plan, the Committee, with the approval of the Board, shall have complete discretion to determine the terms of all LTI Awards, including the amount and vesting conditions thereof. LTI Percentages shall initially be determined by the Chief Executive Officer ("**CEO**") of the Company, recommended by the CEO to the Committee, and, if recommended and approved by the Committee, approved by the Board. The Board may accept or may elect to change any LTI Percentage for any eligible Participant. The Committee shall have full power to delegate to one or more members of senior management of the Company, or a committee thereof, all or a part of the Committee's power and authority to calculate and track actual financial performance of one or more targeted goals and validation of other non-financial measures. All audited financial results and any performance measurement related thereto will be presented to the Committee for review and approval and, if approved by the Committee, submitted for approval by the Board. Subject to the approval of the Board, the Committee shall have the full power, in its sole discretion, to interpret, construe and administer this Plan and to adopt rules and regulations relating to this Plan. Decisions made by the Board (or its designee) in good faith and in the exercise of its powers and duties hereunder shall be final and binding upon all parties concerned. No member of the Board (or its designee) shall be liable to anyone for any action taken or decision made in good faith pursuant to the power or discretion vested in such member or the Board or any designee under this Plan.

SECTION IV. ELIGIBILITY.

for participation in this Plan is limited solely to those persons selected by the Committee and recommended for approval by the Board. Eligibility shall initially be limited to the Company's executives and division presidents. Selection as a Participant does not guarantee receipt of any LTI Award and participation for an Award Year does not entitle such person to be a Participant for any future Award Year. Generally, the Board shall select and designate the Participants who will be eligible for an LTI Award for a specific Award Year no later than the ninetieth (90th) day of such Award Year; provided, however, the Board may, in its sole discretion be permitted to add new Participants at any time during such Award Year.

SECTION V. DETERMINATION OF PARTICIPANT'S TARGET LTI OPPORTUNITY.

Subject to and in accordance with the conditions set forth in this Section V, for any Award Year the Board allocates the Annual Equity Pool by Granting any combination of Options, Restricted Stock and Performance Shares to selected Participants. The manner in which each Award Year's Annual Equity Pool is allocated among Participants, and the number of shares underlying the LTI Awards, shall be based upon each Participant's Target LTI Opportunity calculated as follows:

(A) First, each Participant's LTI Percentage will be determined based on the Participant's Title and position level in the Company and as determined by the Committee or the CEO; and

(B) Second, each Participant's LTI Target Opportunity will be determined by multiplying the Participant's LTI Percentage by the Participant's then current base salary.

SECTION VI. FORM AND TIMING OF LTI AWARDS.

Each Participant's LTI Target Opportunity shall be converted into LTI Awards in accordance with this Section VI. In all cases, a Participant must be employed by the Company or one of its subsidiaries on the date the LTI Awards for that Award Year are Granted (the "**Grant Date**") to be eligible to receive the LTI Awards.

(A) Shares Subject to LTI Awards. For each Award Year:

(i) A Committee-determined percentage, if any, of each Participant's LTI Target Opportunity may be granted in the form of a Time-Vested Option. To the extent a portion of a Participant's LTI Target Opportunity is granted in Time-Vested Options, the number of Shares covered by the Time-Vested Option shall be the quotient of (A) the Committee-determined percentage of the Participant's LTI Target Opportunity allocated for a Time-Vested Option Award, divided by (B) the Grant Date per share fair value (determined using a lattice valuation model selected by the Board or Committee) of a 10-year stock option to purchase a share of Company Stock with an exercise price equal to the closing price of the Company Stock on the date of grant of the LTI Awards. The option exercise price for the Time-Vested Option shall, in all cases, be the "Fair Market Value" (as determined under the Company Equity Plan) of a share of Company Stock on the Time-Vested Option's Grant Date;

(ii) A Committee-determined percentage, if any, of each Participant's LTI Target Opportunity shall be granted in the form of Time-Vested RSUs. To the extent a portion of a Participant's LTI Target Opportunity is granted in Time-Vested RSUs, the number of Shares subject to the Time-Vested RSU award shall be the quotient of (A) the Committee-determined percentage of the Participants' LTI Target Opportunity allocated for a Time-Vested RSU Award, divided by (B) the Grant Date "Fair Market Value" (as determined under the Company Equity Plan) of a share of Company Stock on the Time-Vested RSU's Grant Date; and

(iii) A Committee-determined percentage, if any, of each Participant's LTI Target Opportunity shall be granted in the form of Performance Shares. To the extent a portion of a Participant's LTI Target Opportunity is granted in Performance Shares, the number of Performance Shares covered by the Performance Shares award shall be the quotient of (A) the Committee-determined percentage of the Participant's LTI Target Opportunity allocated for a Time-Vested Performance Share Award, divided by (B) the Grant Date per share value of a Performance Share award (as determined by the Board or Committee) as of the Performance Shares' Grant Date.

All fractional Shares subject to any LTI Award may be rounded up or down as determined by the Board.

(B) General Vesting/Payment Terms. The LTI Awards shall become exercisable, vest and be settled as set forth below in this Section VI (B). All LTI Awards will also be subject to the terms and conditions of the Company Equity Plan and the respective LTI Award agreement.

(i) Time-Vested Option. Provided the Participant has remained continuously employed by the Company through the applicable vesting date, any Time-Vested Option

award shall vest (i.e., become exercisable) in ratable 1/3 increments on the first, second and third anniversaries of the option's Grant Date.

(ii) Time-Vested RSUs. Provided the Participant has remained continuously employed by the Company through the applicable vesting date, any Time-Vested RSU's shall vest and be settled upon the earliest to occur of (a) the scheduled vesting dates determined by the Committee, or (b) subject to Section X(C) and as provided in the LTI Award Agreement, upon the Participant's death, disability, involuntary termination of employment, involuntary termination of employment following a Change in Control, or the Participant's termination from all employment with the Company after attaining the age of 60 and after having been employed by the Company or one of its affiliates for five years or more (a "Retirement"). Any Time-Vested RSUs shall remain nontransferable and subject to forfeiture restrictions until such vesting; provided, however, if upon a Participant's separation from service all or a portion of the Time-Vested RSUs would otherwise be forfeited, the Board may, in its sole discretion, agree to vest all or a portion of such Time-Vested RSUs if in its judgment the performance of Participant has warranted such vesting and/or such vesting is in the best interests of the Company. Any such accelerated vesting and issuance of shares of Company Stock shall be subject to potential delay in accordance with Section X(C).

(iii) Performance Shares. Provided the Participant has remained continuously employed by the Company through the end of applicable three (3) year performance period upon which the payment of the Performance Shares will be based, any Performance Shares will vest and be payable based on the level of achievement of one or more performance goals eligible to be used for equity awards granted under a Company Equity Plan (the "**Performance Goal**") for such performance period, as set forth in the Performance Shares' award agreement. As provided in the Performance Share's award agreement, exceptions to remaining continuously employed until the end of the applicable three (3) year performance period may be available on account of the Participant's Retirement, death, disability, involuntary termination of employment, or involuntary termination of employment following a Change in Control.

(C) Other Equity Grants. Nothing in this Plan shall prevent or restrict the Board from making additional equity award grants to the extent permissible under the Company Equity Plan.

SECTION VII. RIGHTS TO LTI BONUSES ARE UNSECURED.

A Participant's potential right to an LTI Award does not constitute an equity or other ownership interest in the Company. The Company shall not be required to and shall not segregate any funds representing any LTI Award and nothing in this Plan shall be construed as providing for such segregation. Nothing in this Plan and no action taken pursuant to its terms, shall create or be construed to create a trust or escrow account of any kind, or a fiduciary relationship between the Company, on the one hand, and a Participant, or any other person, on the other hand. Participant has no preferred claim on, or any beneficial ownership in, any assets of the Company.

SECTION VIII. AMENDMENT AND TERMINATION OF PLAN; TERM OF PLAN.

The Board may, at any time or times, amend this Plan, pursuant to written resolution adopted by the Board. The Board may, with respect to any Award Year, terminate this Plan by written resolution adopted by the Board. In the event this Plan is terminated, no further LTI Awards will be Granted under this Plan except that all LTI Awards Granted before the termination of this Plan shall continue in accordance with this Plan until such LTI Award either becomes exercised, vested and payable, or is forfeited.

SECTION IX. NON-ASSIGNABILITY.

A Participant's rights pursuant to this Plan may not be transferred, alienated, assigned, pledged, hypothecated or otherwise disposed of other than by will or by the laws of descent and distribution. If a Participant attempts to alienate, assign, pledge, hypothecate, or otherwise dispose of the Participant's rights to any LTI Award or any other right pursuant to this Plan, or in the event of any levy, attachment, execution, or similar process upon the right or interest conferred by this Plan, the Board may terminate all of the Participant's rights under this Plan and all LTI Awards granted to such Participant, and all of such Participant's rights under this Plan will thereupon become null and void.

SECTION X. MISCELLANEOUS.

(A) The Company's obligation to make any payment, or deliver any shares of Company Stock, pursuant to this Plan shall be subject to the Participant's satisfaction of all applicable federal, state and local income and other tax withholding requirements.

(B) Nothing in this Plan shall be construed to give any person any benefit, right or interest except as expressly provided herein, and nothing in this Plan shall be construed as establishing any right of continued employment by the Company.

(C) Notwithstanding any provision in this Plan or any LTI Award to the contrary, this Plan and all LTI Awards shall be interpreted and administered in accordance with Section 409A of the Internal Revenue Code and regulations and other guidance issued thereunder. For purposes of determining whether any payment made pursuant to this Plan or an LTI Award results in a "deferral of compensation" within the meaning of Treasury Regulation §1.409A-1(b), the Company shall maximize the exemptions described in such section, as applicable. Any reference to a “termination of employment” or similar term or phrase shall be interpreted as a “separation from service” within the meaning of Section 409A and the regulations issued thereunder. If any deferred compensation payment is payable due to a "specified employee" under Section 409A on account of a separation from service for any reason other than death, then such payment shall be delayed for a period of six months and paid immediately following the expiration of such six month period. A Participant or beneficiary, as applicable, shall be solely responsible and liable for the satisfaction of all taxes and penalties that may be imposed on the Participant or beneficiary in connection with any payments to such Participant or beneficiary pursuant to this Plan, including but not limited to any taxes, interest and penalties under Section 409A, and neither the Company nor any of its subsidiaries shall have any obligation to indemnify or otherwise hold a Participant or beneficiary harmless from any and all of such taxes and penalties.

(D) The provisions of this Plan, except where otherwise required by law, will be governed, construed, enforced, and administered in accordance with the laws of the State of Delaware.

Exhibit 21.1

SUBSIDIARIES
OF
LAYNE CHRISTENSEN COMPANY

NAME OF SUBSIDIARY	JURISDICTION OF INCORPORATION	PERCENTAGE OF VOTING STOCK OWNED BY COMPANY ¿
Boyles Bros. Drilling Company	Utah	100%
Christensen Boyles Corporation	Delaware	100%
Collector Wells International, Inc.	Ohio	100%
Discretionary Trust	Zimbabwe	100%
ESEMES (Mauritius) Ltd.	Mauritius	100%
Fenix Supply, LLC	Delaware	100%
Fursol Informatica S.r.l.	Italy	100%
G&K Properties Pty Ltd	Australia	100%
Hermosa Pipeline, LLC	Delaware	100%
Inliner American, Inc.	Delaware	100%
Inliner Technologies, LLC	Indiana	100%
International Directional Services, L.L.C.	Delaware	100%
International Directional Services de Mexico S.A. de C.V.	Mexico	100%
International Directional Services of Canada, Ltd.	Ontario	100%
International Mining Services Pty Ltd	Western Australia	100%
International Water Consultants, Inc.	Ohio	100%
Inversiones Layne Energy Limitada	Chile	100%
Layne Christensen Australia Pty Limited	Australia	100%
Layne Christensen Canada Limited	Alberta	100%
Layne de Bolivia S.R.L.	Bolivia	100%
Layne de Mexico S.A. de C.V.	Mexico	100%
Layne do Brasil Sondagens Ltda.	Brazil	100%
Layne Drilling Burkina Faso S.A.R.L.	Burkina	100%
Layne Drilling Guinee SARL	Guinea	100%
Layne Drilling Mali SARL	Mali	100%
Layne Drilling Mauritania Sarl	Mauritania	100%
Layne Drilling Pty Ltd	Australia	100%
Layne Drilling (RDC) SPRL	Democratic Republic of Congo	100%
Layne Drilling Tanzania Limited	Tanzania	100%
Layne Drilling Zambia	Zambia	100%
Layne Energia Chile S.A.	Chile	85%
Layne Energy, Inc.	Delaware	100%

¿ directly or indirectly through its subsidiaries, nominees or trustees

NAME OF SUBSIDIARY	JURISDICTION OF INCORPORATION	PERCENTAGE OF VOTING STOCK OWNED BY COMPANY ¿
Layne Geo, Inc.	Delaware	100%
Layne Heavy Civil, Inc.	Indiana	100%
Layne Inliner, LLC	Indiana	100%
Layne International, LLC	Delaware	100%
Layne Puerto Rico, Inc.	Puerto Rico	100%
Layne Southwest, Inc.	New Mexico	100%
Layne SWD, LLC	Delaware	100%
Layne Texas, Incorporated	Delaware	100%
Layne Transport Co.	Indiana	100%
Layne Water Development and Storage, L.L.C.	Delaware	100%
Layne Water Midstream, LLC	Delaware	100%
Lenity Investments (Private) Limited	Zimbabwe	100%
Liner Products, LLC	Indiana	100%
Meadors Construction Co., Inc.	Florida	100%
Mid-Continent Drilling Company	Delaware	100%
PT Layne Christensen Indonesia	Indonesia	100%
SMS Holdings Pty Ltd	Australia	100%
SMS Offshore Pty Ltd	Western Australia	100%
Stamm-Scheele Incorporated	Louisiana	100%
Stanley Mining Services Pty Limited	Australia	100%
Stanley Mining Services (Botswana) (Pty) Ltd.	Botswana	100%
Stanley Mining Services (Uganda) Limited	Uganda	100%
Stanley Mining Services Zimbabwe (Private) Limited	Zimbabwe	100%
W. L. Hailey & Company, Inc.	Tennessee	100%
West Africa Holdings Pty Ltd	Australia	100%
West African Drilling Services Pty Ltd	Australia	100%
West African Drilling Services (No. 2) Pty Ltd	Australia	100%

¿ directly or indirectly through its subsidiaries, nominees or trustees

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in

- Registration Statement No. 333-218909 on Form S-8
- Registration Statement No. 333-205194 on Form S-8
- Registration Statement No. 333-130167 on Form S-8
- Registration Statement No. 333-64714 on Form S-8
- Registration Statement No. 333-89071 on Form S-8
- Registration Statement No. 333-105930 on Form S-8
- Registration Statement No. 333-135683 on Form S-8
- Registration Statement No. 333-159908 on Form S-8
- Registration Statement No. 333-159909 on Form S-8
- Registration Statement No. 333-195653 on Form S-8

of our reports dated April 10, 2018, relating to the consolidated financial statements and financial statement schedule of Layne Christensen Company and subsidiaries, and the effectiveness of Layne Christensen Company and subsidiaries' internal control over financial reporting, appearing in this Annual Report on Form 10-K of Layne Christensen Company for the year ended January 31, 2018.

/s/ DELOITTE & TOUCHE LLP

Houston, Texas

April 10, 2018

Exhibit 31.1

CERTIFICATIONS

I, Michael J. Caliel, certify that:

1. I have reviewed this report on Form 10-K of Layne Christensen Company;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: April 10, 2018

/s/ Michael J. Caliel
Michael J. Caliel
President and Chief Executive Officer

Exhibit 31.2

CERTIFICATIONS

I, J. Michael Anderson, certify that:

1. I have reviewed this report on Form 10-K of Layne Christensen Company;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: April 10, 2018

/s/ J. Michael Anderson
J. Michael Anderson
Senior Vice President and Chief Financial Officer

Exhibit 32.1

Certification of Chief Executive Officer

I, Michael J. Caliel, President and Chief Executive Officer of Layne Christensen Company (the "Company"), do hereby certify in accordance with 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(a) the Company's Annual Report on Form 10-K for the fiscal year ended January 31, 2018, which this certification accompanies, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(b) the information contained in the Company's Annual Report on Form 10-K for the fiscal year ended January 31, 2018, which this certification accompanies, fairly presents, in all material aspects, the financial condition and results of operations of the Company.

Dated: April 10, 2018

/s/ *Michael J. Caliel*
Michael J. Caliel
President and Chief Executive Officer

Exhibit 32.2

Certification of Chief Financial Officer

I, J. Michael Anderson, Senior Vice President and Chief Financial Officer, of Layne Christensen Company, do hereby certify in accordance with 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(a) the Company's Annual Report on Form 10-K for the fiscal year ended January 31, 2018, which this certification accompanies, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(b) the information contained in the Company's Annual Report on Form 10-K for the fiscal year ended January 31, 2018, which this certification accompanies, fairly presents, in all material aspects, the financial condition and results of operations of the Company.

Dated: April 10, 2018

/s/ *J. Michael Anderson*
J. Michael Anderson
Senior Vice President and Chief Financial Officer

Exhibit 95

Mine Safety Disclosures

Section 1503 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Act”) requires companies to disclose in their periodic reports information about the coal and other mines at which they are an operator. The operations of the Company at coal and other mines in the U.S. are inspected by the Mine Safety and Health Administration (“MSHA”) on an ongoing basis.

In evaluating the information regarding mine safety and health, investors should take into account the fact that the Federal Mine Safety and Health Act (the “Mine Act”) has been construed as authorizing MSHA to issue citations and orders pursuant to the legal doctrine of strict liability, or liability without fault. If, in the opinion of an MSHA inspector, a condition that violates the Mine Act or regulations promulgated pursuant to it exists, then a citation or order will be issued regardless of whether the operator had any knowledge of, or fault in, the existence of that condition. Many of the Mine Act standards include one or more subjective elements, so that issuance of a citation or order often depends on the opinions or experience of the MSHA inspector.

Whenever MSHA believes that a violation of the Mine Act, any health or safety standard, or any regulation has occurred, it may issue a citation or order which describes the violation and fixes a time within which the operator must abate the violation. In some situations, such as when MSHA believes that conditions pose a hazard to miners, MSHA may issue an order requiring cessation of operations, or removal of miners from the area of the mine, affected by the condition until the hazards are corrected.

Citations and orders can be contested before the Federal Mine Safety and Health Review Commission (the "Commission"), and as part of that process, are often reduced in severity and amount, and are sometimes dismissed. The Commission is an independent adjudicative agency that provides administrative trial and appellate review of legal disputes arising under the Mine Act. These cases may involve, among other questions, challenges by operators to citations, orders and penalties they have received from MSHA.

The table that follows reflects citations, orders, violations and proposed assessments issued to the Company by MSHA during the quarter ended January 31, 2018 and all pending legal actions as of January 31, 2018. Due to timing and other factors, the data may not agree with the mine data retrieval system maintained by MSHA.

Mine or Operating Name/MSHA	Section 104 S&S (#)	Section 104(b) Orders (#)	Section 104(d) Citations and Orders (#)	Section 110(b)(2) Violations (#)	Section 107(a) Orders (#)	Total Dollar Value of MSHA ($)	Total Number of Mining Related Fatalities (#)	Received Notice of Pattern of Violations Under Section 104(e) (yes/no)	Received Notice of Potential to Have Pattern under Section 104(e) (yes/no)	Legal Actions Pending as of Last Day of Period (#)	Legal Actions Initiated During Period (#)	Legal Actions Resolved During Period (#)
Hycroft								No	No			
Swift Creek Outside Lake City, Florida								No	No			
Mosaic – Hookers Prairie								No	No			
Boron Operations								No	No			
CR Briggs								No	No			
Barrick Gold, Turguoise Ridge								No	No			
ISP Minerals								No	No			
Gold Corp Marigold Mine								No	No			
Barrick Ruby Hill								No	No			
Barrick Golden Sunlight								No	No			

Barrick/ Kinross Round Mountain Gold								No	No			
Newmont, Buffalo Valley								No	No			
Nevada Copper								No	No			
Barrick Cortez								No	No			
FMI Sierrita Mine, AZ								No	No			
Jim Walters								No	No			
Nyrstar Young								No	No			
Nyrstar Gordonsville								No	No			
Drummond								No	No			
Carmeuse								No	No			
Morgan Worldwide								No	No			
Carmeuse								No	No			
Lafarge NA								No	No			
Lafarge								No	No			
Lhoist NA								No	No			
Mingo Logan								No	No			
US Gypsum								No	No			
Sweetwater								No	No			
Libson Vallet								No	No			
Twenty Mile Coal								No	No			
Barrick Goldstrike								No	No			
URS Morenci								No	No			
Freeport-McMoRan Sierrita								No	No			
Cyprus Tohono Corp.								No	No			
Sun Valley Plant								No	No			
CML Metals								No	No			
FMI Bagdad								No	No			
FMI Morenci								No	No			
FMI Miami								No	No			
Twin Buttes								No	No			
FMI – Tyrone								No	No			
Newmont-Carlin								No	No			
Silver Bell Mining								No	No			
Allied NV Hycroft								No	No			
Imerys Plant #1								No	No			
PCS Phosphates								No	No			
Noranda Alumina								No	No			
Agnico Eagle-West Pequop								No	No			
Allied NV Gold-Hycroft Mine								No	No			
Allied NV – Hasbrook								No	No			
AMEC-Sullivan Ranch								No	No			
American Lithium Minerals-								No	No			
Asacro-Chilito								No	No			
Asarc-Mission								No	No			
Asarco-Ray								No	No			
Asarco-Silver Bell								No	No			
Barrick Arturo (Dee)								No	No			

Barrick Bald. Mt.								No	No			
Barrick Cortez								No	No			
Barrick EXP Surf & UG								No	No			
Barrick Turquoise Ridge Surf/UG								No	No			
Barrick-Goldstrike								No	No			
Barrick-Goldstrike UG								No	No			
Barrick-Ruby Hill								No	No			
BH Minerals-								No	No			
BHP-Pinto Valley								No	No			
Canamex Resources-Bruner								No	No			
Cayden Resources US Inc-Quartz MT.								No	No			
Centerra-Ren								No	No			
Coeur Rochester-Rochester								No	No			
Comstock-								No	No			
Cooper One-								No	No			
Denton-Rawhide								No	No			
Dynasty Gold								No	No			
Evolving Gold Corp.								No	No			
Freeport McMoRan-Bagdad								No	No			
Freeport McMoRan-Christmas Mine								No	No			
Freeport McMoRan- Chino								No	No			
Freeport McMoRan-Dragoon								No	No			
Freeport McMoRan-Miami								No	No			
Freeport McMoRan-Morenci	1(104(a))							No	No			
Freeport McMoRan-Safford								No	No			
Freeport McMoRan-Sierrita								No	No			
Freeport McMoRan-Twin Buttes								No	No			
Fronteer Development– Long Cany.								No	No			
Gold Acquisition Corp.								No	No			
Gold Reef-Rim Rock								No	No			

Gold Standard Ventures-Railroad								No	No			
Golden Predator-								No	No			
Golden Vertex – Moss Mine								No	No			
Grammercy Facility								No	No			
Great Basin Gold-Ivanhoe/Hollister								No	No			
Gryphon Gold-Borealis								No	No			
Harvest Gold-Rosebud								No	No			
Hayden Concentrator								No	No			
JR Simplot – Soda Springs								No	No			
Kennecott UT Copper- Bingham								No	No			
KGHM International, Ltd. (Formerly Quadra) Mining-Robinson								No	No			
Klondex-Fire Creek								No	No			
Marigold								No	No			
Martin Marietta – Weeping Water Mine								No	No			
Meridian Gold-								No	No			
Metallic Ventures-Converse								No	No			
Metallic Ventures-Gold Field								No	No			
Mettalic Ventures-Gemfield								No	No			
Midway-Pancake								No	No			
Mineral Ridge								No	No			
Minerals Technology								No	No			
Miranda Gold								No	No			
Montezuma-Red Canyon								No	No			
Musgrove Mineral								No	No			
Nevada Copper-Pumpkin								No	No			
Newmont-Carlin								No	No			
Newmont Exploration								No	No			
Newmont Genex								No	No			
Newmont Leeville								No	No			
Newmont-Lonetree								No	No			
Newmont McCoy Cove								No	No			
Newmont-Midas Surf / UG								No	No			

Newmont Phoenix								No	No			
Newmont Twin-Creeks								No	No			
Northgate Minerals								No	No			
Oracle Ridge Mining								No	No			
Paramount Gold and Silver								No	No			
Paris Hills Agricom								No	No			
Pilot Gold								No	No			
Premier Gold Mines-								No	No			
Quaterra Resources-								No	No			
Regal Resources – Camp Verde								No	No			
Renaissance Gold – Spruce MT								No	No			
Rio Tinto-Resolution								No	No			
Romarco Minerals-Haile Gold Mine								No	No			
Round Mt. Gold								No	No			
Rye Patch Gold								No	No			
Snowstorm LLC								No	No			
Solitario Exp-Mt. Hamilton								No	No			
Talon Gold-N. Bullfrog								No	No			
Tatmar Ventures								No	No			
TGC Holdings								No	No			
Thompson Creek Mining								No	No			
Trio Gold								No	No			
US Gold-								No	No			
Victoria Res.								No	No			
Vista NV								No	No			
Western Pacific Resources								No	No			
WPC Resources								No	No			
WK Mining								No	No			
Yukon NV Gold – Surface								No	No			
Heritage Coal								No	No			
Carmeuse Lime								No	No			
Hilltop Basic Resources								No	No			
Hilltop Basic Resources								No	No			
Noranda Alumin S. Flourocarbon								No	No			
Noranda Alumina East Flourocarbon								No	No			
Carmeuse								No	No			
Carmeuse								No	No			
Imery's								No	No			

The citations, orders and assessments reflected above are those initially issued or proposed by MSHA. They do not reflect subsequent changes in the level of severity of a citation or order or the value of an assessment that may occur as a result of proceedings conducted in accordance with MSHA rules and regulations.

The Federal Mine Safety and Health Review Commission (the "Commission") is an independent adjudicative agency that provides administrative trial and appellate review of legal disputes arising under the Mine Act. During the quarter ended January 31, 2018, 0 actions were instituted before the Commission, and 0 matters were resolved. As of January 31, 2018, the Company has a total of 0 matters pending before the Commission.