

**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 YEAR ENDED DECEMBER 31, 2022

OR

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

Commission file number 1-12317

NOV INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation or organization)



76-0475815
(IRS Employer
Identification No.)

10353 Richmond Avenue
Houston, Texas 77042-4103
(Address of principal executive offices)

(346) 223-3000
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$0.01 per share	NOV	New York Stock Exchange

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

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

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

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

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

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

Large accelerated filer Accelerated filer Emerging growth company
Non-accelerated filer Smaller Reporting Company

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).

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 voting and non-voting common stock held by non-affiliates of the registrant as of June 30, 2022 was \$6.6 billion. As of February 3, 2023, there were 392,831,492 shares of the Company's common stock (\$0.01 par value) outstanding.

Documents Incorporated by Reference

Portions of the Proxy Statement in connection with the 2023 Annual Meeting of Stockholders are incorporated in Part III of this report.

ITEM 1. BUSINESS**General**

NOV Inc. (“NOV” or the “Company”) is a leading independent equipment and technology provider to the global energy industry. Originally founded in 1862, NOV and its predecessor companies have spent 161 years helping transform oil and gas field development and improving its cost-effectiveness, efficiency, safety, and environmental impact. Over the past few decades, the Company has pioneered and refined key technologies to improve the economic viability of frontier resources, including unconventional and deepwater oil and gas. More recently, by applying its deep expertise and technology, the company has helped advance the transition toward sustainable energy.

NOV’s extensive proprietary technology portfolio supports the industry’s full-field drilling, completion, and production needs. With unmatched cross-segment capabilities, scope, and scale, NOV continues to develop and introduce technologies that further enhance the economics and efficiencies of energy production, with a focus on automation, predictive analytics, and condition-based maintenance.

NOV serves major-diversified, national, and independent service companies, contractors, and energy producers in 62 countries, operating under three segments: Wellbore Technologies, Completion & Production Solutions, and Rig Technologies.

Business Strategy and Competitive Strengths

NOV’s primary business objective is to generate above-average, long-term capital returns and further enhance its position as a leading independent global energy technology and equipment provider by delivering technologies, equipment, and services that help lower the marginal cost and environmental footprint associated with energy development and production from oil, gas, and renewable sources. NOV’s strategy is to capitalize on economies of scale that arise from its position as a leading provider of equipment and technology to the global energy industry; proprietary technology it continues to develop; and core capabilities and competencies it can apply toward advancing the energy transition. NOV also believes its manufacturing business model is less asset and capital intensive than most other participants in the energy industry.

Leverage NOV’s advantages of size, scope, scale, and market position

NOV’s position as a leading independent global energy technology and equipment provider affords several competitive advantages, including:

Economies of scale in procurement and manufacturing. NOV’s global leadership and footprint, spanning almost every major oil and gas market, provides the Company with economies of scale, enabling development of a unique global supply chain, which allows materials procurement from lower-cost sources. The Company’s global manufacturing footprint and diverse production flexibility also enables NOV to rapidly adapt to demand changes, efficiently leverage manufacturing capacity in high-demand areas, and manufacture goods in lower-cost jurisdictions. NOV’s geographic diversity also reduces potential revenue volatility from shifts in activity location, regional differences in energy prices, and adverse weather events.

Scope and scale for distribution and marketing. With operations in 62 countries, NOV has developed an efficient worldwide distribution network and relationships with virtually every oil and gas producer, service company, and contractor. NOV uses its customer relationships and distribution capabilities to accelerate the commercialization of new products and technologies. NOV also routinely develops technologies for the global marketplace where the Company’s infrastructure allows for quick market penetration and creation of a first-mover advantage with standardized operations around certain products.

Reputation, experience, and benefits of fleet standardization. NOV believes its reputation and experience make its products a lower-risk purchase for customers. The Company benefits from customer efforts to standardize training, maintenance, and spare parts, resulting in reduced downtime and inventory-stocking requirements, lower training costs, and better safety. Customers may prefer standardized equipment from NOV, a well-capitalized market leader with which they can enter into long-term service agreements that offer big-data analytics and condition monitoring to maximize uptime and reduce the total cost of equipment ownership.

Large installed base of equipment. As a leading original equipment manufacturer (“OEM”) for oil and gas operations, NOV believes it is well positioned to provide aftermarket support for its large base of installed equipment. Most service companies prefer, and many of their customers demand, OEM aftermarket support. Customers frequently encounter higher risk and cost when they purchase and use potentially incompatible products from different vendors, particularly where products must interact through complex interfaces, which are common sources of failures and unplanned costs. Additionally, certain past events have increased the industry’s risk profile with government regulatory bodies, which have shown a strong preference for OEM service contractor critical equipment maintenance.

Digital products and technologies. NOV's size, scale, and breadth of knowledge provide inherent competitive advantages in technology relative to smaller, less-diversified organizations. NOV's proficiencies in building capital equipment, control systems, sensors, field instrumentation, and data acquisition systems provide for unique comprehensive digital energy solutions development. Additionally, NOV's well-established, global field-service infrastructure affords the Company a distinct capability and advantage in the commercialization and support required to deploy digital solutions that must collect, aggregate, and transmit field-level data from complex machinery and equipment in harsh environments. NOV is investing considerable time and resources to develop its Max™ platform and Max™ edge devices, which enable large-scale collection, aggregation, and big-data analytics of real-time equipment and process data, both at the edge and in the cloud. While this platform's initial application was a predictive analytics and condition-based equipment-monitoring solution, it is also the edge-focused backbone of the Company's data services and software solutions and is used for monitoring, analyzing, and optimizing many of the Company's manufacturing operations.

Develop proprietary technologies and solutions that assist oil and gas operators in reducing their marginal cost of supply

NOV strives to further develop its substantial technology portfolio and is known for developing innovative customer productivity solutions. The Company is well positioned to introduce breakthrough technologies that enhance efficiencies and address industry needs, to generate strong returns. The Company believes its cross-business-unit expertise uniquely positions NOV to pioneer proprietary technologies across its business lines. For example, NOV's Wellbore Technologies and Rig Technologies segments jointly introduced closed-loop drilling technologies, which link real-time data from the well bottom to drilling rig controls and use machine learning to drive greater efficiency. NOV works closely with customers to identify needs, and its technical experts use internal capabilities to develop value-added technologies.

Capitalize on and drive end-market fragmentation

Technology and product availability to all industry participants is a key tenet of NOV's business model. To the extent NOV can provide equipment and technology products that are equal to or better than those developed by service providers, it will prevent any one organization from having a proprietary advantage and therefore drive fragmentation. This fragmentation expands NOV's customer base and avoids customer concentration in most of its businesses. NOV has resisted the recent trend toward vertical integration, leaving the Company in an attractive and unique position as the largest global independent technology and equipment provider to the oilfield service sector. Governments in certain international markets are pursuing initiatives that drive local content and greater local employment. The Company expects that these actions will likely prompt more local startup enterprises, further expanding demand for NOV's equipment.

Leverage core capabilities and competencies to assist customers in efforts to reduce environmental footprint and advance energy transition initiatives

NOV's engineering expertise, complex global supply chain management, low-cost manufacturing, and large-scale energy infrastructure development support provide unique capabilities to assist customers with energy transition advancement. The Company has pioneered numerous innovations that help reduce emissions, including its recently introduced Ideal eFrac™ equipment, which significantly reduces emissions and lowers costs associated with hydraulic stimulation, and its PowerBlade™ Kinetic Energy Recovery System, which recaptures energy from cranes, winches, and draw-works. NOV is also a leading geothermal equipment and technology provider, offering a broad array of tools and equipment specifically designed for the ultra-harsh conditions associated with geothermal development. Additionally, with expertise in offshore heavy-lift equipment and naval architectural design, the Company is the leading equipment and technology provider for purpose-built vessels used to build, install, and maintain offshore wind towers and turbines. The Company sees promise in development and commercialization of novel products and technologies to improve the efficiencies and economics of land and offshore-based wind, geothermal power generation, and carbon capture and sequestration (See "Energy Transition" below).

Employ a capital-light business model with the ability to quickly scale operations

NOV's manufacturing facilities require relatively low investment and maintenance expenses versus the sales they enable. NOV manufactures a diverse line of products and improves efficiency by shifting production runs to high-demand or lowest-cost facilities. The Company also benefits from a customer base requiring technically complex equipment for use in extreme environments. Using sophisticated tools to precisely place a wellbore several miles into the earth, and then physically cracking open reservoir rock using large volumes of highly abrasive fluids pumped at extremely high pressures, is incredibly rough on equipment, creating recurring sales opportunities for equipment replacement and aftermarket sales and service.

NOV's infrastructure leverages the energy industry's cyclical nature. As commodity prices rise, the industry typically enters an expansionary phase, and equipment orders increase. NOV is able to ramp up manufacturing capacity quickly to capture the up-cycle value while meeting customer demand. During down-cycles, the Company's focus is internal efficiency and technological advancement. NOV's continuous pursuit of cyclical technological initiatives enhances its ability to drive long-term customer and shareholder value. The

Company also outsources non-critical machining operations with lower tolerance requirements during increased activity and brings the machining operations back into Company-owned facilities during down-cycles for lower cost and effective utilization.

Employ a conservative capital structure with ample liquidity to capitalize on volatility associated with the oil and gas industry

NOV maintains a conservative capital structure with an investment-grade credit rating and ample liquidity. The Company carefully manages its capital structure by continuously monitoring cash flow, capital spending, and debt capacity. Maintaining financial strength inspires confidence from customers who make large purchase commitments delivered over multi-year timeframes and who expect NOV to support their equipment with OEM aftermarket parts and services for decades to come. NOV's strong balance sheet provides flexibility to execute its strategy, including advancing technological offerings, through industry volatility and commodity price cycles. The Company intends to maintain a conservative approach to balance sheet management to preserve operational and strategic flexibility.

Energy Transition

As a leading independent global energy technology and equipment provider, NOV can be a key participant in the world's transition to a low-carbon future. While oil and gas will remain critical to many parts of the global economy, the transition to clean, carbon-neutral energy sources represents an enormous economic opportunity for organizations that can improve the economic competitiveness of renewable energy. The International Energy Agency estimates that approximately \$71 trillion, or \$3.4 trillion per year, must be spent by 2040 for global CO₂ emissions to decline 50 percent as outlined in the Paris Agreement. NOV is working to develop proprietary solutions to improve project execution, drive higher capital returns, and lower levelized costs of energy ("LCOE," which is a measure of the average net present cost of electricity generation over a source's lifetime) associated with renewable energy.

Fixed Offshore Wind

NOV has drawn on its expertise in oil and gas jack-up vessel design, robust aftermarket network, and strong reputation in marine equipment design to become the leading global equipment and design provider for offshore wind turbine installation vessels. NOV's comprehensive offerings include designing and manufacturing critical jacking systems, cranes, and mooring equipment; developing and licensing vessel designs; working closely with shipyards to install and commission equipment on wind installation vessels; and aftermarket parts, service, and repair. The Company expects an upcoming growth period in the global offshore wind installation vessel market, driven primarily by the need for larger vessels required to support the installation of wind turbines with increasingly large rotor diameters, nacelle weights, and hub heights. The vessels required to install modern, heavier nacelles at higher hub heights are similar to those previously designed by NOV and are relatively consistent across global geographies. Additionally, as U.S. fixed offshore wind projects approach final permitting approval, the need for Jones Act-compliant wind installation vessels will become more urgent. As a result, the Company is well-positioned to capture additional orders associated with future newbuild wind installation vessels.

Floating Offshore Wind

The Company believes that the nascent floating offshore wind market presents one of the great renewable resource opportunities of the next decade. NOV is actively developing new products and technologies to support this industry alongside its legacy portfolio, which includes cranes, winches, mooring systems, cable-lay systems, ballasting systems, and chain connectors and tensioners. NOV has developed a patent-pending Tri-Floater semi-submersible floating foundation that requires less steel than competing offerings. NOV is also designing several proprietary lifting and handling tools for streamlined turbine component installation. Today, the floating offshore wind market sits in the pre-commercial development phase, with industry players focused on proofs of concept and mitigating execution risk. NOV is working to become a value-added partner capable of meaningfully reducing project execution risk by leveraging the Company's broad and growing portfolio of relevant technology, extensive track record of successfully managing complex marine projects, relationships with global shipyards, and robust global supply chain accustomed to stringent quality and traceability.

Onshore Wind

NOV is developing technology to lower onshore wind's LCOE by economically constructing increasingly tall wind towers. Higher hub heights allow turbines to reach stronger winds, significantly increasing energy capture, lowering energy cost, and expanding the regions where wind projects can be profitably developed. Higher hub heights are also required for larger, more efficient turbines. The combination of larger turbines and steadier, higher winds improves wind farm economics. Consequently, wind turbine size and tower height have been increasing steadily for several years. NOV's core design and manufacturing competencies for large, industrial capital equipment, including cranes, lifting tools, and rotating machinery, uniquely position NOV to develop fit-for-purpose wind components and installation equipment to facilitate building onshore wind turbines at higher hub heights.

In 2019, NOV acquired a minority interest in Keystone Tower Systems ("KTS"), which has developed a patented tapered spiral-welding process that enables automated wind tower section production. If perfected, this proprietary process could significantly decrease tower

section production times and reduce costs. Additionally, in time the process could enable in-field manufacturing operations, which could reduce costs and eliminate many logistical limitations of transporting the larger-diameter sections necessary for tall tower developments. KTS's first commercial line is currently undergoing testing and commissioning before commercial production commences within NOV's facility in Pampa, TX.

NOV is developing a fit-for-purpose onshore wind tower erection system. Constructing onshore wind towers currently requires large crawler cranes, which provide advantaged mobility at low and moderate hub heights but are significantly less efficient at high hub heights. NOV's technology, built upon the intellectual property, control systems, and experience developed through mobile desert and arctic drilling rig design, uses a tower crane in conjunction with a unique mobility system. This patent-pending combination creates a structurally-sound, mobile tower crane that is expected to significantly improve the safety, reliability, and efficiency of tall wind tower installation processes.

Geothermal

Today, many of NOV's oil and gas products are used for drilling geothermal wells which produce steam that turns surface-mounted turbines to generate electricity. NOV's top drives, blowout preventers, drill pipe, drill pipe inspection and coating, liner hangers, completion tools, drill bits, and full land rig packages have been a critical part of global geothermal development. Further, with geothermal power generation's recently renewed traction, NOV has developed new proprietary products that address many unique geothermal production challenges and is investigating certain novel geothermal energy forms that could expand the worldwide geothermal power generation market.

Carbon Capture and Sequestration

NOV is positioned to play a meaningful role in the growing carbon capture and sequestration industry. Technology from NOV's Wellstream Processing business enables CO₂-from-hydrocarbon separation, dehydration, and liquification, all vital parts of the carbon capture chain. In addition, the APL business's turret and mooring systems facilitate the development of offshore carbon re-injection sites.

Lowering the Carbon and Environmental Footprint of the Oil & Gas Industry

NOV is committed to providing products and services that economically reduce carbon intensity and deliver superior performance. The Company has pioneered numerous solutions for improving the industry's safety and environmental footprint, including NOV's closed-loop solids control systems, dual-containment flowline technologies, solar pumping systems, and hydrocarbon leak detection systems, among others. NOV remains committed to reducing emissions and improving industry sustainability.

NOV's PowerBlade™ Kinetic Energy Recovery System is a regenerative braking technology that utilizes both flywheel energy and lithium-ion battery energy storage to significantly reduce fuel consumption and emissions associated with drilling and hoisting. The PowerBlade™ system captures and regenerates electrical energy that would have previously dissipated as heat when a drawworks, crane, or winch slows and stops. The PowerBlade™ system then returns this energy when needed.

NOV's Maestro™ smart configurable power management system helps operators reduce fuel consumption while maintaining safe drilling operations. The Maestro system effectively calculates and determines the optimized and safe level of required power generation real-time. The Maestro system functions in real-time with the ongoing rig operations and optimizes power consumption on the rig to reduce emissions.

NOV's Ecoboost system enables peak power shaving in hydraulic power systems and results in less active pumps needed which results in reduced fuel consumption and emissions savings of up to 80%. The short term power peaks are covered with flow from accumulators connected to the ringline piping by a smart valve. An added benefit of Ecoboost is improved equipment performances as the hydraulic response is quicker from the accumulators than from ramping up the pumps.

NOV's iNOVaTHERM™ waste management system incorporates thermal desorption technology that efficiently minimizes and treats drilling waste at the source for safe on-site disposal, significantly reducing carbon-emitting activities, such as barge vessel trips, crane lifts, and trucking transport. NOV's advanced waste management systems with real-time monitoring play an integral role in reducing the risks associated with waste in transit and decreasing the industries' overall emissions operations.

NOV's Ideal eFrac™ pressure pumping equipment delivers advanced well stimulation technology to dramatically reduce emissions and decrease ownership cost. The patent-pending Ideal eFrac™ system enhances wellsite safety by reducing complexity and removing personnel from hazardous environments. In addition to lower operating emissions and greater power density, the Ideal eFrac™ system is less disruptive to neighboring communities due to its reduced noise and smaller footprint, requiring 40 percent fewer truckloads for delivery.

NOV's eDrive™ system for wireline skids and hybrid wireline trucks provides a more sustainable solution for interventions by making customers' operations less impactful on the environment and strengthening regulatory compliance.

Business Segment Overview

NOV executes its business strategy under the following three segments:

Wellbore Technologies provides the critical technologies, equipment, and services required to maximize customer oil and gas drilling efficiencies and economics. The segment contains the following business units:

- *Downhole* is a leading independent drilling and intervention equipment supplier with engineering teams, manufacturing facilities, supply hubs, and service centers situated in oil and gas activity regions with a constantly evolving product portfolio that includes downhole drilling motors, SelectShift™ motors, agitator systems, and fishing and thru-tubing tools. Downhole's offerings enable significant efficiency increases in drilling, workover, and intervention.
- *Tuboscope* is a tubular coating and inspection leader, servicing drill-pipe and other oil country tubular goods ("OCTG") such as casing, production tubing, and line pipe. With an 80-year track record, Tuboscope offers a fully integrated inspection, coating, and repair process that enables critical OCTG customer confidence. In addition, Tuboscope offers artificial lift rod solutions, line-pipe connection systems, pipe thread protection systems, and RFID technology for complete drill-pipe lifecycle management.
- *Grant Prideco* is a leading premium drill-stem tubular manufacturer. With an integrated supply chain and an array of premium drill-pipe connections, Grant Prideco offers one-stop shopping. Grant Prideco leverages its expertise in metallurgy and connection technologies to offer an innovative product portfolio ranging from the simplest vertical land well to deepwater, extended-reach, high-pressure/high-temperature, and factory-drilling applications.
- *IntelliServ's* commercial telemetry network enables real-time broadband data transmission for instantaneous two-way communication between the bottomhole assembly and surface control system utilizing wired drill-pipe. IntelliServ™ telemetry enables real-time information, real-time bottom-hole pressure monitoring, and significant rig-time savings as surveys, downlinks, slide orientations, and other data-driven activities are performed in seconds.
- *Directional Drilling Technologies* is a designer and manufacturer of downhole tools and technologies for directional drilling operations. Directional Drilling Technologies' measurement-while-drilling tools enable real-time wellbore location monitoring, and its logging-while-drilling tools provide real-time critical formation data. Its rotary-steerable-systems, including tools with closed-loop directional control, enable directional well trajectory drilling at high rates of penetration with limited surface interaction. As an independent supplier, Directional Drilling Technologies provides critical technologies required for efficient directional well drilling and enables service companies, drilling contractors, and E&P operators worldwide to deliver productive wells cost-effectively and reliably.
- *WellSite Services* is a leading provider of solids control and waste management equipment and services, advanced wellhead cellar systems, managed-pressure-drilling systems, and wellsite logistics solutions. WellSite Services manufactures, sells, and rents highly engineered solids control equipment and provides field services that improve customers' bottom line by efficiently separating solids and reclaiming drilling fluids for reuse. After separating drill cuttings, WellSite Services provides waste management (both onsite and at centralized locations), including transport and storage. Additionally, WellSite Services provides water management solutions, and managed pressure drilling services, combined with a network of wellsite experts who support operators in bringing their wells in on-time and on-budget. WellSite Services offers diversified resources to help manage the full wellsite lifecycle from initial preparation and cellar installation to worksite abandonment and remediation, including generators, temperature-control equipment, and other wellsite accessories.
- *ReedHycalog* is a premier technical provider of performance-engineered drill bits and borehole enlargement products to help operators improve well construction efficiency and economics. The specialized product base centers on directly breaking the rock during rotary drilling operations, primarily through design, manufacturing, sales and rentals of high-quality, customized fixed cutter drill bits and the use of industry-leading cutter technology. The portfolio also includes roller cone drill bits, borehole enlargement tools that excel in the most demanding applications, and geographically focused coring tools and services.
- *M/D Totco* is a leading independent provider of data and digital solutions to the energy industry. Supported by a global field service infrastructure and a sensor network designed for harsh environments, M/D Totco's ability to acquire, aggregate and deliver real-time data, to enable edge and cloud analytics improves safety, remote monitoring, and operational efficiency for its drilling and completions customers. Using IntelliServ wired drill pipe telemetry services, M/D Totco harnesses NOV's unique ability to connect electronic tools downhole with surface automation equipment to transform drilling performance using highspeed downhole data.

Completion & Production Solutions provides critical technologies to optimize the well completion process and production phase of a well's lifecycle. Completion & Production Solutions business units include:

- *Intervention and Stimulation Equipment ("ISE")* designs and manufactures capital equipment, related consumables, and digital products for oilfield pressure pumpers, coiled tubing, wireline, and well testing/flowback service companies. For hydraulic stimulation jobs, ISE produces both conventional and multiple next-generation-technology configurations of high-pressure fracturing pumping units, along with complex process equipment such as hydration units, chemical additive systems, blenders, and control systems. The business unit produces essential consumables to support pressure pumping spreads, including centrifugal pumps, valves, seats, and flowline equipment. Along with providing surface well-testing and flowback equipment for ultimate production assurance, the unit designs and manufactures cement pumping, mixing, transport, and storage equipment for well construction. ISE is also a leading provider of coiled tubing units and strings, pressure control and nitrogen support equipment, injector heads, and snubbing units. The business unit designs and manufactures wireline products for electric and slickline applications, including critical pressure control equipment like wireline lubricators. Through NOV's Max™ platform for digital solutions, ISE can leverage its integrated control systems and data acquisition services, at site and remotely, to provide comprehensive equipment status and quality operational process insights for the entire completions job, to optimize job efficiency and extend the equipment life. ISE supports all its equipment with comprehensive repair, recertification, and other services through an unmatched global aftermarket facilities network.
- *Fiber Glass Systems ("FGS")* leads the market in the design, manufacture, and delivery of high-end composite piping systems, pressure vessels, tanks, and structures engineered to solve both corrosion and weight challenges. With manufacturing facilities spanning five continents and a sales and distribution network covering 40 countries, FGS serves a wide array of applications. In addition to oil and gas products, including composite downhole tubing and casing, high-pressure line pipe, spoolable pipe, and tanks, FGS supplies the marine and offshore industry with piping systems, scrubbers, and structural components such as handrails and grating. FGS also supplies packaged, UL-certified fiberglass pipe and tank solutions to the fuel handling market, as well as supporting chemical, industrial, hydrogen, and mining applications with corrosion and abrasion-resistant piping systems, tanks, and structural components.
- *Process and Flow Technologies ("PFT")* provides integrated processing, production, and pumping equipment to energy producers. For the production space, PFT manufactures reciprocating, multistage, and progressive cavity pumps, as well as artificial lift systems. For the midstream space, PFT manufactures closures and transfer pumps. For fluid processing, PFT designs and manufactures integrated systems that provide water treatment, separation, sand management, hydrate inhibition and gas processing for use both on and offshore. Building on its processing equipment portfolio, PFT offers turret mooring systems, top side process modules, integrated engineering, and project management to supply comprehensive topside solutions for the offshore production industry, including floating production, storage, and offloading ("FPSO") and floating liquified natural gas ("FLNG") vessels. Using our extensive processing expertise, PFT is now moving into the Carbon Capture market with both carbon capture technology and complementary processing technologies such as CO2 dehydration.

Certain products and systems are integrated with monitoring and optimization services, leveraging NOV's Max™ digital ecosystem. These services include real-time condition monitoring, remote control, data analytics, condition-based maintenance, and process optimization, which improve performance and enable more proactive aftermarket support.

- *Subsea Production Systems ("SPS")* provides technical innovation to reduce cost and improve subsea infrastructure and customer productivity. The business unit manufactures flexible subsea pipe systems designed to operate worldwide in demanding offshore conditions. Flexible pipes are highly engineered, complex, helically wound structures composed of multiple unbonded steel and composite layers, allowing them to withstand the demanding pressures and tensile loads of deepwater production while remaining resistant to wave- and tidal-induced fatigue. SPS also provides an assortment of critical subsea production equipment, such as water injection and tie-in connector systems, subsea storage units, and other related products. SPS also supports offshore wind developments and the electrification of offshore infrastructure by providing accessories for dynamic power cables.
- *XL Systems ("XLS")* provides integral and weld-on connectors for oil and gas applications, including conductor strings, surface casing, and liners, with diameters ranging from 16 to 72 inches. XLS is the sole provider of a proprietary line of wedge thread connections on large-bore pipe. In addition, XLS supplies connector products with threads machined on high strength forging material and then welded to the pipe.

- *Completion Tools* solves the most pressing needs of the global completions marketplace, including lowering well cost through operational efficiency maximization, significant water consumption reduction, and increased production and ultimate recovery. Completion Tools' technologies include multistage frac products, such as its proprietary BPS™ (Burst Port System), VapR™ dissolvable frac plug, i-Frac CEM™ multistage frac sleeve, Voyager™ Open Hole frac sleeve, and Bullmastiff™ frac system, which incorporates sand-control capabilities. The breadth of these offerings provides customers with optimal solutions for their application. Completion Tools also provides well construction technologies, including liner hangers and real-time optimization solutions such as iCon™ RT.
- *Fluid Motion Systems* is a leading provider of specialized, technology-driven progressive cavity pumps and mixers for moving high-viscosity liquids for a variety of attractive end markets with high failure cost. Products include progressive cavity pumps for sludge movement, fluid metering, and sanitation sold under the Moyno and Mono brands; and industrial and static mixers, homogenizers, mixing systems, impellers, and agitators sold under the Chemineer, Kenics, Greerco, and Prochem brands. Marketed under globally recognized brands known for quality and reliability and backed by more than 75 years of advanced fluid-handling experience, Industrial Pumps and Mixers serves a wide breadth of end markets, including biogas, food and beverage, water/wastewater, chemical, mineral processing, pulp & paper, pharmaceutical, and general industrial processes.
- *Pole Products* provides premium products to support connectivity, lighting, and power for municipal and residential applications, including 5G, smart-city infrastructure, roads and highways, and energy-grid modernization. The business unit is a national leading manufacturer of premium spun-cast concrete, tapered steel, and innovative fiberglass poles for diverse applications. Known for durability, aesthetic design, superior lead times, and differentiated field services, Pole Products provides bundled installed products to the telecom, utility, and transportation infrastructure markets.

Rig Technologies is the global leader in the engineering, manufacturing, and support of advanced drilling equipment packages and related capital equipment for oil and gas wells. The segment also designs, builds, installs, and supports renewable energy equipment and technology, with a focus on wind and solar. Rig Technologies operates two business units:

- *Rig Equipment* designs, manufactures, and sells land rigs, complete offshore drilling packages, and rig components designed to mechanize and automate complex drilling rig processes, including the NOVOS™ automation control system and ATOM™ RTX Robotics solutions. Rig Equipment's portfolio includes designs that changed the way rigs are operated, such as the TDS top drive drilling system and automated roughneck. The product portfolio has evolved with market needs and includes solutions to reduce energy consumption and enable energy regeneration, resulting in reduced drilling environmental impact. The business unit also provides comprehensive aftermarket products and services to maximize rig fleet drilling uptime and reduce total cost of ownership through big-data analytics, condition monitoring, and digital solutions like TrackerVision™ and eHawk™ that enable efficient remote support. Aftermarket offerings include upgrades of existing equipment and systems, spare parts, repair, and rentals, as well as comprehensive remote equipment monitoring, technical support, field service, and customer training through an extensive aftermarket facilities network strategically located in major drilling areas around the world.
- *Marine Construction* designs, engineers, and manufactures heavy-lift cranes; a large range of knuckle-boom and lattice-boom cranes, including active heave options; mooring, anchor, and deck-handling machinery; a full range of jacking systems both for drilling rigs and wind turbine installation jack-ups; and solutions for installing offshore wind towers and turbines, pipelay, and construction vessel systems. Within Marine Construction, GustoMSC provides design solutions for drilling jack-ups and floaters, wind turbine installation jack-ups, and floating offshore wind solutions like the TriFloater. Marine Construction serves the oil and gas industry as well as wind energy and other marine-based end markets. This business unit also provides aftermarket support, including upgrades of existing equipment, spare parts, repair and field services.

See Note 16 to the Consolidated Financial Statements for financial information by segment and a geographical revenue and long-lived asset breakout. We have also included a glossary of oilfield terms at the end of Item 1. "Business" of this Annual Report.

Markets and Competition

The Company's customers are predominantly service companies, oil and gas companies, and shipyards. Products within Wellbore Technologies and Completion & Production Solutions are sold and rented worldwide through NOV's sales force and through commissioned representatives. Substantially all of Rig Technologies' capital equipment and spare parts sales, and a large portion of smaller pumps and parts sales, are made through NOV's direct sales force and distribution service centers. Sales to foreign oil companies are often made with or through representative arrangements.

The Company's competition consists primarily of publicly traded oilfield service and equipment companies and smaller independent equipment manufacturers in the oil and gas, industrial, and renewable energy equipment markets.

The Company's foreign operations, which include significant operations in the Middle East, Africa, Latin America, the Far East, Canada and Europe are subject to the risks normally associated with conducting business in foreign countries, including foreign currency exchange risks and uncertain political and economic environments, which may limit or disrupt markets, restrict the movement of funds or result in the deprivation of contract rights or the taking of property without fair compensation. Government-owned oil and gas companies located in some of the countries in which the Company operates have adopted policies (or are subject to governmental policies) giving preference to the purchase of goods and services from companies that are majority-owned by local nationals. As a result of such policies, the Company relies on joint ventures, license arrangements, and other business combinations with local nationals in these countries. See Note 16 to the Consolidated Financial Statements for information regarding geographic revenue information.

Influence of Oil and Gas Activity Levels on the Company's Business

The oil and gas industry has historically experienced significant volatility. Demand for the Company's products and services depends primarily upon the general level of activity in the oil and gas industry worldwide. Oil and gas activity is in turn heavily influenced by, among other factors, oil and gas prices worldwide. High levels of drilling and well remediation generally spurs demand for the Company's products and services. Additionally, high levels of oil and gas activity increase cash flows available for oil and gas companies, drilling contractors, oilfield service companies, and manufacturers of OCTG to invest in equipment that the Company sells.

See additional discussion on the current worldwide economic environment and related oil and gas activity levels in Item 1A. "Risk Factors" and Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Seasonal Nature of the Company's Business

Historically, activity levels of some of the Company's segments have followed seasonal trends to some degree. Extremely harsh winter weather can reduce oilfield operations in far northern or high-altitude locations, including parts of Colorado, Canada, Russia and China, and the annual thaw (or "breakup") in Canada makes some unimproved roads inaccessible to heavy equipment during part of each second quarter. Both situations temporarily reduce demand for the Company's products and services in the affected geographic area, although revenues generally recover once conditions improve. Fluctuations in customer's activity levels caused by national or customary holiday seasons and annual budgetary cycles can also affect their spending levels with the Company, leading to both temporary local decreases and increases in sales. Over the past few years, the Company has seen a more pronounced level of spending during the fourth quarter, and a decline in the first quarter, in certain of its businesses, which it believes is related to annual budgetary cycles. While the Company anticipates that the seasonal and other trends described above may continue, there can be no guarantee that spending by the Company's customers will continue to follow patterns seen in the past.

Research and New Product Development and Intellectual Property

The Company believes that it has been a leader in the development of new technology and equipment to enhance the safety and productivity of drilling and well servicing processes and that its sales and earnings have been dependent, in part, upon the successful introduction of new or improved products. It also invests in new technologies related to its non-oil and gas business as well as renewable energy-related technologies. Through its internal development programs and certain acquisitions, the Company has assembled an extensive array of technologies protected by a substantial number of trademarks, for both goods and services, patents, trade secrets, and other proprietary rights.

As of December 31, 2022, the Company held a substantial number of granted patents and pending patent applications worldwide, including U.S. patents and U.S. patent applications as well as patents and patent applications in a variety of other countries. Expiration dates of such patents range from 2023 to 2042. Additionally, the Company maintains a substantial number of trademarks for both goods and services and maintains a number of trade secrets.

Although the Company believes that this intellectual property has value, competitive products with different designs have been successfully developed and marketed by others. The Company considers the quality and timely delivery of its products, the service it provides to its customers, and the technical knowledge and skills of its personnel to be as important as its intellectual property in its ability to compete. While the Company stresses the importance of its research and development programs, the technical challenges and market uncertainties associated with the development and successful introduction of new products are such that there can be no assurance that the Company will realize future revenue from new products.

Manufacturing and Service Locations

The manufacturing processes for the Company's products generally consist of machining, welding and fabrication, heat treating, assembly of manufactured and purchased components, and testing. Most equipment is manufactured primarily from alloy steel. The availability and price of alloy steel castings, forgings, purchased components, and bar stock is critical to the production and timing of shipments.

Wellbore Technologies designs, manufactures, rents, and sells a variety of equipment and technologies used to perform drilling operations, and offers services that optimize their performance, including: solids control and waste management equipment and services, drilling fluids, premium drillpipe, wired pipe, drilling optimization services, tubular inspection and coating services, instrumentation, downhole tools, and drill bits. Primary facilities are located in Houston, Conroe, Navasota, and Cedar Park, Texas; Veracruz, Mexico; Nisku, Canada; and Dubai, UAE.

Completion & Production Solutions designs, manufactures, and integrates technologies for well completions, oil and gas production, and industrial markets. This includes equipment and technologies needed for hydraulic fracture stimulation, including pressure pumping trucks, blenders, sanders, hydration units, injection units, flowline, and manifolds; well intervention, including coiled tubing units, coiled tubing, and wireline units and tools; cementing products for pumping, mixing, transport, and storage; onshore production, including fluid processing, composite pipe, surface transfer and progressive cavity pumps, and artificial lift systems; and offshore production, including integrated production systems and subsea production technologies. Primary facilities are located in Houston, and Fort Worth, Texas; Tulsa, Oklahoma; Senai, Malaysia; Qingdao, Shandong, China; Kalundborg, Denmark; Superporto du Acu, Brazil; Manchester, England; Dammam, Saudi Arabia; Aberdeenshire, Scotland, UK; and Mt. Union, Pennsylvania.

Rig Technologies provides drilling rig components, complete land drilling rigs, and offshore drilling equipment packages. Primary manufacturing and service facilities are located in Houston, Texas; Dubai, UAE; Al Jubail, Saudi Arabia; New Iberia, Louisiana; Stavanger and Kristiansand, Norway; Mexicali, Mexico; Pune, India; and Singapore.

Raw Materials

The Company believes that materials and components used in its operations are generally available from multiple sources. The prices paid by the Company for its raw materials may be affected by, among other things, energy, steel, and other commodity prices; tariffs and duties on imported materials; and foreign currency exchange rates. The Company has experienced rising, declining, and stable prices for milled steel and standard grades in line with broader economic activity and has generally seen specialty alloy prices continue to rise, driven primarily by escalation in the price of the alloying agents. The Company has generally been successful in its effort to mitigate the financial impact of higher raw materials costs on its operations by applying surcharges to, and adjusting prices on, the products it sells. Higher prices and lower availability of steel and other raw materials the Company uses in its business may adversely impact future periods.

Backlog

The Company monitors its backlog of orders to guide its planning. Backlog includes orders which typically require more than three months to manufacture and deliver.

Backlog measurements are based on written orders that are firm but may be defaulted upon by the customer in some instances. Most require reimbursement to the Company for costs incurred in such an event. There can be no assurance that the backlog amounts will ultimately be realized as revenue, or that the Company will earn a profit on backlog work. Backlog for Completion & Production Solutions at December 31, 2022, 2021 and 2020 was \$1.6 billion, \$1.3 billion and \$0.7 billion, respectively. Backlog for Rig Technologies at December 31, 2022, 2021 and 2020, was \$2.8 billion, \$2.8 billion and \$2.7 billion, respectively.

Human Capital

NOV's 32,307 global, diverse employees use their skill and expertise to provide the products and services that help our customers operate safely, efficiently, sustainably, and competitively. NOV's team designs and manufactures a broad array of equipment and technology, from some of the heaviest, largest, and most complex mobile machines on earth (on and offshore drilling rigs, wind turbine installation ships, and FPSOs) to very small precision sensors and measuring devices.

NOV's employee base includes:

- *Inventors, designers, scientists, and engineers (including mechanical, electrical, chemical, hydraulic, materials, computer, software, data analytics, and other disciplines)* who design and improve the equipment, electronics, software, services and process that bring value to NOV's customers.
- *Technical sales, marketing and training professionals* who educate customers, the industry, and our own organization about NOV's many products, services, and unique capabilities.
- *Supply chain, logistics, warehousing, and quality testing professionals* who ensure our factories, workshops, repair centers and field technicians have the right materials and tools to do their jobs efficiently.

- *Production and service planners and schedulers, project managers, and process design and Quality Health Safety and Environmental professionals* who plan, manage, and monitor the activities of our workforce to ensure high-quality, efficient, safe, and environmentally compliant operations.
- *Machinists, metal fabricators, welders, assemblers, pipe fitters, riggers, electronics technicians, system integrators, composite material fabricators, paint and industrial coatings specialists, and other skilled trade professionals* who use a wide variety of industrial processes, tools, and techniques to transform raw materials and purchased components into the many products NOV sells.
- *Field service engineers, mechanics, and technicians* who maintain, service, repair, and upgrade NOV equipment and, in some cases, assist customers with its operation.
- *Business leaders and managers* who create business strategies and targets, assess goals and priorities, and allocate resources to ensure NOV's employees have the tools they need to get the job done and further build the Company's competitive advantages.
- *Support function professionals, including: Information Technology, Human Resources, Legal, Compliance, Clerical, and Accounting and Finance* who support operations to keep the business infrastructure and administrative burdens flowing.

Thirty-six percent of NOV employees work in the United States, 21% in Europe, 15% in Latin America, 12% in the Asia Pacific region, 10% in the Middle East and Africa, 4% in Canada and 2% in China. The Company's 554 physical locations include various size manufacturing plants, research facilities, machine shops, office buildings, warehouses, and distribution centers where between 20 to 1,100 people work and repair shops, rental tool bases, sales offices and other small locations where between 5 to 200 people work. Many NOV employees travel to work at customer locations, including onshore and offshore drilling sites, shipyards, and other industrial locations where equipment needs installation, commissioning, service, or repair, or where customers need training or technical support.

NOV's success depends on these dedicated, skilled hardworking employees. The Company strongly believes that safeguarding and supporting the health, safety, diversity, respect, skills, career satisfaction and wellbeing of NOV's employees are critical to the success of the business. The Company's Human Resources and Health Safety and Environmental organizations provide policies, oversight, monitoring, resources, training, and assistance companywide that are designed to foster a culture that embraces this belief.

Safety

Protecting the health and safety of all stakeholders is a core value. NOV maintains comprehensive monitoring and tracking of reportable injuries, reviewed each quarter by our operating Segment Presidents with the CEO, CFO, and Chief HSE Officer (including significant injuries, root cause analysis, and remediation measures). Successful safety programs and campaigns are also shared across the Company's operations, including:

- Stop Work Authority – all NOV employees have the authority, responsibility, and duty to stop an unsafe act, practice, or job.
- Life Saving Rules – standardized rules aligning NOV with industry partners to reduce the risk of serious injury or death associated with critical hazards in the workplace.
- Fresh-Eyes – program coordinating safety walk-throughs, observations, and improvements at peer NOV facilities.
- Safety stand downs – pausing normal operations for general safety meetings or to address a specific risk.

Health and wellbeing

The Company offers locally competitive health benefits, paid holidays and time off, and retirement benefits to our employees. In the US this includes health, vision and dental insurance, life insurance, disability insurance, a 401(k)-retirement savings plan, an employee assistance program, and a wellness program. The Company suspended its employer contributions to the 401(k)-retirement savings plan during the pandemic but began reinstating the contributions during the fourth quarter of 2021.

During the COVID-19 pandemic NOV implemented programs tailored to each location that may include, among other things, working from home, virtual meetings, social distancing, masking, contact tracing and quarantining, facility and machine sanitizing, staggered work shifts, and staggered workdays.

Diversity and inclusion

NOV is committed to maintaining a diverse workforce, individual inclusion, and equal opportunities. The Company believes an employee base with different education, training, and life experiences (gender, age, religion, race, ethnicity, cultural background, sexual orientation, language, education, abilities, perspectives, etc.) can lead to more innovative and creative business solutions, more informed decision-making, greater employee engagement, and better retention and recruitment of top talent.

In support of this commitment, NOV has communicated a Diversity and Inclusion Statement from the CEO to our employees and has implemented training programs covering the Company's *Code of Conduct and Business Ethics*, *Unconscious Bias*, and *Harassment in the Workplace*.

Across NOV's global workforce, women make up 15% of all employees, 22% of salaried employees, 10% of the C-Suite and hold 20% of the Company's Board of Directors seats.

Career satisfaction and skills

NOV tracks and monitors data on the employee experience including hiring, turnover, and promotion trends. The Company also obtains employee feedback through 'pulse' surveys which measure employee satisfaction across several areas. Human resources managers and business managers across the Company review this information to identify areas for improvement and create remediation strategies.

The Company invests in opportunities for employee education, growth, and development, providing comprehensive training opportunities in technical, managerial, and soft skills. Some programs include: *Powering Excellence* designed for current and potential business leaders, *Supervisor Training and Resources (STAR)* and *Leading Self and Others* designed for new managers, as well as many other courses through the Company's dedicated Technical Training Centers based in Houston, Singapore, UAE, Norway, UK, and South America.

Available Information

The Company's principal executive offices are located at 10353 Richmond Avenue, Houston, Texas 77042. Its telephone number is (346) 223-3000. Further information about the Company's products and services can be found on its website at: www.nov.com. The Company's common stock is traded on the New York Stock Exchange under the symbol "NOV". The Company's annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and all related amendments are available free of charge on the Investor Relations portion of the Company's website, www.nov.com/investor, as soon as reasonably practicable after such material is electronically filed with, or furnished to, the Securities and Exchange Commission ("SEC"). The Company's Code of Ethics is also posted on its website. The information posted on the Company's website is not incorporated by reference into this Annual Report on Form 10-K.

ITEM 1A. RISK FACTORS

You should carefully consider the risks described below, in addition to other information contained or incorporated by reference herein. Realization of any of the following risks could have a material adverse effect on our business, financial condition, cash flows and results of operations.

Industry Environment and Operations Related

We are dependent upon the level of activity in the oil and gas industry, which is volatile and has caused, and may cause future, fluctuations in our operating results.

The oil and gas industry historically has experienced significant volatility. Demand for our products and services depends primarily upon the number of oil rigs in operation, the number of oil and gas wells being drilled, the depth and drilling conditions of these wells, the volume of production, the number of well completions, capital expenditures of other oilfield service companies and the level of workover activity. Drilling and workover activity can fluctuate significantly in a short period, particularly in the United States and Canada. The willingness of oil and gas operators to make capital expenditures to explore for and produce oil and natural gas and the willingness of oilfield service companies to invest in capital equipment will continue to be influenced by numerous factors over which we have no control, including the:

- current and anticipated future prices for oil and natural gas;
- volatility of prices for oil and natural gas;
- ability or willingness of the members of the Organization of Petroleum Exporting Countries (“OPEC”) and other countries, such as Russia, to maintain or influence price stability through voluntary production limits;
- sanctions and other restrictions placed on certain oil producing countries, such as Russia, Iran, and Venezuela;
- level of production by non-OPEC countries including production from U.S. shale plays;
- level of excess production capacity;
- cost of exploring for and producing oil and gas;
- level of drilling activity and drilling rig dayrates;
- worldwide economic activity and associated demand for oil and gas;
- public health crises and other catastrophic events, such as the COVID-19 pandemic;
- availability and access to potential hydrocarbon resources;
- governmental political requirements, regulation and energy policies;
- fluctuations in political conditions in the United States and abroad;
- currency exchange rate fluctuations and devaluations;
- development of alternate energy sources; and
- environmental regulations.

Expectations for future oil and gas prices cause many shifts in the strategies and expenditure levels of oil and gas companies, drilling contractors, and other service companies, particularly with respect to decisions to purchase major capital equipment of the type we manufacture. Oil and gas prices, which are determined by the marketplace, may remain below a range that is acceptable to certain of our customers, which could continue the reduced demand for our products and have a material adverse effect on our financial condition, results of operations and cash flows.

There are risks associated with certain contracts for our equipment.

As of December 31, 2022, we had a backlog of capital equipment to be manufactured, assembled, tested and delivered by Completion & Production Solutions and Rig Technologies in the amount of \$1.6 billion and \$2.8 billion, respectively. The following factors, in addition to others not listed, could reduce our margins on these contracts, adversely impact completion of these contracts, adversely affect our position in the market or subject us to contractual penalties:

- financial challenges for consumers of our capital equipment;

- credit market conditions for consumers of our capital equipment;
- our failure to adequately estimate costs for making this equipment;
- our inability to deliver equipment that meets contracted technical requirements;
- our inability to maintain our quality standards during the design and manufacturing process;
- our inability to secure parts made by third party vendors at reasonable costs and within required timeframes;
- unexpected increases in the costs of raw materials;
- our inability to manage unexpected delays due to weather, shipyard access, labor shortages, public health crises such as the COVID-19 pandemic or other factors beyond our control;
- the imposition of tariffs or duties between countries, which could materially affect our global supply chain. For example, section 232 tariffs on steel may increase our costs, reduce margins or otherwise adversely affect the Company; and
- export sanctions, controls or other trade restrictions, which could affect our ability to manufacture, sell, or receive payment for our equipment and/or services.

The Company's existing contracts for rig and production equipment generally carry significant down payment and progress billing terms to facilitate the ultimate completion of these projects and the majority do not allow customers to cancel projects for convenience. However, unfavorable market conditions or financial difficulties experienced by our customers may result in cancellation of contracts or the delay or abandonment of projects. Any such developments could have a material adverse effect on our operating results and financial condition.

Competition in our industry, including the introduction of new products and technologies by our competitors, as well as the expiration of the intellectual property rights protecting our products and technologies, could ultimately lead to lower revenue and earnings.

The oilfield products and services industry is highly competitive. We compete with national, regional and foreign competitors in each of our current major product lines. Certain of these competitors may have greater financial, technical, manufacturing and marketing resources than us, and may be in a better competitive position. The following can each affect our revenue and earnings:

- price changes;
- improvements in the availability and delivery of products and services by our competitors;
- the introduction of new products and technologies by our competitors; and
- the expiration of intellectual property rights protecting our products and technologies.

We are a leader in the development of new technology and equipment to enhance the safety and productivity of drilling and well servicing processes. If we are unable to maintain our technology leadership position, it could adversely affect our competitive advantage for certain products and services. Our revenues and operating results have been dependent, in part, upon the successful introduction of new or improved products. Through our internal development programs and acquisitions, we have assembled an array of technologies protected by a substantial number of trade and service marks, patents, trade secrets, and other proprietary rights, which expire after a prescribed duration, some at varying times over the coming years. The expiration of these rights could have a material adverse effect on our operating results. Furthermore, while the Company stresses the importance of its research and development programs, the technical challenges and market uncertainties associated with the development and successful introduction of new products are such that there can be no assurance that the Company will realize future revenue from new products.

The tools, techniques, methodologies, programs and components we use to provide our services may infringe upon the intellectual property rights of others. Infringement claims generally result in significant legal and other costs and may distract management from running our core business. Royalty payments under licenses from third parties, if available, could increase our costs. Additionally, developing non-infringing technologies could increase our costs. If a license were unavailable, we might be unable to continue providing a particular service or product, which could adversely affect our financial condition, results of operations and cash flows.

In addition, certain foreign jurisdictions and government-owned oil and gas companies located in some of the countries in which we operate have adopted policies or regulations which may give local nationals in these countries competitive advantages. Actions taken by our competitors and changes in local policies, preferences or regulations could impact our ability to compete in certain markets and adversely affect our financial results.

A significant portion of our revenue is derived from our non-United States operations, which exposes us to risks inherent in doing business in each of the many countries in which we operate.

Approximately 64% of our revenues in 2022 were derived from operations outside the United States (based on revenue destination). Our foreign operations include significant operations in every oil producing region in the world. Our revenues and operations are subject to the risks normally associated with conducting business in foreign countries, including:

- uncertain political, social and economic environments;
- social unrest, acts of terrorism, war and other armed conflict;
- public health crises and other catastrophic events, such as the COVID-19 pandemic;
- trade and economic sanctions, export controls, and other restrictions imposed by the United States, European Union or other countries;
- restrictions under the United States Foreign Corrupt Practices Act (“FCPA”) or similar legislation, as well as foreign anti-bribery and anti-corruption laws;
- confiscatory taxation, tax duties, complex and everchanging tax regimes or other adverse tax policies;
- exposure to expropriation of our assets and other actions by foreign governments;
- deprivation of contract rights;
- restrictions on the repatriation of income or capital;
- inflation; and
- currency exchange rate fluctuations and devaluations.

Supply chain disruption and price escalation could have a material adverse effect on our business, liquidity, consolidated results of operations and consolidated financial condition.

Our business relies on a broad range of raw materials and commodities for the products we manufacture. Shortages, transportation and supply disruptions can adversely impact supply of our manufacturing raw materials, as well as delivery of finished goods and transportation of our personnel for services. To varying degrees, these problems persist and may continue to persist as a consequence of evolving geopolitical trends. Among the factors that can adversely affect our business and consolidated results of operations are the following:

- Inability to access raw materials and components;
- Suppliers putting the Company on allocations;
- Higher prices for raw materials and components;
- Delays and higher costs for shipping and transportation;
- Labor shortages and absences;
- Wage and other labor cost inflation;
- Government regulation; and
- Travel restrictions;
- Increased labor costs;
- Liabilities resulting from an inability to perform services due to limited manpower availability or an inability to travel to perform the services;
- Other contractual or other legal claims from our customers resulting from supply chain, transportation or other business disruption.

The COVID-19 pandemic and related economic repercussions have had and are expected to continue to have a significant impact on our business.

Negative impacts arising from the COVID-19 pandemic continue to adversely affect a number of jurisdictions and disrupt pre-pandemic economic activities. For example, lockdowns in China have disrupted supply chains for the Company’s vendors and products. The

Company's ability to manufacture equipment and perform services could also be impaired and the Company could be exposed to liabilities resulting from additional interruption or delay in its ability to perform due to limited manpower, travel restrictions, difficulty obtaining visas, adverse health consequences to employees, supply chain disruption, inflationary pressures, and materials shortages. The Company continues to see operational disruption due to work force and supply chain impacts and closure or limitations imposed on our facilities as well as work force regulations. We may face loss of workers, labor shortages, litigation, fines and/or other adverse consequences resulting from vaccine mandates and enforcement of other COVID-19 regulations.

Disputes may arise regarding application of force majeure and other contract provisions and allocation of responsibility among customers, the Company, and suppliers, resulting in material added cost and/or litigation. Our customers may attempt to cancel or delay projects, cancel contracts, or may invoke force majeure clauses. Our customers may also seek to delay or may default on their payments to us. As a result, the Company may be exposed to additional costs, liabilities and risks which could materially, adversely impact our financial performance and results. These potential operational and service delays resulting from the COVID-19 pandemic and long tail supply chain disruption could result in contractual or other legal claims from our customers or with our vendors. At this time, it is not possible to quantify all these risks, but the combination of these factors could have a material impact on our financial results.

We sometimes provide engineered process packages and other engineered products for multi-year, fixed price contracts that may require us to assume risks associated with cost over-runs, operating cost inflation, labor availability, supplier and contractor pricing and performance, and potential claims for liquidated damages.

We sometimes provide engineered skid packages of processing equipment or complex equipment in the form of multi-year contracts, without price escalation clauses. Some of these contracts are required by our customers, primarily national oil companies (NOCs). These projects include acting as suppliers of skid packages or engineered products, as well as installation and commissioning services and may require us to assume additional risks associated with cost over-runs from our vendors or due to material or labor cost escalation. In addition, NOCs often operate in countries with unsettled political conditions, war, civil unrest, or other types of community issues. These issues may also result in cost over-runs, delays, and project losses.

Providing skid packages and engineered products as well as services on an integrated basis may also require us to assume additional risks associated with operating cost inflation, labor availability and productivity, supplier pricing and performance, and potential claims for liquidated damages. We rely on third-party subcontractors, consortium partners and equipment providers to assist us with the completion of these types of contracts. To the extent that we cannot engage subcontractors or acquire equipment or materials in a timely manner and on reasonable terms, our ability to complete a project in accordance with stated deadlines or at a profit may be impaired. If the amount we are required to pay for these goods and services exceeds the amount we have estimated in bidding for fixed-price work, we could experience losses in the performance of these contracts. These delays and additional costs may be substantial, and we may be required to compensate our customers for these delays. This may reduce the profit to be realized or result in a loss on a project.

Cybersecurity risks and threats could adversely affect our business.

We rely heavily on information systems to conduct our business. Any failure, interruption, or breach in security of our information systems, or information systems owned by others that we use and rely on, could result in failures or disruptions in our customer relationship management, general ledger systems and other systems. While we have policies and procedures designed to prevent or limit the effect of the failure, interruption or security breach of our information systems, there can be no assurance that any such failures, interruptions or security breaches will not occur or, if they do occur, that any breach or interruption will be sufficiently limited. The occurrence of any failures, interruptions or security breaches of our information systems could damage our reputation, result in a loss of our intellectual property or other proprietary information, including customer data, result in a loss of customer business, subject us to additional regulatory scrutiny, or expose us to civil litigation and possible financial liability, any of which could have a material adverse effect on our financial position or results of operations.

We may suffer business disruption from direct or indirect cyber-attacks. These take many forms, including ransomware directed at us, our vendors or our customers. For example, our operations were affected by the well-publicized shutdown of the Kronos Company's cloud-based employee work time keeping system, to which certain of our operations subscribe for recording hours worked. Our Human Resources and Operations management were able to quickly implement alternate procedures until the Kronos system was restored. We suffered no material loss due to the outage, and our employee data was not compromised. As with virtually all other large companies, we receive numerous phishing efforts, and other attempted cyber-attacks such as efforts to hack our systems or use distributed denial-of-service attacks. These cyber-security risks have not resulted in any material adverse interruption in our business to date but pose an ongoing threat of material interruption to our business activities.

Our ability to hire and retain qualified personnel at competitive cost could materially affect our operations and growth potential.

Many of the products we sell, and related services that we provide, are complex and technologically advanced, which enable them to perform in challenging conditions. Our ability to succeed is, in part, dependent on our success in attracting and retaining qualified personnel to provide service and to design, manufacture, use, install and commission our products. A significant increase in wages paid by competitors, both within and outside the energy industry, for such highly skilled personnel could result in insufficient availability of skilled labor or increase our labor costs, or both. If the supply of skilled labor is constrained or our costs increase, our margins could decrease, and our growth potential could be impaired.

Severe or unseasonable weather conditions may adversely affect our operations.

Our business may be materially and adversely affected by severe weather conditions in areas where we operate. Many experts believe global climate change could increase the frequency and severity of extreme weather conditions. Repercussions of severe or unseasonable weather conditions may entail the evacuation of personnel and stoppage of services; inability to deliver material to jobsites in accordance with contract schedules; decreases in demand for oil and natural gas during unseasonably warm winters; and loss of productivity. In addition, particularly severe weather could result in weather related evacuation of personnel and curtailment of services, including:

- Damage to platforms or structures and offshore drilling rigs;
- Suspension of activities and operations;
- Damage to our facilities and project work sites;
- Disruption in delivery of materials to jobsites in accordance with contract schedules;
- Decreases in demand for oil and natural gas during unseasonably warm winters; and
- Loss of productivity.

Any of these events could adversely affect our financial condition, results of operations and cash flows.

An impairment of goodwill or other indefinite lived intangible assets could reduce our earnings.

The Company has approximately \$1.5 billion of goodwill and \$0.2 billion of other intangible assets with indefinite lives as of December 31, 2022. Generally accepted accounting principles require the Company to test goodwill and other indefinite lived intangible assets for impairment on an annual basis or whenever events or circumstances indicate they might be impaired. Events or circumstances which could indicate a potential impairment include (but are not limited to) a significant sustained reduction in worldwide oil and gas prices or drilling; a significant sustained reduction in profitability or cash flow of oil and gas companies or drilling contractors; a significant sustained reduction in capital investment by other oilfield service companies; or a significant increase in worldwide inventories of oil or gas. The timing and magnitude of any goodwill impairment charge, which could be material, would depend on the timing and severity of the event or events triggering the charge and would require a high degree of management judgement. If we were to determine that any of our remaining balance of goodwill or other indefinite lived intangible assets was impaired, we would record an immediate charge to earnings with a corresponding reduction in stockholders' equity; resulting in a possible increase in balance sheet leverage as measured by debt to total capitalization.

See additional discussion on "Goodwill and Other Indefinite – Lived Intangible Assets" in Critical Accounting Estimates of Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations."

We have expanded and grown our businesses through acquisitions and continue to pursue a growth strategy but we cannot assure that attractive acquisitions will be available to us at reasonable prices or at all.

We cannot assure that we will successfully integrate the operations and assets of any acquired business with our own or that our management will be able to effectively manage any new lines of business. Any inability on the part of management to integrate and manage acquired businesses and their assumed liabilities could adversely affect our business and financial performance. In addition, we may need to incur substantial indebtedness to finance future acquisitions. We cannot assure that we will be able to obtain this financing on terms acceptable to us or at all. Future acquisitions may result in increased depreciation and amortization expense, increased interest expense, increased financial leverage or decreased operating income for the Company, any of which could cause our business to suffer.

The adoption of any future federal, state, or local laws or implementing regulations imposing reporting obligations on, or limiting or banning, the hydraulic fracturing process could make it more difficult to complete natural gas and oil wells and could have a material adverse effect on our business, consolidated results of operations and consolidated financial condition.

Various federal and state legislative and regulatory initiatives, as well as actions in other countries, have been or could be undertaken which could result in additional requirements or restrictions being imposed on hydraulic fracturing operations. For example, legislation and/or regulations have been adopted in many U.S. states that require additional disclosure regarding chemicals used in the hydraulic fracturing process but that generally include protections for proprietary information. Legislation, regulations and/or policies have also been adopted at the state level that impose other types of requirements on hydraulic fracturing operations (such as limits on operations in the event of certain levels of seismic activity). Additional legislation and/or regulations are being considered at the state and local level that could impose further chemical disclosure or other regulatory requirements (such as prohibitions on hydraulic fracturing operations in certain areas) that could affect our operations. Four states (New York, Maryland, Washington, and Vermont) have banned the use of high-volume hydraulic fracturing. Oregon has adopted a five-year moratorium and Colorado has enacted legislation providing local governments with regulatory authority over hydraulic fracturing operations. Local jurisdictions in some states have adopted ordinances that restrict or in certain cases prohibit the use of hydraulic fracturing, although many of these ordinances have been challenged and some have been overturned. In addition, governmental authorities in various foreign countries where we have provided or may provide hydraulic fracturing services have imposed or are considering imposing various restrictions or conditions that may affect hydraulic fracturing operations. The adoption of any future federal, state, local, or foreign laws or regulations imposing reporting obligations on, or limiting or banning, the hydraulic fracturing process could make it more difficult to complete natural gas and oil wells and could have a material adverse effect on our business, consolidated results of operations, and consolidated financial condition.

Legal and Regulatory Related

Our failure to comply with existing or future U.S. and foreign laws and regulations could have a material adverse effect on our business and our results of operations.

Our ability to comply with various complex U.S. and foreign laws and regulations, such as the FCPA, the U.K. Bribery Act and other foreign anti-bribery and anti-corruption laws, various trade control regulations, and human rights and anti-slavery legislation is dependent on the success of our ongoing compliance program, including our ability to continue to effectively supervise and train our employees to deter prohibited practices. These various laws and regulations can change frequently and significantly. We may become involved in a governmental investigation even if the Company has complied with these laws. If we fail to comply with applicable laws and regulation, we could be subject to investigations, sanctions, and civil and criminal prosecution as well as fines and penalties, which could have a material adverse effect on our reputation and our business, financial condition, results of operations and cash flows. In addition, government disruptions could negatively impact our ability to conduct our business. Supply chain restrictions such as the U.K. Modern Slavery Act and other similar legislation could also materially affect our supply chain, cost of production, and ability to manufacture our products.

We are also required to comply with various complex U.S. and foreign tax laws, regulations and treaties. These laws, regulations and treaties can change frequently and significantly, and it is reasonable to expect changes in the future. If we fail to comply with any of these tax laws, regulations or treaties, we could be subject to, among other things, civil and criminal prosecution, fines, penalties and confiscation of our assets, which could disrupt our ability to provide our products and services to our customers. Any of these events could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Further, in some instances, direct or indirect consumers of our products and services, entities providing financing for purchases of our products and services or members of the supply chain for our products and services may become involved in governmental investigations, internal investigations, political or other enforcement matters. In such circumstances, such investigations may adversely impact the ability of consumers of our products, entities providing financial support to such consumers or entities in the supply chain to timely perform their business plans or to timely perform under agreements with us. The Company could also become involved in investigations of consumers of our products at significant cost to the Company.

We could be adversely affected if we fail to comply with any of the numerous federal, state and local laws, regulations and policies that govern environmental protection, zoning and other matters applicable to our businesses.

Our businesses are subject to numerous federal, state and local laws, regulations and policies governing environmental protection, zoning and other matters. These laws and regulations have changed frequently in the past and it is reasonable to expect additional changes in the future. If existing regulatory requirements change, we may be required to make significant unanticipated capital and operating expenditures. We cannot assure you that our operations will continue to comply with future laws and regulations. Governmental authorities may seek to impose fines and penalties on us or to revoke or deny the issuance or renewal of operating permits for failure to comply with applicable laws and regulations. Under these circumstances, we might be required to reduce or cease operations or conduct site remediation or other corrective action which could adversely impact our operations and financial condition.

Our businesses expose us to potential environmental, product or personal injury liability.

Our businesses have in the past and may in the future expose us to risks from harmful substances that escape into the environment or product failing to perform or causing personal injury, or exposing individuals to chemicals, harmful substances, or environmental conditions, any of which could result in:

- personal injury or loss of life;
- severe damage to or destruction of property; or
- environmental damage and suspension of operations.

Our current and past activities, as well as the activities of our former divisions and subsidiaries, could result in our facing substantial environmental, regulatory, personal injury, class action, mass tort and other litigation and liabilities. These could include the costs of cleanup of contaminated sites and site closure obligations. These liabilities could also be imposed on the basis of one or more of the following theories:

- negligence;
- strict liability;
- products liability;
- breach of contract with customers; or
- as a result of our contractual agreement to indemnify our customers in the normal course of business, which is normally the case.

We may not have adequate insurance for potential environmental, product or personal injury liabilities.

While we maintain liability insurance, this insurance is subject to coverage limits. In addition, certain policies do not provide coverage for damages resulting from environmental contamination or may exclude coverage for other reasons. We face the following risks with respect to our insurance coverage:

- we may not be able to continue to obtain insurance on commercially reasonable terms;
- we may be faced with types of liabilities that will not be covered by our insurance;
- our insurance carriers may not be able to meet their obligations under the policies; or
- the dollar amount of any liabilities may exceed our policy limits.

Even a partially uninsured claim, if successful and of significant size, could have a material adverse effect on our consolidated financial statements.

Future laws, regulations, treaties, international obligations, reporting obligations related to greenhouse gases (GHG), climate change, and activism related to environmental, social and governance (ESG) could adversely impact our business, may increase compliance obligations and could have a material adverse effect on our business, consolidated results of operations and consolidated financial condition.

Focus and attention by advocacy groups and regulatory agencies on climate change and greenhouse gas (GHG) emissions in the United States and European Union have accelerated. Investors, customers, governance pundits and government officials have increased focus on sustainability, stakeholder governance and the energy transition. As a result, there has been increased promotion of alternative energy and increased negative attitudes or perceptions of fossil fuels. New laws and regulations to reduce GHG, including the imposition of fees or taxes, could adversely impact our operations and financial condition. Oil and natural gas exploration and production may decline as a result of environmental requirements, including land use policies responsive to environmental concerns. State, national, and international governments and agencies in areas in which we conduct business continue to evaluate, and in some instances adopt, climate-related legislation and other regulatory initiatives that limit GHG emissions. The President of the United States has issued Executive Orders seeking to adopt new regulations and policies to address climate change and to suspend, revise, or rescind prior agency actions that the administration identified as conflicting with its climate policies. These include Executive Orders requiring a review of current U.S. federal lands leasing and permitting practices, as well as a temporary halt of new leasing of U.S. federal lands and offshore waters available for oil and gas exploration. The Executive Orders halting the leasing of U.S. federal lands were challenged in court and remain subject to litigation. As a result of the review of leasing and permitting practices, the U.S. Department of the Interior has recommended increasing the royalty rate payable to the U.S. government by operators, as well as bonding requirements and emissions requirements for operators. Some form of these recommendations may become applicable to operations on U.S. federal leases, which could have a negative effect on exploration and production of oil and natural gas given the increased costs associated with any such changes. In February 2021, the United States formally re-joined the Paris Agreement. The Paris Agreement requires countries to review and

“represent a progression” in their intended nationally determined contributions, which set greenhouse gases emission reduction goals, every five years. Though we are closely following developments in this area and changes in the regulatory landscape in the United States and other jurisdictions, we cannot predict with precision or quantify how or when those challenges may ultimately impact our business. Because our business depends on the level of activity in the oil and natural gas industry, existing or future laws, regulations, treaties, or international agreements related to greenhouse gases and climate change, including incentives to conserve energy or use alternative energy sources, may reduce demand for oil and natural gas and could have a negative impact on our business. Likewise, such restrictions may result in additional compliance obligations with respect to the release, capture, sequestration, and use of carbon dioxide. The efforts we have taken, and may undertake in the future, to respond to these evolving or new regulations and to environmental initiatives of customers, investors, and others may increase our costs. These and other environmental requirements could have a material adverse effect on our business, consolidated results of operations, and consolidated financial condition.

In addition to regulatory risks, increased advocacy related to ESG issues generally, and on climate change and greenhouse gas emissions in particular, may have a material adverse effect on our business, consolidated results of operations, and consolidated financial condition. Our investors, customers, and other stakeholders have increased their focus on sustainability and the energy transition. Negative perceptions of the oil and natural gas industry and promotion of alternative energy sources can negatively impact demand for our products and the price of our stock. Additionally, we may suffer reputational harm if we do not adequately identify or manage ESG-related risks or if there are negative perceptions of our response to ESG issues. We may also incur increased costs as a result of our efforts to address ESG issues important to our stakeholders, including providing expanded reporting on ESG issues, which may impact our financial condition or results of operations. The combination of laws, regulations, treaties, negative reputational impact, and societal perceptions of our industry may adversely impact demand for oil and natural gas and demand for our products. Consequently, the price of our stock could be negatively impacted as we navigate the energy transition.

Local content requirements imposed in certain jurisdictions may increase the complexity of our operations and impact the demand for our services.

A growing number of nations are requiring equipment providers and contractors to meet local content requirements or other local standards. To meet many of these local content and other requirements, we are required to attract and retain qualified local personnel. If we are unable to do so because the supply of qualified local personnel is constrained for any reason, the growth and profitability of our business may be adversely affected. In addition, our ability to work in certain jurisdictions is sometimes subject to our ability to successfully negotiate and agree upon acceptable joint venture agreements. The failure to reach acceptable agreements could adversely impact the Company’s operations in certain countries. Additionally, we may share control of joint ventures with unaffiliated third parties. Differences in views, and disagreements, among joint venture parties may result in delayed decision making and disputes on important issues. In some instances, we could suffer a material adverse effect to the results of our joint ventures and our consolidated results of operations.

The Company could be subject to changes in its tax rates, the adoption of new tax legislation, tax audits, or exposure to additional tax liabilities that could have a material adverse effect on our business, consolidated results of operations, and consolidated financial condition.

We are subject to taxes in the U.S. and numerous jurisdictions where we operate and our subsidiaries are organized. Due to economic and political conditions, tax rates in the U.S. and other jurisdictions may be subject to significant change. In addition, our tax returns are subject to examination by the U.S. and other tax authorities and governmental bodies. We regularly assess the likelihood of an adverse outcome resulting from these examinations to determine the adequacy of our provision for taxes. There can be no assurance as to the outcome of the examinations. An increase in tax rates, particularly in the U.S., changes in our ability to realize our deferred tax assets, or adverse outcomes resulting from examinations of our tax returns could have a material adverse effect on our business, consolidated results of operations, and consolidated financial condition. In particular, the Company received and paid a \$51 million transfer pricing tax assessment in Denmark. The Company and its advisors believe the assessment is without merit. The Company is presently appealing and believes it will be reimbursed following a successful appeals process. The payment has been recorded as a long term receivable.

The Company is assessing various provisions contained in the Inflation Reduction Act of 2022 (the “IRA”) including increased production and manufacturing credits as well as the new Corporate Alternative Minimum Tax. The Company does not anticipate that these provisions will materially impact its results from operations or its effective tax rate.

Our operations outside the United States require us to comply with both United States and international regulations violations of which could have a material adverse effect on our business, consolidated results of operations, and consolidated financial condition. In particular, our operations in Russia have subjected us to additional risks related to current political conflicts.

The shipment of goods, services, and technology across international borders subjects us to extensive trade laws and regulations. Our import and export activities are governed by the trade, customs, and other laws and regulations in the countries in which we operate.

Moreover, many countries, including the United States, control the export, re-export, and in-country transfer of certain goods, services, and technology and impose related export recordkeeping and reporting obligations. Governments also impose economic sanctions against certain countries, persons, and entities that can restrict or prohibit transactions involving such countries, persons, and entities. This in turn can restrict, limit or prevent our conduct of business in certain jurisdictions. For our operations outside the United States, we are required to comply with United States laws and other international regulations. Because we have legal entities, facilities and citizens from many jurisdictions, our operations and people may be subject to laws and regulations issued by different sovereigns. Sometimes these laws conflict and impose inconsistent obligations on citizens from the different jurisdictions in which we operate giving rise to complicated compliance issues. In 2014, the United States, the European Union and other governmental bodies imposed sectoral sanctions directed at Russia's oil and gas industry. Among other things, these sanctions restricted the provision of certain United States and European Union goods, services, and technology in support of exploration or production for deep water, Arctic offshore, or shale projects that have the potential to produce oil in Russia. At the time, these sanctions resulted in our winding down and ending work on certain projects in Russia and prevented us from pursuing certain other projects in Russia. In 2017 and 2018, the U.S. Government imposed additional sanctions against Russia, Russia's oil and gas industry, and certain Russian companies.

In February of 2022, as a result of armed conflict in Ukraine, governments in the European Union, the United States, the United Kingdom, Switzerland, and other countries have enacted additional sanctions against Russia and Russian interests. Among other things, these sanctions include controls on the export, re-export, and in-country transfer in Russia of certain goods, supplies, and technologies, including some that we use in our business in Russia. They also impose restrictions on doing business with certain state-owned Russian customers, certain financial institutions and certain individuals and restrict or prohibit new investments and business activities in Russia. The situation is complicated by actual and potential governmental and legal actions taken by the Russian Federation in response to the sanctions, which could expose our employees to adverse legal consequences in Russia, including potential criminal penalties. Other sanctions have been enacted related to Belarus and Belarussian interests. In response to these sanctions, we ceased new investments in Russia and have curtailed our activities in Russia. During the third quarter of 2022, we sold our business in Belarus and committed to a plan to sell our business in Russia. The sale is subject to government approval under Russian law. Litigation may result from the confluence of these events in Russia and Belarus and our response to the various sanctions as we work to comply with applicable laws and regulations. We also may incur severance costs as a result of conditions in Russia if we are unable to obtain government approval. As a consequence of the conflict in Ukraine and related sanctions on activities related to Russia and Belarus, we recorded impairment and other charges of \$127 million for the year ended December 31, 2022.

In addition to customs laws, trade regulations and sanctions, our operations in countries outside the United States are subject to anti-corruption laws. For example, we comply with the United States Foreign Corrupt Practices Act (FCPA), which prohibits United States companies and their agents and employees from providing anything of value to a foreign official for the purposes of influencing any act or decision of these individuals in their official capacity to help obtain or retain business, direct business to any person or corporate entity, or obtain any unfair advantage. Our activities create the risk of unauthorized payments or offers of payments by our employees, agents, or joint venture partners that could be in violation of anti-corruption laws, even though some of these parties are not subject to our control. We have internal control policies and procedures and have implemented training and compliance programs for our employees and agents with respect to the FCPA. However, we cannot assure that our policies, procedures, and programs will always protect us from reckless or criminal acts committed by our employees or agents. We are also subject to the risks that our employees, joint venture partners, and agents outside of the United States may fail to comply with other applicable laws. Allegations of violations of applicable anti-corruption laws have resulted and may in the future result in internal, independent, or government investigations. Violations of anti-corruption laws may result in severe criminal or civil sanctions, and we may be subject to other liabilities, which could have a material adverse effect on our business, consolidated results of operations and consolidated financial condition.

GLOSSARY OF OILFIELD TERMS

(Sources: Company management; "A Dictionary for the Petroleum Industry," The University of Texas at Austin, 2001.)

API	Abbr: American Petroleum Institute
Annulus	The open space around pipe in a wellbore through which fluids may pass.
Automatic Roughneck	A large, self-contained pipe-handling machine used by drilling crew members to make up and break out tubulars. The device combines a spinning wrench, torque wrench, and backup wrenches.
Bit	The cutting or boring element used in drilling oil and gas wells. The bit consists of a cutting element and a circulating element. The cutting element is steel teeth, tungsten carbide buttons, industrial diamonds, or polycrystalline diamonds ("PDCs"). These teeth, buttons, or diamonds penetrate and gouge or scrape the formation to remove it. The circulating element permits the passage of drilling fluid and utilizes the hydraulic force of the fluid stream to improve drilling rates. In rotary drilling, several drill collars are joined to the bottom end of the drill pipe column, and the bit is attached to the end of the drill collars. Drill collars provide weight on the bit to keep it in firm contact with the bottom of the hole.
Blowout	An uncontrolled flow of gas, oil or other well fluids into the atmosphere. A blowout, or gusher, occurs when formation pressure exceeds the pressure applied to it by the column of drilling fluid. A kick warns of an impending blowout.
Blowout Preventer (BOP)	Series of valves installed at the wellhead while drilling to prevent the escape of pressurized fluids.
Borehole Enlargement ("BHE")	The process of opening up or enlarging the internal diameter of the wellbore. This is typically done with under-reamers, reamers, or hole openers.
Bottomhole Assembly ("BHA")	The lower portion of the drillstring including (if used): the bit, bit sub, mud motor, stabilizers, drillcollar, heavy-weight drillpipe, jarring devices, and crossovers for various thread forms.
Carbon-Neutral	The state of achieving net zero carbon dioxide emissions with removal or simply eliminating carbon dioxide emissions altogether.
Coiled Tubing	A continuous string of flexible steel tubing, often hundreds or thousands of feet long, that is wound onto a reel, often dozens of feet in diameter. The reel is an integral part of the coiled tubing unit, which consists of several devices that ensure the tubing can be safely and efficiently inserted into the well from the surface. Because tubing can be lowered into a well without having to make up joints of tubing, running coiled tubing into the well is faster and less expensive than running conventional tubing. Rapid advances in the use of coiled tubing make it a popular way in which to run tubing into and out of a well. Also called reeled tubing.
Cuttings	Fragments of rock dislodged by the bit and brought to the surface in the drilling mud. Washed and dried cutting samples are analyzed by geologist to obtain information about the formations drilled.
Directional Well	Well drilled in an orientation other than vertical in order to access broader portions of the formation.
Drawworks	The hoisting mechanism on a drilling rig. It is essentially a large winch that spools off or takes in the drilling line and thus raises or lowers the drill stem and bit.
Drill Pipe Elevator (Elevator)	On conventional rotary rigs and top-drive rigs, hinged steel devices with manual operating handles that crew members latch onto a tool joint (or a sub). Since the elevators are directly connected to the traveling block, or to the integrated traveling block in the top drive, when the driller raises or lowers the block or the top-drive unit, the drill pipe is also raised or lowered.

Fiberglass-reinforced spoolable pipe	A spoolable glass fiber-reinforced epoxy composite tubular product for onshore oil and gas gathering and injection systems, with superior corrosion resistant properties and lower installed cost than steel.
Flexible pipe	A dynamic riser that connects subsea production equipment to a topside facility allowing for the flow of oil, gas, and/or water. Also used on the seafloor to tie wells and subsea equipment together.
Formation	A bed or deposit composed throughout of substantially the same kind of rock; often a lithologic unit. Each formation is given a name, frequently as a result of the study of the formation outcrop at the surface and sometimes based on fossils found in the formation.
FPSO	A Floating Production, Storage and Offloading vessel used to receive hydrocarbons from subsea wells, and then produce and store the hydrocarbons until they can be offloaded to a tanker or pipeline.
Hub Height	The distance from the turbine platform to the rotor of an installed wind turbine and indicates how high the turbine stands above the ground (or water), not including the length of the wind blades.
Hydraulic Fracturing	The process of creating fractures in a formation by pumping fluids, at high pressures, into the reservoir, which allows or enhances the flow of hydrocarbons.
Jack-up rig	A mobile bottom-supported offshore drilling structure with columnar or open-truss legs that support the deck and hull. When positioned over the drilling site, the bottoms of the legs penetrate the seafloor.
Jar	A mechanical device placed near the top of the drill stem which allows the driller to strike a very heavy blow upward or downward on stuck pipe.
Joint	1. In drilling, a single length (from 16 feet to 45 feet, or 5 meters to 14.5 meters, depending on its range length) of drill pipe, drill collar, casing or tubing that has threaded connections at both ends. Several joints screwed together constitute a stand of pipe. 2. In pipelining, a single length (usually 40 feet-12 meters) of pipe. 3. In sucker rod pumping, a single length of sucker rod that has threaded connections at both ends.
Kelly	The heavy steel tubular device, four-or six-sided, suspended from the swivel through the rotary table and connected to the top joint of drill pipe to turn the drill stem as the rotary table turns. It has a bored passageway that permits fluid to be circulated into the drill stem and up the annulus, or vice versa. Kellys manufactured to API specifications are available only in four-or six-sided versions, are either 40 or 54 feet (12 or 16 meters) long, and have diameters as small as 2.5 inches (6 centimeters) and as large as 6 inches (15 centimeters).
Kelly bushing	A special device placed around the kelly that mates with the kelly flats and fits into the master bushing of the rotary table. The kelly bushing is designed so that the kelly is free to move up or down through it. The bottom of the bushing may be shaped to fit the opening in the master bushing or it may have pins that fit into the master bushing. In either case, when the kelly bushing is inserted into the master bushing and the master bushing is turned, the kelly bushing also turns. Since the kelly bushing fits onto the kelly, the kelly turns, and since the kelly is made up to the drill stem, the drill stem turns. Also called the drive bushing.
Kick	An entry of water, gas, oil, or other formation fluid into the wellbore during drilling. It occurs because the pressure exerted by the column of drilling fluid is not great enough to overcome the pressure exerted by the fluids in the formation drilled. If prompt action is not taken to control the kick, or kill the well, a blowout may occur.
Levelized Cost of Energy (“LCOE”)	A measure of the average net present cost of electricity generation for a generating plant over its lifetime. The LCOE is calculated as the ratio between all the discounted costs over the lifetime on an electricity generating plant divided by a discounted sum of the actual energy

amounts delivered. LCOE is used to compare different methods of electricity generation on a consistent basis.

Making-up	1. To assemble and join parts to form a complete unit (e.g., to make up a string of drill pipe). 2. To screw together two threaded pieces. 3. To mix or prepare (e.g., to make up a tank of mud). 4. To compensate for (e.g., to make up for lost time).
Manual tongs (Tongs)	The large wrenches used for turning when making up or breaking out drill pipe, casing, tubing, or other pipe; variously called casing tongs, pipe tongs, and so forth, according to the specific use. Power tongs or power wrenches are pneumatically or hydraulically operated tools that serve to spin the pipe up tight and, in some instances to apply the final makeup torque.
Master bushing	A device that fits into the rotary table to accommodate the slips and drive the kelly bushing so that the rotating motion of the rotary table can be transmitted to the kelly. Also called rotary bushing.
Mooring system	The method by which a vessel or buoy is fixed to a certain position, whether permanently or temporarily.
Mud pump	A large, high-pressure reciprocating pump used to circulate the mud on a drilling rig.
Nacelle	A cover housing that houses all of the generating components in a wind turbine, including the generator, gearbox, drive train, and brake assembly. The nacelle must be easily accessible for maintenance and repair work.
Pressure control equipment	Equipment used in: 1. The act of preventing the entry of formation fluids into a wellbore. 2. The act of controlling high pressures encountered in a well.
Pressure pumping	Pumping fluids into a well by applying pressure at the surface.
Riser pipe	The pipe and special fitting used on floating offshore drilling rigs to establish a seal between the top of the wellbore, which is on the ocean floor, and the drilling equipment located above the surface of the water. A riser pipe serves as a guide for the drill stem from the drilling vessel to the wellhead and as a conductor for drilling fluid from the well to the vessel. The riser consists of several sections of pipe and includes special devices to compensate for any movement of the drilling rig caused by waves. Also called marine riser pipe, riser joint.
Rotary table	The principal piece of equipment in the rotary table assembly; a turning device used to impart rotational power to the drill stem while permitting vertical movement of the pipe for rotary drilling. The master bushing fits inside the opening of the rotary table; it turns the kelly bushing, which permits vertical movement of the kelly while the stem is turning.
Slips	Wedge-shaped pieces of metal with serrated inserts (dies) or other gripping elements, such as serrated buttons, that suspend the drill pipe or drill collars in the master bushing of the rotary table when it is necessary to disconnect the drill stem from the kelly or from the top-drive unit's drive shaft. Rotary slips fit around the drill pipe and wedge against the master bushing to support the pipe. Drill collar slips fit around a drill collar and wedge against the master bushing to support the drill collar. Power slips are pneumatically or hydraulically actuated devices that allow the crew to dispense with the manual handling of slips when making a connection.
Solids	See "Cuttings"
Spinning wrench	Air-powered or hydraulically powered wrench used to spin drill pipe in making or breaking connections.
Stand	The connected joints of pipe racked in the derrick or mast when making a trip. On a rig, the usual stand is about 90 feet (about 27 meters) long (three lengths of drill pipe screwed together), or a treble.
Steerable Technologies	Tools that allow for steering the BHA towards a target while rotating from surface.
String	The entire length of casing, tubing, sucker rods, or drill pipe run into a hole.

Sucker rod	A special steel pumping rod. Several rods screwed together make up the link between the pumping unit on the surface and the pump at the bottom of the well.
Tensioner	A system of devices installed on a floating offshore drilling rig to maintain a constant tension on the riser pipe, despite any vertical motion made by the rig. The guidelines must also be tensioned, so a separate tensioner system is provided for them.
Thermal desorption	The process of removing drilling mud from cuttings by applying heat directly to drill cuttings.
Top drive	A device similar to a power swivel that is used in place of the rotary table to turn the drill stem. It also includes power tongs. Modern top drives combine the elevator, the tongs, the swivel, and the hook. Even though the rotary table assembly is not used to rotate the drill stem and bit, the top-drive system retains it to provide a place to set the slips to suspend the drill stem when drilling stops.
Torque wrench	Spinning wrench with a gauge for measuring the amount of torque being applied to the connection.
Turret	Mechanical device that allows a floating vessel to rotate around stationary flowlines, umbilicals, and other associated risers.
Well completion	1. The activities and methods of preparing a well for the production of oil and gas or for other purposes, such as injection; the method by which one or more flow paths for hydrocarbons are established between the reservoir and the surface. 2. The system of tubulars, packers, and other tools installed beneath the wellhead in the production casing; that is, the tool assembly that provides the hydrocarbon flow path or paths.
Wellhead	The termination point of a wellbore at surface level or subsea, often incorporating various valves and control instruments.
Well stimulation	Any of several operations used to increase the production of a well, such as acidizing or fracturing.
Wellbore	A borehole; the hole drilled by the bit. A wellbore may have casing in it or it may be open (uncased); or part of it may be cased, and part of it may be open. Also called a borehole or hole.
Wireline	A slender, rodlike or threadlike piece of metal usually small in diameter, that is used for lowering special tools (such as logging sondes, perforating guns, and so forth) into the well. Also called slick line.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

The Company owned or leased approximately 554 facilities worldwide as of December 31, 2022, including the following principal manufacturing, service, distribution and administrative facilities:

Location	Description	Building Size (SqFt)	Property Size (Acres)	Owned / Leased	Lease Termination Date
Wellbore Technologies:					
Navasota, Texas	Manufacturing Facility & Administrative Offices	562,112	196	Owned	
Conroe, Texas	Manufacturing Facility of Drill Bits and Downhole Tools, Administrative & Sales Offices	275,383	28	Owned	
Houston, Texas	Sheldon Road Inspection Facility	319,365	197	Owned	
Veracruz, Mexico	Manufacturing Facility of Tool Joints, Warehouse & Administrative Offices	303,400	42	Owned	
Houston, Texas	Holmes Rd Complex: Manufacturing, Warehouse, Coating Manufacturing Plant & Corporate Office	351,377	41	Owned	
Cedar Park, Texas	Instrumentation Manufacturing Facility, Administrative & Sales Offices	215,778	34	Owned	
Dubai, UAE	Manufacturing Facility of Downhole Tools, Distribution Warehouse	184,492	8	Leased	1/29/2031
Conroe, Texas	Solids Control Manufacturing Facility, Warehouse, Administrative & Sales Offices, and Engineering Labs	153,750	42	Owned	
Houston, Texas	Manufacturing of plastic thread products	158,250	7	Owned	
Completion & Production Solutions:					
Senai, Malaysia	Manufacturing Facility of Fiber Glass Products	284,701	14	Owned*	10/31/2027
Kalundborg, Denmark	Flexibles Manufacturing, Warehouse, Shop & Administrative Offices	485,067	38	Owned	
Superporto do Acu, Brazil	Flexibles Manufacturing, Warehouse, Shop & Administrative Offices	464,885	30	Owned*	10/19/2031
Manchester, England	Manufacturing, Assembly & Testing of PC Pumps and Expendable Parts, Administrative & Sales Offices	365,872	27	Owned	
Houston, Texas	Manufacturing of Wireline and Pressure Performance Equipment, Warehouse and Administrative Offices	383,750	26	Leased	6/30/2041
Fort Worth, Texas	Coiled Tubing Manufacturing Facility, Warehouse, Administrative & Sales Offices	345,000	24	Owned	
Qingdao, Shandong, China	Manufacturing of fiber-reinforced tubular products	277,331	25	Leased	10/26/2036
Tulsa, Oklahoma	Manufacturing Facility of Pumps, Warehouse and Administrative & Sales Offices	222,625	10	Owned	
Houston, Texas	Manufacturing of fiber-reinforced tubular products & Administrative Offices	130,873	7	Leased	4/30/2026
Kintore, Aberdeenshire, Scotland, UK	Manufacturing & Servicing of Elmar, ASEP and Anson Equipment	198,651	13	Leased	9/3/2037
Dammam, Saudi Arabia	Manufacturing of fiberglass products	213,484	23	Leased	12/7/2036
Mt. Union, Pennsylvania	Manufacturing of fiberglass products	135,000	24	Owned	
Rig Technologies:					
Houston, Texas	Bammel Facility, Repairs, Service, Aftermarket Parts, Administrative & Sales Offices	608,718	33	Leased	7/31/2028
Houston, Texas	Manufacturing Plant of Drilling Equipment	511,964	36	Leased	4/30/2027
Houston, Texas	West Little York Manufacturing Facility, Repairs, Service, Administrative & Sales Offices	484,794	51	Owned	
New Iberia, Louisiana	Repair, Services and Spares facility	170,000	17	Leased	9/30/2027
Singapore	Manufacturing, Repairs, Service, Field Service/Training, Administrative & Sales Offices	133,659	4	Leased	1/5/2024
Dubai, UAE	Repair & Overhaul of Drilling Equipment, Warehouse & Sales Office	39,433	2	Leased	7/14/2036
Al Jubail, Saudi Arabia	Manufacturer and Service of Drilling Rigs and Equipment	668,293	113	Leased	11/17/2050
Corporate:					
Houston, Texas	Corporate and Shared Administrative Offices	441,029	3	Leased	1/31/2041

*Building owned but land leased.

We own or lease approximately 321 repair and manufacturing facilities that refurbish and manufacture new equipment and parts, 101 service centers that provide inspection and equipment rental and 132 engineering, sales and administration facilities.

ITEM 3. LEGAL PROCEEDINGS

See Note 12 – Commitments and Contingencies (Part IV, Item 15 of this Form 10-K) for further discussion.

ITEM 4. MINE SAFETY DISCLOSURES

Information regarding mine safety and other regulatory actions at our mines 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

Market Information

Our common stock is traded on the New York Stock Exchange (NYSE) under the symbol "NOV". As of February 3, 2023, there were 1,864 holders of record of our common stock. Many stockholders choose to own shares through brokerage accounts and other intermediaries rather than as holders of record (excluding individual participants in securities positions listing) so the actual number of stockholders is unknown but significantly higher.

Cash dividends declared were \$0.05 per share in each quarter of 2022 and \$0.05 per share in the fourth quarter of 2021, aggregating \$78 million and \$20 million for the years ended December 31, 2022 and 2021, respectively. The declaration and payment of future dividends is at the discretion of the Company's Board of Directors and will be dependent upon the Company's results of operations, financial condition, capital requirements, future outlook and other factors deemed relevant by the Company's Board of Directors.

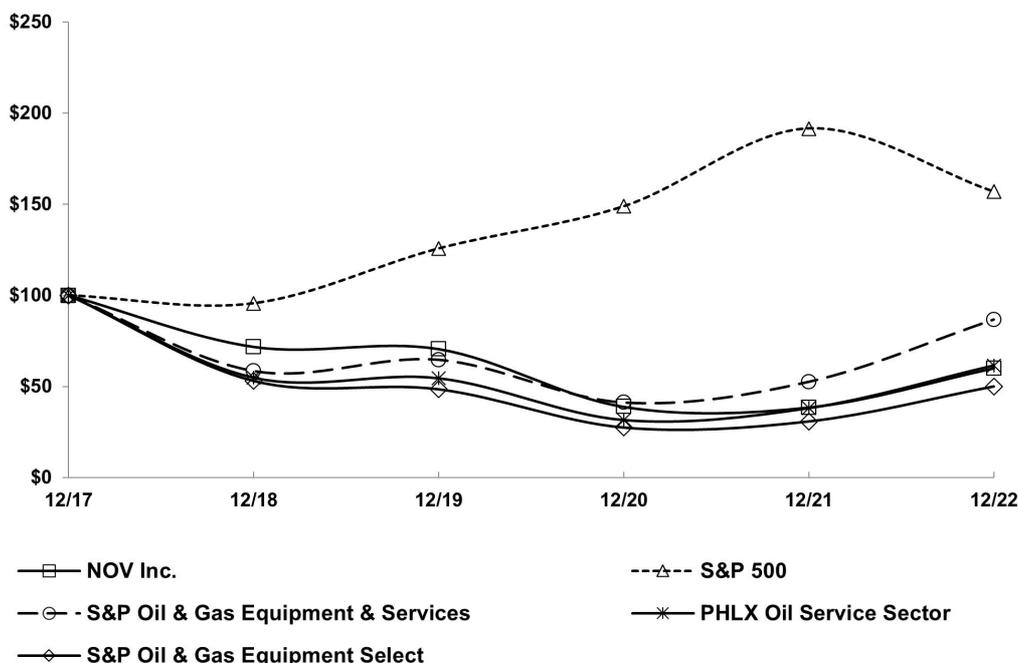
The information relating to our equity compensation plans required by Item 5. "Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities" is incorporated by reference to such information as set forth in Item 12. "Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters" contained herein.

PERFORMANCE GRAPH

The graph below compares the cumulative total shareholder return on our common stock to the S&P 500 Index, the S&P Oil & Gas Equipment & Services Index, the PHLX Oil Service Index, and the S&P Oil & Gas Equipment Index. The total shareholder return assumes \$100 invested on December 31, 2017 in NOV Inc., the S&P 500 Index, the S&P Oil & Gas Equipment & Services Index, the PHLX Oil Service Index, and the S&P Oil & Gas Equipment Index. It also assumes reinvestment of all dividends. The results shown in the graph below are not necessarily indicative of future performance.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*

Among NOV Inc., the S&P 500 Index, the S&P Oil & Gas Equipment & Services Index, the PHLX Oil Service Sector Index, and the S&P Oil & Gas Equipment Select Index



*\$100 invested on 12/31/17 in stock or index, including reinvestment of dividends. Fiscal year ending December 31.

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	12/17	12/18	12/19	12/20	12/21	12/22
NOV Inc.	100.00	71.73	70.52	38.88	38.52	59.99
S&P 500	100.00	95.62	125.72	148.85	191.58	156.89
S&P Oil & Gas Equipment & Services Index	100.00	58.53	64.70	41.26	52.64	86.75
PHLX Oil Service Index	100.00	54.78	54.48	31.56	38.10	61.53
S&P Oil & Gas Equipment Index	100.00	52.98	48.40	27.40	30.75	49.98

This information shall not be deemed to be “soliciting material” or to be “filed” with the Commission or subject to Regulation 14A (17 CFR 240.14a-1-240.14a-104), other than as provided in Item 201(e) of Regulation S-K, or to the liabilities of section 18 of the Exchange Act (15 U.S.C. 78r).

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

Period	Total number of shares purchased	Average price paid per share	Total number of shares purchased as part of publicly announced plans or programs	Approximate dollar value of shares that may yet be purchased under the plans or programs
October 1 through October 31, 2022	2,196	\$ 18.51	—	—
November 1 through November 30, 2022	—	—	—	—
December 1 through December 31, 2022	217	22.55	—	—
Total ⁽¹⁾	2,413	18.88	—	—

(1) The shares listed as “purchased” during the fourth quarter of 2022 were withheld from employee’s vested restricted stock grants, as required for income taxes, and retired. The shares were not part of a publicly announced program to purchase common stock.

ITEM 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

General Overview

The Company is a leading independent provider of equipment and technology to the upstream oil and gas industry. With operations in approximately 554 locations across six continents, NOV designs, manufactures and services a comprehensive line of drilling, well servicing and offshore construction equipment; sells and rents drilling motors, specialized downhole tools, and rig instrumentation; performs inspection and internal coating of oilfield tubular products; provides drill cuttings separation, management and disposal systems and services; and provides expendables and spare parts used in conjunction with the Company’s large installed base of equipment. NOV also manufactures coiled tubing and high-pressure fiberglass and composite tubing and sells and rents advanced in-line inspection equipment to makers of oil country tubular goods. More recently, by applying its deep knowledge in technology, the Company has helped advance the transition toward sustainable energy. The Company has a long tradition of pioneering innovations which improve the cost-effectiveness, efficiency, safety, and environmental impact of oil and gas operations.

NOV’s revenue and operating results are principally directly related to the level of worldwide oil and gas drilling and production activities and the profitability and cash flow of oil and gas companies and drilling contractors, which in turn are affected by current and anticipated prices of oil and gas. Oil and gas prices have been and are likely to continue to be volatile. See Item 1A. “Risk Factors”. The Company conducts its operations through three business segments: Wellbore Technologies, Completion & Production Solutions and Rig Technologies. See Item 1. “Business”, for a discussion of each of these business segments.

Unless indicated otherwise, results of operations are presented in accordance with accounting principles generally accepted in the United States (“GAAP”). Certain reclassifications have been made to the prior year financial statements to conform with the 2022 presentation. The Company discloses Adjusted EBITDA (defined as operating profit excluding depreciation, amortization, gains and losses on sales of fixed assets and, when applicable, Other Items (as defined below under “Executive Summary”)) in its periodic earnings press releases and other public disclosures to provide investors additional information about the results of ongoing operations. See Non-GAAP Financial Measures and Reconciliations in Results of Operations for an explanation of our use of non-GAAP financial measures and reconciliations to their corresponding measures calculated in accordance with GAAP.

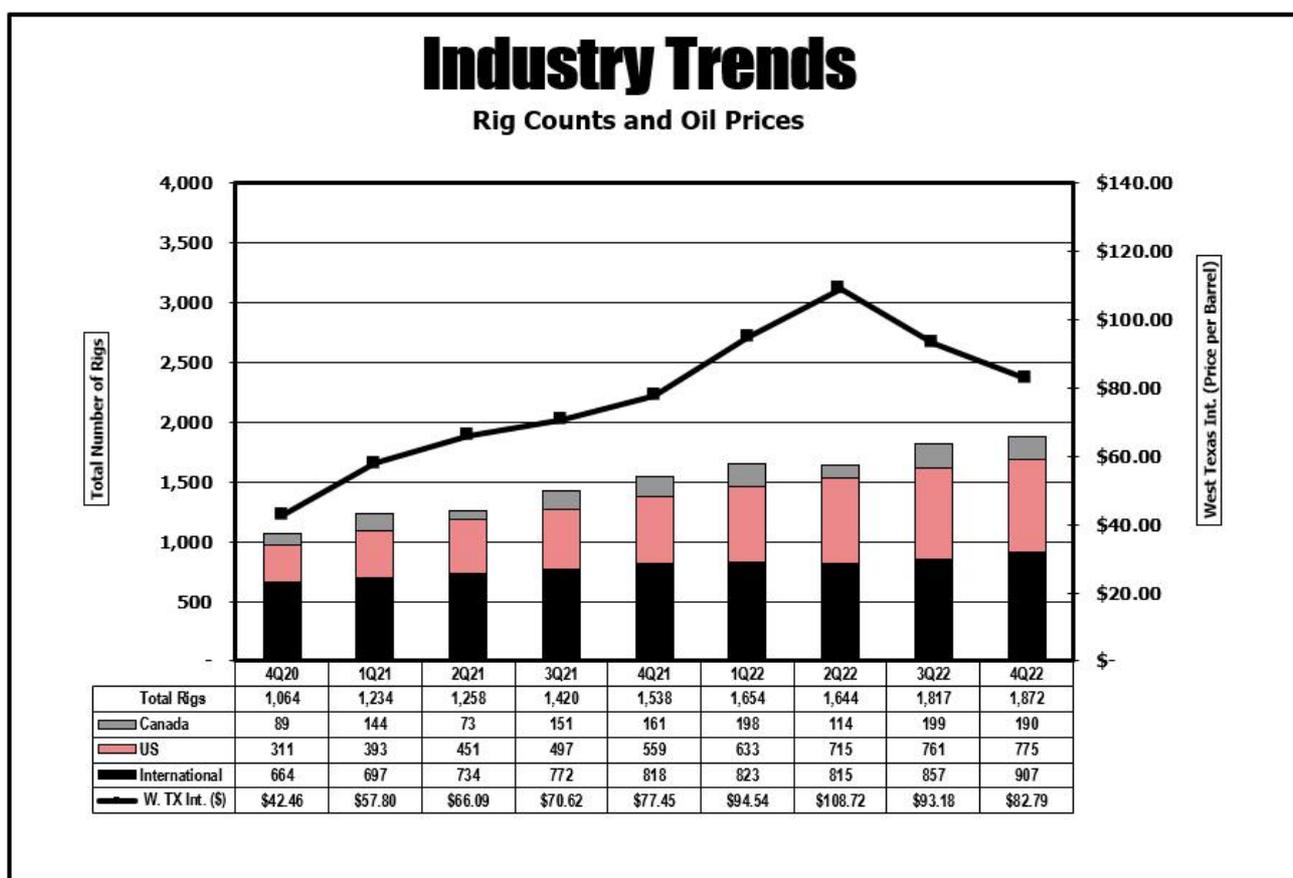
Operating Environment Overview

NOV’s results are dependent on, among other things, the level of worldwide oil and gas drilling, well remediation activity, the price of crude oil and natural gas, capital spending by exploration and production companies and drilling contractors, worldwide oil and gas inventory levels and, to a lesser degree, the level of investment in wind, solar and geothermal energy products. Key industry indicators for the past three years include the following:

	2022*	2021*	2020*	% increase (decrease)	
				2022 v 2021	2022 v 2020
Active Drilling Rigs:					
U.S.	721	475	436	51.8%	65.4%
Canada	175	132	90	32.6%	94.4%
International	851	755	825	12.7%	3.2%
Worldwide	1,747	1,362	1,351	28.3%	29.3%
West Texas Intermediate Crude Prices (per barrel)	\$ 94.81	\$ 67.99	\$ 39.33	39.4%	141.1%
Natural Gas Prices (\$/mmbtu)	\$ 6.38	\$ 3.88	\$ 2.01	64.4%	217.4%

* Averages for the years indicated. See sources below.

The following table details the U.S., Canadian, and international rig activity and West Texas Intermediate Oil prices for the past nine quarters ended December 31, 2022 on a quarterly basis:



Source: Rig count: Baker Hughes, Inc. (www.bakerhughes.com); West Texas Intermediate Crude Price, Natural Gas Price: US Department of Energy, Energy Information Administration (www.eia.doe.gov).

The average price per barrel of West Texas Intermediate Crude was \$94.81 in 2022, an increase of 39% over the average price for 2021 of \$67.99 per barrel. The average natural gas price in 2022 was \$6.38 per mmbtu, an increase of 64% percent compared to the 2021 average of \$3.88 per mmbtu. Average rig activity worldwide increased 28% percent for the full year in 2022 compared to 2021. The average crude oil price for the fourth quarter of 2022 was \$82.79 per barrel, and natural gas was \$5.51 per mmbtu.

At February 3, 2023, there were 1,008 rigs actively drilling in North America, compared to the fourth quarter average of 965 rigs, an increase of 4 percent. The price for West Texas Intermediate Crude Oil was \$73.39 per barrel at February 3, 2023, a decrease of 11 percent from the fourth quarter of 2022 average. The price for natural gas was \$2.41 per mmbtu at February 3, 2023, a decrease of 56 percent from the fourth quarter of 2022 average.

The Company is also becoming increasingly engaged with energy transition related opportunities and is currently involved in projects related to wind energy, solar, geothermal power, rare earth metal extraction, biogas production, and carbon sequestration. Additionally, the Company is investing in developing technologies and solutions that will support other energy transition related industry verticals. Management expects to see continued growth in these areas as low carbon power becomes a larger portion of the global energy supply.

EXECUTIVE SUMMARY

NOV Inc. generated revenue of \$7.24 billion in 2022, which was higher than the prior year due to higher industry activity as a result of higher oil and gas prices. The average 2022 worldwide rig count (as measured by Baker Hughes) increased significantly when compared to 2021.

For the year ended December 31, 2022, the Company reported an operating profit of \$264 million compared to an operating loss of \$134 million in 2021, and net income attributable to the Company of \$155 million, or \$0.39 per fully diluted share compared to a net loss of \$250 million or \$0.65 per share during 2021.

For the fourth quarter ended December 31, 2022, revenue was \$2.07 billion, a \$184 million or 10 percent increase compared to the third quarter of 2022. The Company reported net income of \$104 million, or \$0.26 per fully diluted share, an improvement of \$72 million, or \$0.18 per fully diluted share, from the third quarter of 2022. Compared to the fourth quarter of 2021, revenue increased \$556 million or 37 percent, and net income improved \$144 million.

During the fourth quarter of 2022, third quarter of 2022, and fourth quarter of 2021, pre-tax other items: goodwill, intangible and long-lived asset impairment charges, inventory charges, severance accruals, and other charges and credits (collectively "Other Items"), were \$(8) million, \$63 million, and \$8 million, respectively. Excluding the Other Items from all periods, fourth quarter 2022 Adjusted EBITDA was \$231 million, compared to \$195 million in the third quarter of 2022 and \$69 million in the fourth quarter of 2021.

Segment Performance

Wellbore Technologies

Wellbore Technologies generated revenues of \$762 million in the fourth quarter of 2022, an increase of three percent from the third quarter of 2022 and an increase of 32 percent from the fourth quarter of 2021. Operating profit was \$110 million, or 14.4 percent of sales, and included \$1 million in credits in Other Items. Adjusted EBITDA increased \$1 million sequentially and \$58 million from the prior year to \$146 million, or 19.2 percent of sales. Accelerating demand in international markets was partially offset by lingering supply chain disruptions, which delayed product deliveries.

Completion & Production Solutions

Completion & Production Solutions generated revenues of \$738 million in the fourth quarter of 2022, an increase of eight percent from the third quarter of 2022 and an increase of 34 percent from the fourth quarter of 2021. Operating profit was \$50 million, or 6.8 percent of sales. Adjusted EBITDA increased \$10 million sequentially and \$64 million from the prior year to \$66 million, or 8.9 percent of sales. Growing demand for completion equipment and greater progress on the segment's growing backlog of offshore projects drove improved results.

New orders booked improved 13 percent sequentially to \$557 million, representing a book-to-bill of 118 percent when compared to the \$472 million of orders shipped from backlog. As of December 31, 2022, backlog for capital equipment orders for Completion & Production Solutions was \$1.60 billion, an increase of 8 percent from the third quarter of 2022 and an increase of 24 percent from the fourth quarter of 2021.

Rig Technologies

Rig Technologies generated revenues of \$620 million in the fourth quarter of 2022, an increase of 21 percent from the third quarter of 2022 and an increase of 44 percent from the fourth quarter of 2021. Operating profit was \$80 million, or 12.9 percent of sales, and included a credit of \$11 million from Other Items. Adjusted EBITDA increased \$36 million sequentially and \$67 million from the prior year to \$88 million, or 14.2 percent of sales. Strong demand for aftermarket parts and services combined with improving global supply chains, and an increase in capital equipment deliveries drove the improved results.

New capital equipment orders booked during the quarter totaled \$254 million, representing a book-to-bill of 99 percent when compared to the \$257 million of orders shipped from backlog. At December 31, 2022, backlog for capital equipment orders for Rig Technologies was \$2.79 billion, an increase of \$26 million, or 1 percent, from backlog of \$2.77 billion at December 31, 2021.

Oil & Gas Equipment and Services Market and Outlook

During 2020, the COVID-19 outbreak rapidly spread across the world, driving sharp demand destruction for crude oil as countries took measures that curtailed economic activity to slow the spread of the outbreak. Companies across the industry responded with severe capital spending budget cuts, curtailed production, cost reductions, personnel layoffs, facility closures and bankruptcy filings. Towards

the end of 2020 and into 2021, commodity prices stabilized and began to recover resulting in improving industry activity levels in North America.

During 2021, greater availability of COVID-19 vaccines resulted in the gradual reopening of economies around the world. Pent-up consumer and industrial demand combined with government economic stimulus programs amplified the global recovery, improving economic activity, and driving higher demand for oil and gas. Oil and gas drilling activity levels began to increase in every major region of the world during 2021, reflecting this growing demand. In early 2022, the war in Ukraine roiled energy markets, driving commodity prices to their highest levels in nearly a decade, and forcing many countries to reconsider their sources of energy supplies and the importance of energy security.

Despite a recent pullback in commodity prices, tightening government fiscal policies, concerns regarding a global recession, ongoing global supply chain disruptions and rising inflationary costs, management believes the industry is in the early stages of an extended recovery. Diminished global oil and gas inventories and productive capacity resulting from underinvestment in the industry over the last seven years, along with rising energy security risks, and higher commodity prices should continue to spur increased oilfield activity and demand for the Company's equipment and technology.

NOV remains committed to improving organizational efficiencies while focusing on the development and commercialization of innovative products and services, including technologies to reduce environmental impact of oil and gas operations, and technologies to accelerate the energy transition that are responsive to the longer-term needs of NOV's customers. We believe this strategy will further advance the Company's competitive position in all market conditions.

Results of Operations

The following table summarizes the Company's revenue and operating profit (loss) by operating segment (in millions):

	Year Ended December 31,			% Change	
	2022	2021	2020	2022 vs. 2021	2021 vs. 2020
Revenue:					
Wellbore Technologies	\$ 2,777	\$ 1,959	\$ 1,867	41.8%	4.9%
Completion & Production Solutions	2,588	1,963	2,433	31.8%	(19.3)%
Rig Technologies	2,034	1,739	1,919	17.0%	(9.4)%
Eliminations	(162)	(137)	(129)	(18.2)%	(6.2)%
Total Revenue	\$ 7,237	\$ 5,524	\$ 6,090	31.0%	(9.3)%
Operating Profit (Loss):					
Wellbore Technologies	\$ 304	\$ 74	\$ (858)	310.8%	108.6%
Completion & Production Solutions	69	(65)	(977)	206.2%	93.3%
Rig Technologies	144	43	(362)	234.9%	111.9%
Eliminations and corporate costs	(253)	(186)	(228)	(36.0)%	18.4%
Total Operating Profit (Loss)	\$ 264	\$ (134)	\$ (2,425)	297.0%	94.5%
Operating Profit (Loss)%:					
Wellbore Technologies	10.9%	3.8%	(46.0)%		
Completion & Production Solutions	2.7%	(3.3)%	(40.2)%		
Rig Technologies	7.1%	2.5%	(18.9)%		
Total Operating Profit (Loss) %	3.6%	(2.4)%	(39.8)%		

Years Ended December 31, 2022 and December 31, 2021

Wellbore Technologies

Revenue from Wellbore Technologies for the year ended December 31, 2022 was \$2,777 million, an increase of \$818 million, or 42%, compared to the year ended December 31, 2021.

Operating profit from Wellbore Technologies was \$304 million for the year ended December 31, 2022, an increase of \$230 million compared to the year ended December 31, 2021. Operating profit percentage for 2022 was 10.9 percent compared to an operating profit percentage of 3.8 percent in 2021.

Included in operating profit are Other Items related to Russia impairment and other charges. Other Items included in operating profit for Wellbore Technologies were \$60 million for the year ended December 31, 2022 and \$31 million for the year ended December 31, 2021.

Completion & Production Solutions

Revenue from Completion & Production Solutions for the year ended December 31, 2022 was \$2,588 million, an increase of \$625 million, or 32%, compared to the year ended December 31, 2021.

Operating profit from Completion & Production Solutions was \$69 million for the year ended December 31, 2022 compared to an operating loss of \$65 million for 2021, an improvement of \$134 million. Operating profit percentage for 2022 was 2.7 percent compared to operating loss percentage of 3.3 percent in 2021.

Included in operating profit are Other Items related to Russia impairment and other charges, gains on sales of previously reserved inventory, severance costs and other charges and credits. Other items included in operating profit (loss) for Completion & Production Solutions was \$36 million for the year ended December 31, 2022 and \$1 million for the year ended December 31, 2021.

The Completion & Production Solutions segment monitors its capital equipment backlog to plan its business. New orders are added to backlog only when the Company receives a firm written order for major completion and production components or a signed contract related to a construction project. The capital equipment backlog was \$1,602 million at December 31, 2022, an increase of \$315 million, or 24 percent from backlog of \$1,287 million at December 31, 2021. Although numerous factors can affect the timing of revenue out of backlog (including, but not limited to, customer change orders and supplier accelerations or delays), the Company reasonably expects approximately \$1,299 million of revenue out of backlog in 2023 and approximately \$303 million of revenue out of backlog in 2024 and thereafter. At December 31, 2022, approximately 56 percent of the capital equipment backlog was for offshore products and approximately 69 percent of the capital equipment backlog was destined for international markets.

Rig Technologies

Revenue from Rig Technologies for the year ended December 31, 2022 was \$2,034 million, an increase of \$295 million, or 17%, compared to the year ended December 31, 2021.

Operating profit from Rig Technologies was \$144 million for the year ended December 31, 2022, an improvement of \$101 million compared to 2021. Operating profit percentage for 2022 was 7.1 percent compared to 2.5 percent in 2021.

Included in operating profit are Other Items related to Russia impairment and other charges, gains on sales of previously reserved inventory, severance costs and facility closure costs. Other Items included in operating profit for Rig Technologies was \$22 million for the year ended December 31, 2021.

The Rig Technologies segment monitors its capital equipment backlog to plan its business. New orders are added to backlog only when the Company receives a firm written order for major drilling rig components or a signed contract related to a construction project. The capital equipment backlog was \$2,793 million at December 31, 2022, an increase of \$26 million, or 1 percent, from backlog of \$2,767 million at December 31, 2021. Although numerous factors can affect the timing of revenue out of backlog (including, but not limited to, customer change orders and supplier accelerations or delays), the Company reasonably expects approximately \$799 million of revenue out of backlog in 2023 and the remaining in 2024 and thereafter. At December 31, 2022, approximately 28 percent of the capital equipment backlog was for offshore products and approximately 95 percent of the capital equipment backlog was destined for international markets.

Eliminations and corporate costs

Eliminations and corporate costs were \$253 million for the year ended December 31, 2022 compared to \$186 million for the year ended December 31, 2021. This change is primarily due to an increase in intersegment sales. Sales from one segment to another generally are priced at estimated equivalent commercial selling prices; however, segments originating an external sale are credited with the full profit to the Company. Eliminations and corporate costs include intercompany transactions conducted between the three reporting segments that are eliminated in consolidation, as well as corporate costs not allocated to the segments. Intercompany transactions within each reporting segment are eliminated within each reporting segment.

Other expense, net

Other expense, net was \$35 million for the year ended December 31, 2022 compared to \$23 million for the year ended December 31, 2021. The increase in expense was primarily due to higher foreign exchange losses for 2022.

Provision for income taxes

The effective tax rate for the year ended December 31, 2022 was 34.9 percent, compared to (6.5) percent for 2021. For the year-ended 2022, the effective tax rate was negatively impacted by current year losses in certain jurisdictions with no tax benefit, partially offset by favorable adjustments related to foreign currency translation gains and the utilization of losses and tax credits for prior year tax returns.

For the year ended December 31, 2021 the effective tax rate was negatively impacted by losses in certain jurisdictions with no tax benefit, partially offset by favorable adjustments related to utilization of losses and tax credits for prior year tax returns.

Results of Operations in 2021 Compared to 2020

Information related to the comparison of our operating results between the years 2021 and 2020 is included in "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" of our 2021 Form 10-K filed with the SEC and is incorporated by reference into this annual report on Form 10-K.

Non-GAAP Financial Measures and Reconciliations

This Form 10-K contains certain non-GAAP financial measures that management believes are useful tools for internal use and the investment community in evaluating NOV's overall financial performance. These non-GAAP financial measures are broadly used to value and compare companies in the oilfield services and equipment industry. Not all companies define these measures in the same way. In addition, these non-GAAP financial measures are not a substitute for financial measures prepared in accordance with GAAP and should therefore be considered only as supplemental to such GAAP financial measures.

The Company defines Adjusted EBITDA as operating profit excluding depreciation, amortization, gains and losses on sales of fixed assets and, when applicable, Other Items. Management believes this is important information to provide because it is used by management to evaluate the Company's operational performance and trends between periods and manage the business. Management also believes this information may be useful to investors and analysts to gain a better understanding of the Company's results of ongoing operations. Adjusted EBITDA is not intended to replace GAAP financial measures, such as Net Income.

Other items consist of charges and credits related to (in millions):

	Three Months Ended			Year Ended	
	December 31,		September 30,	December 31,	
	2022	2021	2022	2022	2021
Other items by category:					
Russia Impairment and other charges	\$ 2	\$ —	\$ 76	\$ 127	\$ —
Inventory	(10)	(1)	(13)	(35)	(13)
Severance, facility closures and other	—	9	—	22	72
Total other items	\$ (8)	\$ 8	\$ 63	\$ 114	\$ 59

The following tables set forth the reconciliation of Adjusted EBITDA to its most directly comparable GAAP financial measures (in millions):

	Three Months Ended			Year Ended	
	December 31,		September 30,	December 31,	
	2022	2021	2022	2022	2021
Operating profit (loss):					
Wellbore Technologies	\$ 110	\$ 50	\$ 74	\$ 304	\$ 74
Completion & Production Solutions	50	(16)	21	69	(65)
Rig Technologies	80	1	22	144	43
Eliminations and corporate costs	(78)	(50)	(62)	(253)	(186)
Total operating profit (loss)	\$ 162	\$ (15)	\$ 55	\$ 264	\$ (134)
Other Items, net:					
Wellbore Technologies	\$ (1)	\$ 2	\$ 31	\$ 60	\$ 31
Completion & Production Solutions	—	2	19	36	1
Rig Technologies	(11)	3	13	—	22
Corporate	4	1	—	18	5
Total Other Items	\$ (8)	\$ 8	\$ 63	\$ 114	\$ 59
(Gain)/Loss on Sales of Fixed Assets					
Wellbore Technologies	\$ —	\$ (3)	\$ 1	\$ —	\$ (1)
Completion & Production Solutions	1	—	—	(3)	(1)
Rig Technologies	—	—	(1)	—	(2)
Corporate	—	4	1	3	2
Total (Gain)/Loss on Sales of Fixed Assets	\$ 1	\$ 1	\$ 1	\$ —	\$ (2)
Depreciation & amortization:					
Wellbore Technologies	\$ 37	\$ 39	\$ 39	\$ 150	\$ 158
Completion & Production Solutions	15	16	16	62	62
Rig Technologies	19	17	18	73	71
Corporate	5	3	3	16	15
Total depreciation & amortization	\$ 76	\$ 75	\$ 76	\$ 301	\$ 306
Adjusted EBITDA:					
Wellbore Technologies	\$ 146	\$ 88	\$ 145	\$ 514	\$ 262
Completion & Production Solutions	66	2	56	164	(3)
Rig Technologies	88	21	52	217	134
Eliminations and corporate costs	(69)	(42)	(58)	(216)	(164)
Total Adjusted EBITDA	\$ 231	\$ 69	\$ 195	\$ 679	\$ 229
Reconciliation of Adjusted EBITDA:					
GAAP net income (loss) attributable to Company	\$ 104	\$ (40)	\$ 32	\$ 155	\$ (250)
Noncontrolling interests	(5)	(3)	3	—	5
Provision for income taxes	42	14	29	83	15
Interest expense	21	19	19	78	77
Interest income	(7)	(2)	(6)	(19)	(9)
Equity (income) loss in unconsolidated affiliate	(36)	(1)	(12)	(68)	5
Other (income) expense, net	43	(2)	(10)	35	23
Depreciation and amortization	76	75	76	301	306
(Gain)/Loss on Sales of Fixed Assets	1	1	1	—	(2)
Other Items	(8)	8	63	114	59
Total Adjusted EBITDA	\$ 231	\$ 69	\$ 195	\$ 679	\$ 229

Liquidity and Capital Resources

At December 31, 2022, the Company had cash and cash equivalents of \$1,069 million, and total debt of \$1,730 million. At December 31, 2021, cash and cash equivalents were \$1,591 million and total debt was \$1,713 million. As of December 31, 2022, approximately \$756 million of the \$1,069 million of cash and cash equivalents was held by our foreign subsidiaries and the earnings associated with this cash could be subject to foreign withholding taxes and incremental U.S. taxation if transferred among countries or repatriated to the U.S. If opportunities to invest in the U.S. are greater than available cash balances that are not subject to income tax, rather than repatriating cash, the Company may choose to borrow against its revolving credit facility.

The Company has a revolving credit facility with a borrowing capacity of \$2.0 billion through October 30, 2024, and a borrowing capacity of \$1.7 billion from October 31, 2024, to October 30, 2025. The Company has the right to increase the commitments under this agreement to an aggregate amount of up to \$3.0 billion upon the consent of only those lenders holding any such increase. Interest under the multicurrency facility is based upon LIBOR, NIBOR or CDOR plus 1.25% subject to a ratings-based grid or the U.S. prime rate. The credit facility contains a financial covenant regarding maximum debt-to-capitalization ratio of 60%. As of December 31, 2022, the Company was in compliance with a debt-to-capitalization ratio of 27.7% and had no outstanding letters of credit issued under the facility, resulting in \$2.0 billion of available funds.

A consolidated joint venture of the Company borrowed \$120 million against a \$150 million bank line of credit for the construction of a facility in Saudi Arabia. Interest under the bank line of credit is based upon LIBOR plus 1.40%. The bank line of credit contains a financial covenant regarding maximum debt-to-equity ratio of 75%. As of December 31, 2022, the joint venture was in compliance. Upon completion of the facility construction in the fourth quarter of 2022, the Company will not have future borrowings on the line of credit, with repayments beginning December 2022 and final payment no later than June 2032. As of December 31, 2022, the Company has a carrying value of \$114 million in borrowings related to this line of credit. The Company has \$10 million in payments related to this line of credit due in the next twelve months.

The Company's outstanding debt at December 31, 2022 consisted primarily of \$1,090 million in 3.95% Senior Notes, \$495 million in 3.60% Senior Notes, and other debt of \$145 million. The Company was in compliance with all covenants at December 31, 2022. Long-term lease liabilities totaled \$549 million at December 31, 2022.

The Company had \$504 million of outstanding letters of credit at December 31, 2022, primarily in the U.S. and Norway, that are under various bilateral letter of credit facilities. Letters of credit are issued as bid bonds, advanced payment bonds and performance bonds.

The following table summarizes our net cash provided by (used in) continuing operating activities, continuing investing activities and continuing financing activities for the periods presented (in millions):

	Year Ended December 31,		
	2022	2021	2020
Net cash provided by (used in) operating activities	\$ (179)	\$ 291	\$ 926
Net cash used in investing activities	(238)	(196)	(144)
Net cash used in financing activities	(96)	(189)	(259)

Significant uses of cash during 2022

- Cash flows used in operating activities were \$179 million. This included changes in the primary components of our working capital (inventories, contract assets, and accounts payable).
- Capital expenditures were \$214 million.
- Business acquisitions, net of cash acquired, were \$49 million.
- Payments of \$78 million in dividends to our shareholders.

Other

The effect of the change in exchange rates on cash was a decrease of \$9 million, \$7 million, and \$2 million for the years ended December 31, 2022, 2021 and 2020, respectively.

We believe that cash on hand, cash generated from operations and amounts available under our credit facilities and from other sources of debt will be sufficient to fund operations, working capital needs, capital expenditure requirements, dividends and financing obligations for the foreseeable future.

We may pursue additional acquisition candidates, but the timing, size or success of any acquisition effort and the related potential capital commitments cannot be predicted. We continue to expect to fund future cash acquisitions primarily with cash flow from operations and borrowings, including the unborrowed portion of the revolving credit facility or new debt issuances, but may also issue additional equity

either directly or in connection with acquisitions. There can be no assurance that additional financing for acquisitions will be available at terms acceptable to us.

As of December 31, 2022, the Company had \$62 million of unrecognized tax benefits. This represents the tax benefits associated with various tax positions taken, or expected to be taken, on domestic and international tax returns that have not been recognized in our financial statements due to uncertainty regarding their resolution. Due to the uncertainty of the timing of future cash flows associated with these unrecognized tax benefits, we are unable to make reasonably reliable estimates of the period of cash settlement, if any, with the respective taxing authorities. For further information related to unrecognized tax benefits, see Note 15 to the Consolidated Financial Statements.

Critical Accounting Policies and Estimates

In preparing the financial statements, we make assumptions, estimates and judgements that affect the amounts reported. We periodically evaluate our estimates and judgements that are most critical in nature which are related to revenue recognition under long-term construction contracts and impairment of goodwill and other indefinite-lived intangible assets. Our estimates are based on historical experience and on our future expectations that we believe are reasonable. The combination of these factors forms the basis for making judgements about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results are likely to differ from our current estimates and those differences may be material.

Revenue Recognition under Long-Term Construction Contracts

Revenue is recognized over-time for certain long-term construction contracts in the Completion & Production Solutions and Rig Technologies segments. These contracts include custom designs for customer-specific applications that are unique and require significant engineering efforts. Revenue is recognized as work progresses on each contract. Right to payment is enforceable for performance completed to date, including a reasonable profit.

We generally use the cost-to-cost (input) measure of progress for our contracts because it best depicts the transfer of assets to the customer which occurs as we incur costs. Estimating total revenue and cost at completion of long-term construction contracts is complex, subject to many variables and requires significant judgement. Under the cost-to-cost measure of progress, progress towards completion of each contract is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the performance obligation. Revenues, including estimated fees or profits, are recorded proportionally as costs are incurred. These costs include labor, materials, subcontractors' costs, and other direct costs. Any expected losses on a project are recorded in full in the period in which the loss becomes probable.

These long-term construction contracts generally include integrating a complex set of tasks and components into a single project or capability, so are accounted for as one performance obligation.

It is common for our long-term contracts to contain late delivery fees, work performance guarantees, and other provisions that can either increase or decrease the transaction price. We estimate variable consideration as the most likely amount we expect to receive. We include variable consideration in the estimated transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur, or when the uncertainty associated with the variable consideration is resolved. Our estimates of variable consideration and determination of whether to include estimated amounts in the transaction price are based on an assessment of our anticipated performance and historical, current and forecasted information that is reasonably available to us. Net revenue recognized from performance obligations satisfied in previous periods was \$37 million for the year ended December 31, 2022 primarily due to change orders.

Goodwill

The Company has approximately \$1.5 billion of goodwill as of December 31, 2022. Generally accepted accounting principles require the Company to test goodwill for impairment at least annually or more frequently whenever events or circumstances indicate that goodwill might be impaired. Events or circumstances which could indicate a potential impairment include (but are not limited to) a significant sustained reduction in worldwide oil and gas prices or drilling; a significant sustained reduction in profitability or cash flow of oil and gas companies or drilling contractors; a sustained reduction in the market capitalization of the Company; a significant sustained reduction in capital investment by drilling companies and oil and gas companies; or a significant sustained increase in worldwide inventories of oil or gas.

The Company performs its goodwill test based on the Company's discounted cash flow analysis. The discounted cash flow is based on management's forecast of operating performance for each reporting unit. The two main assumptions used in measuring goodwill impairment, which bear the risk of change and could impact the Company's goodwill impairment analysis, include the cash flow from operations from each of the Company's individual reporting units and the weighted average cost of capital. The starting point for each

of the reporting unit's cash flow from operations is the detailed annual plan or updated forecast. Cash flows beyond the specific operating plans were estimated using a terminal value calculation, which incorporated historical and forecasted financial cyclical trends for each reporting unit and considered long-term earnings growth rates. The financial and credit market volatility directly impacts our fair value measurement through our weighted average cost of capital that we use to determine our discount rate. During times of volatility, significant judgement must be applied to determine whether credit changes are a short-term or long-term trend. The valuation techniques used in the annual test were consistent with those used during previous testing. The inputs used in the annual test were updated for current market conditions and forecasts.

Inventory Reserves

Inventory is carried at the lower of cost or estimated net realizable value. The Company reviews historical usage of inventory on-hand, assumptions about future demand and market conditions, current cost and estimates about potential alternative uses, which are limited, to estimate net realizable value. The Company's inventory consists of finished goods, spare parts, work in process, and raw materials to support ongoing manufacturing operations and the Company's large installed base of highly specialized oilfield equipment. The Company's estimated carrying value of inventory depends upon demand largely driven by levels of oil and gas well drilling and remediation activity, which depends in turn upon oil and gas prices, the general outlook for economic growth worldwide, available financing for the Company's customers, political stability and governmental regulation in major oil and gas producing areas, and the potential obsolescence of various types of equipment we sell, among other factors.

During 2022, 2021, and 2020 we recorded inventory provision charges (credits) to inventory reserves of \$(18) million, \$73 million, and \$367 million, respectively, consisting primarily of obsolete and surplus inventories. At December 31, 2022 and 2021, inventory reserves totaled \$378 and \$444 million, or 17.3% and 25.0% of gross inventory, respectively.

The Company has continued to invest in developing and advancing products and technologies, contributing to the obsolescence of certain older products in a dramatically-shifted and more highly competitive recovering market, but also ensuring that the portfolio of products and services offered by the Company will meet customer needs in 2022 and beyond.

We will continue to assess our inventory levels and inventory offerings for our customers, which could require the Company to record additional allowances to reduce the value of its inventory. Such changes in our estimates or assumptions could be material under weaker market conditions or outlook.

Income Taxes

The Company is U.S. registered and is subject to income taxes in the U.S. The Company operates through various subsidiaries in a number of countries throughout the world. Income taxes have been recorded based upon the tax laws and rates of the countries in which the Company operates and income is earned.

The Company's annual tax provision is based on taxable income, statutory rates and tax planning opportunities available in the various jurisdictions in which it operates. The determination and evaluation of the annual tax provision and tax positions involves the interpretation of the tax laws in the various jurisdictions in which the Company operates. It requires significant judgement and the use of estimates and assumptions regarding significant future events such as the amount, timing and character of income, deductions and tax credits. Changes in tax laws, regulations, and treaties, foreign currency exchange restrictions or the Company's level of operations or profitability in each jurisdiction could impact the tax liability in any given year. The Company also operates in many jurisdictions where the tax laws relating to the pricing of transactions between related parties are open to interpretation, which could potentially result in aggressive tax authorities asserting additional tax liabilities with no offsetting tax recovery in other countries. In 2022, the Company received and paid a \$51 million transfer pricing tax assessment in Denmark. The Company and its advisors believe the assessment is without merit. The Company is presently appealing and believes it will be reimbursed following a successful appeals process. The payment has been recorded as a long-term receivable.

The Company maintains liabilities for estimated tax exposures in jurisdictions of operation. The annual tax provision includes the impact of income tax charges and benefits for changes to liabilities that the Company considers appropriate, as well as related interest. Tax exposure items primarily include potential challenges to intercompany pricing and certain operating expenses that may not be deductible in foreign jurisdictions. These exposures are resolved primarily through the settlement of audits within these tax jurisdictions or by judicial means. The Company is subject to audits by federal, state and foreign jurisdictions which may result in proposed assessments. The Company believes that an appropriate liability has been established for estimated exposures under the guidance in ASC Topic 740 "Income Taxes" ("ASC Topic 740"). However, actual results may differ materially from these estimates. The Company reviews these liabilities quarterly and to the extent audits or other events result in an adjustment to the liability accrued for a prior year, the effect will be recognized in the period of the event.

The Company currently has recorded valuation allowances that the Company intends to maintain until it is more likely than not the deferred tax assets will be realized. Income tax expense recorded in the future will be reduced to the extent of decreases in the Company's valuation allowances. The realization of remaining deferred tax assets is primarily dependent on future taxable income. Any reduction

in future taxable income including but not limited to any future restructuring activities may require that the Company record an additional valuation allowance against deferred tax assets. An increase in the valuation allowance would result in additional income tax expense in such period and could have a significant impact on future earnings.

Recently Issued and Recently Adopted Accounting Standards

See Note 2 – Summary of Significant Accounting Policies (Part IV, Item 15 of this Form 10-K) for further discussion.

Forward-Looking Statements

The Private Securities Litigation Reform Act of 1995 provides safe harbor provisions for forward-looking information. Some of the information in this document contains, or has incorporated by reference, forward-looking statements. Statements that are not historical facts, including statements about our beliefs and expectations, are forward-looking statements. Forward-looking statements typically are identified by use of terms such as “may,” “believe,” “plan,” “will,” “expect,” “anticipate,” “estimate,” “should,” “forecast,” and similar words, although some forward-looking statements are expressed differently. We may also provide oral or written forward-looking information in other materials we release to the public. Forward-looking information involves risk and uncertainties and reflects our best judgment based on current information. You should be aware that our actual results could differ materially from results anticipated in the forward-looking statements due to a number of factors, including but not limited to changes in oil and gas prices, customer demand for our products and worldwide economic activity, including matters related to recent Russian sanctions. Given these uncertainties, current or prospective investors are cautioned not to place undue reliance on any such forward-looking statements. We undertake no obligation to update any such factors or forward-looking statements to reflect future events or developments. You should also consider carefully the statements under “Risk Factors” which address additional factors that could cause our actual results to differ from those set forth in the forward-looking statements, and additional disclosures we make in our press releases and Forms 10-Q, and 8-K. We also suggest that you listen to our quarterly earnings release conference calls with financial analysts.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to changes in foreign currency exchange rates and interest rates. Additional information concerning each of these matters follows:

Foreign Currency Exchange Rates

We have extensive operations in foreign countries. The net assets and liabilities of these operations are exposed to changes in foreign currency exchange rates, although such fluctuations have a muted effect on net income since the functional currency for the majority of them is the local currency. These operations also have net assets and liabilities not denominated in the functional currency, which exposes us to changes in foreign currency exchange rates that impact income. During the years ended December 31, 2022, 2021 and 2020, the Company reported foreign currency losses of \$25 million, \$16 million and \$2 million, respectively. Gains and losses are primarily due to exchange rate fluctuations related to monetary asset balances denominated in currencies other than the functional currency and adjustments to our hedged positions as a result of changes in foreign currency exchange rates. Currency exchange rate fluctuations may create losses in future periods to the extent we maintain net monetary assets and liabilities not denominated in the functional currency of the NOV operation.

Some of our revenues in foreign countries are denominated in U.S. dollars, and therefore, changes in foreign currency exchange rates impact our earnings to the extent that costs associated with those U.S. dollar revenues are denominated in the local currency. Similarly, some of our revenues are denominated in foreign currencies, but have associated U.S. dollar costs, which also give rise to foreign currency exchange rate exposure. In order to mitigate that risk, we may utilize foreign currency forward contracts to better match the currency of our revenues and associated costs. We do not use foreign currency forward contracts for trading or speculative purposes.

The Company had other financial market risk sensitive instruments (cash balances, overdraft facilities, accounts receivable and accounts payable) denominated in foreign currencies with transactional exposures totaling \$340 million and translation exposures totaling \$325 million as of December 31, 2022. The Company estimates that a hypothetical 10% movement of all applicable foreign currency exchange rates on the transactional exposures could affect net income by \$27 million and the translational exposures could affect Other Comprehensive Income by \$33 million.

The counterparties to forward contracts are major financial institutions. The credit ratings and concentration of risk of these financial institutions are monitored on a continuing basis. Because these contracts are net-settled the Company’s credit risk with the counterparties is limited to the foreign currency rate differential at the end of the contract.

Interest Rate Risk

At December 31, 2022, borrowings consisted of \$1,090 million in 3.95% Senior Notes, \$495 million in 3.60% Senior Notes, and other debt of \$145 million. There were no outstanding letters of credit issued under the credit facility resulting in \$2.0 billion of funds available under this credit facility. Additionally, the Company's joint venture has a \$120 million bank line of credit for the construction of a facility in Saudi Arabia. Interest under the bank line of credit is based upon LIBOR plus 1.40%. Occasionally a portion of borrowings under our credit facility could be denominated in multiple currencies which could expose us to market risk with exchange rate movements. These instruments carry interest at a pre-agreed upon percentage point spread from either LIBOR, NIBOR or CDOR, or at the U.S. prime rate. Under our credit facility, we may, at our option, fix the interest rate for certain borrowings based on a spread over LIBOR, NIBOR or CDOR for 30 days to six months. Our objective is to maintain a portion of our debt in variable rate borrowings for the flexibility obtained regarding early repayment without penalties and lower overall cost as compared with fixed-rate borrowings.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Attached hereto and a part of this report are financial statements and supplementary data listed in Item 15. "Exhibits and Financial Statement Schedules."

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE.

None.

ITEM 9A. CONTROLS AND PROCEDURES

(i) Evaluation of disclosure controls and procedures

As required by SEC Rule 13a-15(b), we have evaluated, under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this report. Our disclosure controls and procedures are designed to provide reasonable assurance that the information required to be disclosed by the Company in reports that it files under the Exchange Act is accumulated and communicated to the Company's management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure and is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC. Our principal executive officer and principal financial officer have concluded that our current disclosure controls and procedures were effective as of December 31, 2022 at the reasonable assurance level.

Pursuant to section 302 of the Sarbanes-Oxley Act of 2002, our Chief Executive Officer and Chief Financial Officer have provided certain certifications to the Securities and Exchange Commission. These certifications are included herein as Exhibits 31.1 and 31.2.

(ii) Internal Control Over Financial Reporting

(a) Management's annual report on internal control over financial reporting.

The Company's management report on internal control over financial reporting is set forth in this annual report on Page 48 and is incorporated herein by reference.

(b) Changes in internal control

There were no changes in the Company's internal control over financial reporting that occurred during the Company's last fiscal quarter covered by this report that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS.

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Incorporated by reference to the definitive Proxy Statement for the 2023 Annual Meeting of Stockholders.

ITEM 11. EXECUTIVE COMPENSATION

Incorporated by reference to the definitive Proxy Statement for the 2023 Annual Meeting of Stockholders.

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

Incorporated by reference to the definitive Proxy Statement for the 2023 Annual Meeting of Stockholders.

Securities Authorized for Issuance Under Equity Compensation Plans.

The following table sets forth information as of our fiscal year ended December 31, 2022, with respect to compensation plans under which our common stock may be issued:

Plan Category	Number of securities to be issued upon exercise of warrants and rights (a)	Weighted-average exercise price of outstanding rights (b)	Number of securities remaining available for equity compensation plans (excluding securities reflected in column (a)) ('c') (1)
Equity compensation plans approved by security holders	21,080,388	\$ 42.46	17,326,010
Equity compensation plans not approved by security holders	—	—	—
Total	21,080,388	\$ 42.46	17,326,010

(1) Shares could be issued through equity instruments other than stock options, warrants or rights.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Incorporated by reference to the definitive Proxy Statement for the 2023 Annual Meeting of Stockholders.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Incorporated by reference to the definitive Proxy Statement for the 2023 Annual Meeting of Stockholders.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

Financial Statements and Exhibits

(1) Financial Statements

The following financial statements are presented in response to Part II, Item 8:

	<u>Page</u>
<u>Consolidated Balance Sheets</u>	52
<u>Consolidated Statements of Income (Loss)</u>	53
<u>Consolidated Statements of Comprehensive Income (Loss)</u>	54
<u>Consolidated Statements of Cash Flows</u>	55
<u>Consolidated Statements of Stockholders' Equity</u>	56
<u>Notes to Consolidated Financial Statements</u>	57

The report of NOV Inc.'s independent registered public accounting firm (PCAOB ID: 42) with respect to the above-referenced financial statements and their report on internal control over financial reporting are included before the above-referenced reports. Their consent appears in Exhibit 23.1 of this Form 10-K.

(2) Financial Statement Schedule

<u>Schedule II – Valuation and Qualifying Accounts</u>	84
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All schedules, other than Schedule II, are omitted because they are not applicable, not required or the information is included in the financial statements or notes thereto.

(1) Exhibits

3.1	<u>Sixth Amended and Restated Certificate of Incorporation of NOV Inc. (Exhibit 3.1)(1)</u>
3.2	<u>Amended and Restated By-laws of NOV Inc. (Exhibit 3.2)(1)</u>
4.1	<u>Description of Securities (2)</u>
4.2	<u>Indenture, dated November 15, 2012, between National Oilwell Varco, Inc. and U.S. Bank National Association. (Exhibit 4.1)(3)</u>
4.3	<u>Third Supplemental Indenture, dated November 20, 2012, between National Oilwell Varco, Inc. and U.S. Bank National Association. (Exhibit 4.6)(3)</u>
4.4	<u>Fourth Supplemental Indenture, dated November 14, 2019, between National Oilwell Varco, Inc. and Wells Fargo Bank, National Association, as successor trustee. (Exhibit 4.2)(4)</u>
10.1	<u>Credit Agreement, dated as of June 27, 2017, among National Oilwell Varco, Inc., the financial institutions signatory thereto, including Wells Fargo Bank, N.A., in its capacity, among others, as Administrative Agent, Co-Lead Arranger and Joint Book Runner (Exhibit 3.1)(5)</u>
10.2	<u>Amendment No. 1 to Credit Agreement, dated as of October 30, 2019 (6)</u>
10.3	<u>NOV Inc. Long-Term Incentive Plan, as amended and restated. (7)*</u>
10.4	<u>Form of Employee Stock Option Agreement. (Exhibit 10.1)(8)</u>
10.5	<u>Form of Non-Employee Director Stock Option Agreement. (Exhibit 10.2)(8)</u>
10.6	<u>Form of Performance-Based Restricted Stock. (18 Month) Agreement (Exhibit 10.1)(9)</u>
10.7	<u>Form of Performance-Based Restricted Stock. (36 Month) Agreement (Exhibit 10.2)(9)</u>
10.8	<u>Form of Performance Award Agreement (Exhibit 10.1)(10)</u>

10.9 [Form of Executive Employment Agreement. \(Exhibit 10.1\)\(11\)](#)

10.10 [Form of Executive Severance Agreement. \(Exhibit 10.2\)\(12\)](#)

10.11	Form of Employee Nonqualified Stock Option Grant Agreement (13)
10.12	Form of Restricted Stock Agreement (13)
10.13	Form of Performance Award Agreement (13)
10.14	Form of Employee Nonqualified Stock Option Grant Agreement (2019) (14)
10.15	Form on Restricted Stock Agreement (2019) (14)
10.16	Form of Performance Award Agreement (2019) (14)
10.17	Form of Performance Award Agreement (2020) (15)
10.18	Form of Performance Award Agreement (2021) (16)
10.19	Form of Employee Nonqualified Stock Option Grant Agreement (2022) (17)
	Form of Restricted Stock Unit Agreement (2022) (17)
	Form of Performance Award Agreement (2022) (17)
10.20	NOV Inc. Retirement Policy for Equity Awards (Exhibit 10.1) (18)
10.21	Form of Non-Employee Director Restricted Stock Unit Agreement (2022) (19)
21.1	Subsidiaries of the Registrant (20)
23.1	Consent of Ernst & Young LLP. (20)
24.1	Power of Attorney (included on signature page hereto) (20)
31.1	Certification pursuant to Rule 13a-14a and Rule 15d-14(a) of the Securities and Exchange Act, as amended. (20)
31.2	Certification pursuant to Rule 13a-14a and Rule 15d-14(a) of the Securities and Exchange Act, as amended. (20)
32.1	Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. (21)
32.2	Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. (21)
95	Mine Safety Information pursuant to section 1503 of the Dodd-Frank Act. (20)
101.INS	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)

* Compensatory plan or arrangement for management or others.

- (1) Filed as an Exhibit to our Current Report on Form 8-K filed on December 22, 2020.
- (2) Filed as an Exhibit to our Annual Report on Form 10-K filed on February 12, 2021.
- (3) Filed as an Exhibit to our Current Report on Form 8-K filed on November 20, 2012.
- (4) Filed as an Exhibit to our Current Report on Form 8-K filed on November 19, 2019.
- (5) Filed as an Exhibit to our Current Report on Form 8-K filed on June 28, 2017.
- (6) Filed as an Exhibit to our Current Report on Form 8-K filed on November 4, 2019.
- (7) Filed as Appendix I to our Proxy Statement filed on April 8, 2022.
- (8) Filed as an Exhibit to our Current Report on Form 8-K filed on February 23, 2006.
- (9) Filed as an Exhibit to our Current Report on Form 8-K filed on March 27, 2007.
- (10) Filed as an Exhibit to our Current Report on Form 8-K filed on March 27, 2013.

- (11) Filed as an Exhibit to our Current Report on Form 8-K filed on December 4, 2020.
- (12) Filed as an Exhibit to our Current Report on Form S-K filed on November 21, 2014.
- (13) Filed as an Exhibit to our Current Report on Form 8-K filed on February 26, 2016.
- (14) Filed as an Exhibit to our Quarterly Report on Form 10-Q filed on April 26, 2019.
- (15) Filed as an Exhibit to our Quarterly Report on Form 10-Q filed on April 28, 2020.
- (16) Filed as an Exhibit to our Quarterly Report on Form 10-Q filed on April 28, 2021.
- (17) Filed as an Exhibit to our Current Report on Form 8-K filed on February 22, 2022.
- (18) Filed as an Exhibit to our Current Report on Form 8-K filed on July 12, 2022.
- (19) Filed as an Exhibit to our Quarterly Report on Form 10-Q filed on July 28, 2022.
- (20) Filed with this Form 10-K.
- (21) Furnished with this Form 10-K.

We hereby undertake, pursuant to Regulation S-K, Item 601(b), paragraph (4) (iii), to furnish to the U.S. Securities and Exchange Commission, upon request, all constituent instruments defining the rights of holders of our long-term debt not filed herewith.

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.

NOV INC.

Dated: February 14, 2023

By: /s/ CLAY C. WILLIAMS
Clay C. Williams
Chairman, President and Chief Executive Officer

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

Each person whose signature appears below in so signing, constitutes and appoints Clay C. Williams and Jose A. Bayardo, and each of them acting alone, his/her true and lawful attorney-in-fact and agent, with full power of substitution, for him/her and in his/her name, place and stead, in any and all capacities, to execute and cause to be filed with the Securities and Exchange Commission any and all amendments to this report, and in each case to file the same, with all exhibits thereto and other documents in connection therewith, and hereby ratifies and confirms all that said attorney-in-fact or his/her substitute or substitutes may do or cause to be done by virtue hereof.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
/s/ CLAY C. WILLIAMS Clay C. Williams	Chairman, President and Chief Executive Officer	February 14, 2023
/s/ JOSE A. BAYARDO Jose A. Bayardo	Senior Vice President and Chief Financial Officer	February 14, 2023
/s/ CHRISTY H. NOVAK Christy H. Novak	Vice President, Corporate Controller and Chief Accounting Officer	February 14, 2023
/s/ GREG L. ARMSTRONG Greg L. Armstrong	Director	February 14, 2023
/s/ MARCELA E. DONADIO Marcela E. Donadio	Director	February 14, 2023
/s/ BEN A. GUILL Ben A. Guill	Director	February 14, 2023
/s/ JAMES T. HACKETT James T. Hackett	Director	February 14, 2023
/s/ DAVID D. HARRISON David D. Harrison	Director	February 14, 2023
/s/ ERIC L. MATTSON Eric L. Mattson	Director	February 14, 2023
/s/ MELODY B. MEYER Melody B. Meyer	Director	February 14, 2023
/s/ WILLIAM R. THOMAS William R. Thomas	Director	February 14, 2023
/s/ ROBERT S. WELBORN Robert S. Welborn	Director	February 14, 2023

MANAGEMENT’S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

NOV Inc.’s management is responsible for establishing and maintaining adequate internal control over financial reporting. NOV Inc.’s internal control system was 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.

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 judgement 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, though not eliminate, this risk.

Management has used the 2013 framework set forth in the report entitled “Internal Control—Integrated Framework” published by the Committee of Sponsoring Organizations (“COSO”) of the Treadway Commission to evaluate the effectiveness of the Company’s internal control over financial reporting. Management has concluded that the Company’s internal control over financial reporting was effective as of December 31, 2022.

The effectiveness of our internal control over financial reporting as of December 31, 2022, has been audited by Ernst & Young LLP, the independent registered public accounting firm which also has audited the Company’s Consolidated Financial Statements included in this Annual Report on Form 10-K.

/s/ Clay C. Williams

Clay C. Williams

Chairman, President and Chief Executive Officer

/s/ Jose A. Bayardo

Jose A. Bayardo

Senior Vice President and Chief Financial Officer

Houston, Texas

February 14, 2023

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of NOV Inc.

Opinion on Internal Control Over Financial Reporting

We have audited NOV Inc.'s internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, NOV Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the 2022 consolidated financial statements of the Company and our report dated February 14, 2023, expressed an unqualified opinion thereon.

Basis for Opinion

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

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

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

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

/s/ Ernst & Young LLP

Houston, Texas
February 14, 2023

To the Shareholders and the Board of Directors of NOV Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of NOV Inc. (the Company) as of December 31, 2022 and 2021, the related consolidated statements of income (loss), comprehensive income (loss), cash flows and stockholders' equity for each of the three years in the period ended December 31, 2022, and the related notes and financial statement schedule listed in the Index at Item 15(2) (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 14, 2023, expressed an unqualified opinion thereon.

Basis for Opinion

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

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

Critical Audit Matter

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

Revenue recognition under long-term construction contracts

<i>Description of the Matter</i>	As discussed in Note 2 to the consolidated financial statements, the Company recognizes revenue over time for certain long-term construction contracts using an input method described as the cost-to-cost approach to determine the extent of progress towards completion of performance obligations. Under the cost-to-cost approach, the determination of the progress towards completion requires management to prepare estimates of the costs to complete. For material fixed price contracts, estimates are subject to considerable judgment and could be impacted by such items as changes to the project schedule and the cost of labor and material.
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Auditing management's estimate of the progress towards completion of its projects involved subjectivity as the costs to complete forecasts of fixed price contracts are subject to considerable judgment.

<i>How We Addressed the Matter in Our Audit</i>	We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's estimate of the progress towards completion of its projects, including key controls related to monitoring projected project costs.
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To test the Company's estimate of the progress towards completion of its projects, we performed audit procedures that included, among others, testing the significant assumptions discussed above to develop the estimated cost to complete and testing the completeness and accuracy of the underlying data. To assess management's estimated costs, we performed audit procedures that included, among others, agreeing the estimates to supporting documentation; conducting interviews with project personnel; attending selected project review meetings; performing observations of select projects to observe progress; and performing lookback analyses to historical actual costs to assess management's ability to estimate.

/s/ Ernst & Young LLP

We have served as the Company's auditor since at least 1995, but we are unable to determine the specific year.

Houston, Texas
February 14, 2023

NOV INC.
CONSOLIDATED BALANCE SHEETS
(In millions, except share data)

	December 31,	
	2022	2021
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 1,069	\$ 1,591
Receivables, net	1,739	1,321
Inventories, net	1,813	1,331
Contract assets	685	461
Prepaid and other current assets	187	198
Total current assets	5,493	4,902
Property, plant and equipment, net	1,781	1,823
Lease right-of-use assets, operating	346	361
Lease right-of-use assets, financing	171	176
Goodwill	1,505	1,527
Intangibles, net	490	503
Investment in unconsolidated affiliates	117	50
Other assets	232	208
Total assets	\$ 10,135	\$ 9,550
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 906	\$ 612
Accrued liabilities	959	778
Contract liabilities	444	392
Current portion of lease liabilities	87	99
Current portion of long-term debt	13	5
Accrued income taxes	28	24
Total current liabilities	2,437	1,910
Long-term debt	1,717	1,708
Lease liabilities	549	576
Deferred income taxes	68	66
Other liabilities	230	226
Total liabilities	5,001	4,486
Commitments and contingencies		
Stockholders' equity:		
Common stock - par value \$.01; 1 billion shares authorized; 392,832,752 and 392,673,077 shares issued and outstanding at December 31, 2022 and December 31, 2021	4	4
Additional paid-in capital	8,754	8,685
Accumulated other comprehensive loss	(1,593)	(1,546)
Retained earnings	(2,069)	(2,146)
Total Company stockholders' equity	5,096	4,997
Noncontrolling interests	38	67
Total stockholders' equity	5,134	5,064
Total liabilities and stockholders' equity	\$ 10,135	\$ 9,550

The accompanying notes are an integral part of these statements.

NOV INC.
CONSOLIDATED STATEMENTS OF INCOME (LOSS)
(In millions, except per share data)

	Year Ended December 31,		
	2022	2021	2020
Revenue			
Sales	\$ 4,873	\$ 3,769	\$ 4,409
Services	1,482	1,114	1,091
Rental	882	641	590
Total	<u>7,237</u>	<u>5,524</u>	<u>6,090</u>
Cost of revenue			
Sales	4,146	3,369	4,313
Services	1,186	951	929
Rental	571	430	414
Total	<u>5,903</u>	<u>4,750</u>	<u>5,656</u>
Gross profit	1,334	774	434
Selling, general and administrative	1,070	908	968
Goodwill and indefinite-lived intangible asset impairment	—	—	1,378
Long-lived asset impairment	—	—	513
Operating profit (loss)	<u>264</u>	<u>(134)</u>	<u>(2,425)</u>
Interest and financial costs	(78)	(77)	(84)
Interest income	19	9	7
Equity income (loss) in unconsolidated affiliates	68	(5)	(260)
Other income (expense), net	(35)	(23)	(17)
Income (Loss) before income taxes	238	(230)	(2,779)
Provision (benefit) for income taxes	83	15	(242)
Net income (loss)	<u>155</u>	<u>(245)</u>	<u>(2,537)</u>
Net income (loss) attributable to noncontrolling interests	—	5	5
Net income (loss) attributable to Company	<u>\$ 155</u>	<u>\$ (250)</u>	<u>\$ (2,542)</u>
Net income (loss) attributable to Company per share:			
Basic	<u>\$ 0.40</u>	<u>\$ (0.65)</u>	<u>\$ (6.62)</u>
Diluted	<u>\$ 0.39</u>	<u>\$ (0.65)</u>	<u>\$ (6.62)</u>
Cash dividends per share	<u>\$ 0.20</u>	<u>\$ 0.05</u>	<u>\$ 0.05</u>
Weighted average shares outstanding:			
Basic	<u>390</u>	<u>386</u>	<u>384</u>
Diluted	<u>394</u>	<u>386</u>	<u>384</u>

The accompanying notes are an integral part of these statements.

NOV INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(In millions)

	Year Ended December 31,		
	2022	2021	2020
Net income (loss)	\$ 155	\$ (245)	\$ (2,537)
Other comprehensive income (loss):			
Currency translation adjustments	(30)	(34)	(78)
Derivative financial instruments, net of tax	(11)	(12)	23
Change in defined benefit plans, net of tax	(6)	9	(31)
Comprehensive income (loss)	108	(282)	(2,623)
Net income (loss) attributable to noncontrolling interests	-	5	5
Comprehensive income (loss) attributable to Company	<u>\$ 108</u>	<u>\$ (287)</u>	<u>\$ (2,628)</u>

The accompanying notes are an integral part of these statements.

NOV INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In millions)

	Year Ended December 31,		
	2022	2021	2020
Cash flows from operating activities:			
Net income (loss)	\$ 155	\$ (245)	\$ (2,537)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization	301	306	352
Russia/Belarus Impairment and loss on assets held for sale	127	—	—
Deferred income taxes	(2)	11	(65)
Stock-based compensation	67	78	105
Loss on extinguishment of debt	—	7	8
Equity (income) loss in unconsolidated affiliates	(68)	5	260
Goodwill and indefinite-lived intangible asset impairment	—	—	1,378
Long-lived asset impairment	—	—	513
Provision for inventory losses	(18)	73	367
Other, net	18	16	16
Change in operating assets and liabilities, net of acquisitions:			
Receivables	(440)	(52)	574
Inventories	(480)	17	429
Contract assets	(220)	150	30
Prepaid and other current assets	6	28	22
Accounts payable	289	118	(226)
Accrued liabilities	101	(97)	(110)
Contract liabilities	52	27	(74)
Income taxes payable	5	(28)	9
Other assets/liabilities, net	(72)	(123)	(125)
Net cash provided by (used in) operating activities	<u>(179)</u>	<u>291</u>	<u>926</u>
Cash flows from investing activities:			
Purchases of property, plant and equipment	(214)	(201)	(226)
Business acquisitions, net of cash acquired	(49)	(52)	(14)
Other, net	25	57	96
Net cash used in investing activities	<u>(238)</u>	<u>(196)</u>	<u>(144)</u>
Cash flows from financing activities:			
Borrowings against lines of credit and other debt	20	60	36
Payments against lines of credit and other debt	(4)	(183)	(217)
Financing leases	(24)	(26)	(31)
Cash dividends paid	(78)	(20)	(19)
Debt issuance and extinguishment costs	—	(7)	(8)
Other	(10)	(13)	(20)
Net cash used in financing activities	<u>(96)</u>	<u>(189)</u>	<u>(259)</u>
Effect of exchange rates on cash	(9)	(7)	(2)
Increase (decrease) in cash and cash equivalents	(522)	(101)	521
Cash and cash equivalents, beginning of period	1,591	1,692	1,171
Cash and cash equivalents, end of period	<u>\$ 1,069</u>	<u>\$ 1,591</u>	<u>\$ 1,692</u>
Supplemental disclosures of cash flow information:			
Cash payments (refunds) during the period for:			
Interest	\$ 75	\$ 76	\$ 83
Income taxes	\$ 117	\$ (78)	\$ (9)

The accompanying notes are an integral part of these statements.

NOV INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In millions)

	Shares Issued and Outstandi ng	Common Stock	Additional Paid in Capital	Accumulated Other Comprehen sive Loss	Retained Earnings (Loss)	Total Company Stockholders Equity	Noncontrol ling Interests	Total Stockholders Equity
Balance at December 31, 2019	386	\$ 4	\$ 8,507	\$ (1,423)	\$ 690	\$ 7,778	\$ 68	\$ 7,846
Net loss	—	—	—	—	(2,542)	(2,542)	5	(2,537)
Other comprehensive loss	—	—	—	(86)	—	(86)	—	(86)
Cash dividends, \$0.05 per common share	—	—	—	—	(19)	(19)	—	(19)
Adoption of new accounting standards	—	—	—	—	(5)	(5)	—	(5)
Stock-based compensation	2	—	104	—	—	104	—	104
Withholding taxes	—	—	(20)	—	—	(20)	—	(20)
Other	—	—	—	—	—	—	(4)	(4)
Balance at December 31, 2020	388	\$ 4	\$ 8,591	\$ (1,509)	\$ (1,876)	\$ 5,210	\$ 69	\$ 5,279
Net loss	—	—	—	—	(250)	(250)	5	(245)
Other comprehensive loss	—	—	—	(37)	—	(37)	—	(37)
Cash dividends, \$0.05 per common share	—	—	—	—	(20)	(20)	—	(20)
Stock-based compensation	3	—	78	—	—	78	—	78
Stock issued in acquisition	2	—	29	—	—	29	—	29
Withholding taxes	—	—	(13)	—	—	(13)	—	(13)
Other	—	—	—	—	—	—	(7)	(7)
Balance at December 31, 2021	393	\$ 4	\$ 8,685	\$ (1,546)	\$ (2,146)	\$ 4,997	\$ 67	\$ 5,064
Net Income	—	—	—	—	155	155	—	155
Other comprehensive loss	—	—	—	(47)	—	(47)	—	(47)
Cash dividends, \$0.20 per common share	—	—	—	—	(78)	(78)	—	(78)
Stock-based compensation	—	—	67	—	—	67	—	67
Withholding taxes	—	—	(12)	—	—	(12)	—	(12)
Purchase of equity in non-controlling interest	—	—	12	—	—	12	(29)	(17)
Other	—	—	2	—	—	2	—	2
Balance at December 31, 2022	393	\$ 4	\$ 8,754	\$ (1,593)	\$ (2,069)	\$ 5,096	\$ 38	\$ 5,134

The accompanying notes are an integral part of these statements.

NOV INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Organization and Basis of Presentation

Nature of Business

We design, construct, manufacture and sell comprehensive systems, components, and products used in oil and gas drilling and production and certain industrial and renewable energy sectors. We also provide technology and oilfield services and supplies, distribute products and provide supply chain integration services to the upstream oil and gas industry. Our revenues and operating results are directly related to the level of worldwide oil and gas drilling and production activities and the profitability and cash flow of oil and gas companies, drilling contractors and oilfield service companies, which in turn are affected by current and anticipated prices of oil and gas. Oil and gas prices have been, and are likely to continue to be, volatile.

Basis of Consolidation

The accompanying Consolidated Financial Statements include the accounts of NOV Inc. and its consolidated subsidiaries. Certain reclassifications have been made to the prior year financial statements for them to conform with the 2022 presentation. All significant intercompany transactions and balances have been eliminated in consolidation. Investments that are not wholly owned, but where we exercise control, are fully consolidated with the equity held by minority owners and their portion of net income (loss) reflected as noncontrolling interests in the accompanying consolidated financial statements. Investments in unconsolidated affiliates, over which we exercise significant influence, but not control, are accounted for by the equity method.

2. Summary of Significant Accounting Policies

Fair Value of Financial Instruments

The carrying amounts of financial instruments including cash and cash equivalents, receivables, and payables approximated fair value because of the relatively short maturity of these instruments. Cash equivalents include only those investments having a maturity date of three months or less at the time of purchase.

Derivative Financial Instruments

The Company records all derivative financial instruments at their fair value in its Consolidated Balance Sheet. Except for certain non-designated hedges discussed in Note 3 below, all derivative financial instruments that the Company holds are designated as cash flow hedges and are highly effective in offsetting movements in the underlying risks. Such arrangements typically have terms between two and 24 months but may have longer terms depending on the underlying cash flows being hedged, typically related to the projects in our backlog.

Inventories

Inventories are stated at the lower of cost or estimated net realizable value using the first-in, first-out or average cost methods. Inventories consist of raw materials and supplies, work-in-process and finished goods and purchased products. The Company reviews historical usage of inventory on-hand, assumptions about future demand and market conditions, and estimates about potential alternative uses, which are limited, to estimate net realizable value. The Company evaluates inventory using the best information available at the time to inform our assumptions and estimates about future demand and resulting sales volumes, and records reserves as necessary.

We recorded charges (credits) to inventory reserves of \$(18) million, \$73 million, and \$367 million for the years ended December 31, 2022, 2021, and 2020, respectively, consisting primarily of obsolete and surplus inventories. At December 31, 2022 and 2021, inventory reserves totaled \$378 million and \$444 million, or 17.3% and 25.0% of gross inventory, respectively.

Property, Plant and Equipment

Property, plant and equipment are recorded at cost. Expenditures for major improvements that extend the lives of property and equipment are capitalized while minor replacements, maintenance and repairs are charged to operations as incurred. Disposals are removed at cost less accumulated depreciation with any resulting gain or loss reflected in operations. Depreciation is provided using the straight-line method over the estimated useful lives of individual items. Depreciation expense was \$250 million, \$264 million, and \$302 million for the years ended December 31, 2022, 2021 and 2020, respectively. The estimated useful lives of the major classes of property, plant and equipment are included in Note 5 to the consolidated financial statements.

We record impairment losses on long-lived assets used in operations when events and circumstances indicate that the assets are impaired and the undiscounted cash flows estimated to be generated by those assets are less than the carrying amount of those assets. The carrying value of assets used in operations that are not recoverable is reduced to fair value if lower than carrying value. In determining the fair market value of the assets, we consider market trends and recent transactions involving sales of similar assets, or when not available, discounted cash flow analysis. Impairments of plant, property and equipment were \$262 million for the year ended December 31, 2020.

Acquisitions and Investments

Acquisitions of businesses are accounted for using the acquisition method of accounting, and the financial statements include the results of the acquired operations from the respective dates of acquisition.

The purchase price of the acquired entities is preliminarily allocated to the net assets acquired and liabilities assumed based on the estimated fair value at the dates of acquisition, with any excess of cost over the fair value of net assets acquired, including intangibles, recognized as goodwill. Subsequent changes to preliminary amounts are made prospectively.

The Company paid cash of \$49 million, \$52 million, and \$14 million for acquisitions for the years ended December 31, 2022, 2021 and 2020, respectively. Additionally, the Company paid \$29 million in stock (consisting of 2 million shares) for acquisitions in 2021. These acquisitions did not have a material effect on the Company's operating results, cash flows or financial position.

Foreign Currency

The functional currency for most of our foreign operations is the local currency. However, certain foreign operations, including our operations in Norway, use the U.S. dollar as the functional currency. The cumulative effects of translating the balance sheet accounts from the functional currency into the U.S. dollar at current exchange rates are included in accumulated other comprehensive income (loss). Revenues and expenses are translated at average exchange rates in effect during the period. Accordingly, financial statements of these foreign subsidiaries are remeasured to U.S. dollars for consolidation purposes using current rates of exchange for monetary assets and liabilities and historical rates of exchange for nonmonetary assets and related elements of expense. Revenue and expense elements are remeasured at rates that approximate the rates in effect on the transaction dates. For all operations, gains or losses from remeasuring foreign currency transactions into the functional currency are included in income. Net foreign currency transaction losses were \$25 million, \$16 million, and \$2 million for the years ending December 31, 2022, 2021 and 2020, respectively, and are included in other income (expense) in the accompanying statement of income (loss).

Revenue Recognition

The majority of the Company's revenue streams record revenue at a point in time when a performance obligation has been satisfied by transferring control of promised goods or services to a customer. Products are sold or rented and services are provided based upon a fixed or determinable price and do not generally include right of return or other significant post-delivery obligations. Revenue is recognized net of any taxes collected from customers, which are subsequently remitted to governmental authorities. Payment terms and conditions vary by contract type. We have elected to apply the practical expedient that does not require an adjustment for a financing component if, at contract inception, the period between when we transfer the promised goods or service to the customer and when the customer pays for the goods or service is one year or less. Shipping and handling costs are recognized when incurred and are treated as costs to fulfill the original performance obligation instead of as a separate performance obligation.

Revenue is generated from contracts that may include multiple performance obligations. The Company considers the degree of customization, integration and interdependency of the related products and services when assessing distinct performance obligations within one contract. Stand-alone selling price ("SSP") for each distinct performance obligation is generally determined using the price at which the products and services would be sold separately to the customer. Discounts, when provided, are allocated based on the relative SSP of the various products and services.

For revenue that is not recognized at a point in time, the Company follows accounting guidance for revenue recognized over time, as follows:

Revenue Recognition under Long-term Construction Contracts

Revenue is recognized over-time for certain long-term construction contracts in the Completion & Production Solutions and Rig Technologies segments. These contracts include custom designs for customer-specific applications that are unique and require significant engineering efforts. Revenue is recognized as work progresses on each contract. Right to payment is enforceable for performance completed to date, including a reasonable profit.

Because of control transferring over time, revenue is recognized based on the extent of progress towards completion of the performance obligation. We generally use the cost-to-cost (input) measure of progress for our contracts because it best depicts the transfer of assets to the customer which occurs as we incur costs. Under the cost-to-cost measure of progress, progress towards completion of each contract is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the performance obligation. Revenues, including estimated fees or profits, are recorded proportionally as costs are incurred. These costs include labor, materials, subcontractors' costs, and other direct costs. Any expected losses on a project are recorded in full in the period in which the loss becomes probable.

These long-term construction contracts generally include integrating a complex set of tasks and components into a single project or capability so they are accounted for as one performance obligation.

Estimating total revenue and cost at completion of long-term construction contracts is complex, subject to many variables and requires significant judgement. It is common for our long-term contracts to contain late delivery fees, work performance guarantees, and other provisions that can either increase or decrease the transaction price. We estimate variable consideration as the most likely amount we expect to receive. We include variable consideration in the estimated transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur, or when the uncertainty associated with the variable consideration is resolved. Our estimates of variable consideration and determination of whether to include estimated amounts in the transaction price are based on an assessment of our anticipated performance and historical, current and forecasted information that is reasonably available to us. Net revenue recognized from performance obligations satisfied in previous periods was \$37 million and \$38 million for the years ended December 31, 2022 and 2021, respectively, primarily due to change orders.

Service and Repair Work

For service and repair contracts, revenue is recognized over time. We generally use the output method to measure progress on service contracts due to the manner in which the customer receives and derives value from the services provided. For repair contracts, we generally use the cost-to-cost measure of progress because it best depicts the transfer of assets to the customer.

Remaining Performance Obligations

Remaining performance obligations represent the transaction price of firm orders for all revenue streams for which work has not been performed on contracts with an original expected duration of one year or more. We do not disclose the remaining performance obligations of royalty contracts, service contracts for which there is a right to invoice, and short-term contracts that are expected to have a duration of one year or less.

As of December 31, 2022, the aggregate amount of the transaction price allocated to remaining performance obligations was \$4,161 million. The Company expects to recognize approximately \$1,286 million in revenue for the remaining performance obligations in 2023 and \$2,875 million in 2024 and thereafter.

Costs to Obtain and Fulfill a Contract

We recognize an asset for the incremental costs of obtaining a contract, such as sales commissions, with a customer when we expect the benefit of those costs to be longer than one year. Costs to fulfill a contract, such as set-up and mobilization costs, are also capitalized when we expect to recover those costs. These contract costs are deferred and amortized over the period of contract performance. Total capitalized costs to obtain and fulfill a contract and the related amortization were immaterial during the periods presented and are included in other current and long-term assets on our consolidated balance sheets. We apply the practical expedient to expense costs as incurred for costs to obtain a contract with a customer when the amortization period would have been one year or less.

Service and Product Warranties

The Company provides service and warranty policies on certain of its products. The Company accrues liabilities under service and warranty policies based upon specific claims and a review of historical warranty and service claim experience. Adjustments are made to accruals as claim data and historical experience change. In addition, the Company incurs discretionary costs to service its products in connection with product performance issues and accrues for them when they are encountered. The Company monitors the actual cost of performing these discretionary services and adjusts the accrual based on the most current information available.

The changes in the carrying amount of service and product warranties are as follows (in millions):

Balance at December 31, 2020	\$	87
Net provisions for warranties issued during the year		15
Amounts incurred		(24)
Currency translation adjustments		(5)
Balance at December 31, 2021	\$	73
Net provisions for warranties issued during the year		11
Amounts incurred		(17)
Currency translation adjustments and other		3
Balance at December 31, 2022	\$	70

Income Taxes

The liability method is used to account for income taxes. Deferred tax assets and liabilities are determined based on differences between the financial reporting and tax basis of assets and liabilities and are measured using the enacted tax rates that will be in effect when the differences are expected to reverse. Valuation allowances are established when necessary to reduce deferred tax assets to amounts which are more likely than not to be realized.

Concentration of Credit Risk

We grant credit to our customers, which operate primarily in the oil and gas industry. Concentrations of credit risk are limited because we have many geographically diverse customers, thus spreading trade credit risk. We control credit risk through credit evaluations, credit limits and monitoring procedures. We perform periodic credit evaluations of our customers' financial condition and generally do not require collateral but may require letters of credit for certain international sales. Credit losses are provided for in the financial statements. Allowances for credit losses are determined based on a continuous process of assessing the Company's portfolio on an individual customer basis considering current market conditions and trends. This process consists of a review of historical collection experience, current aging status of the customer accounts, and financial condition of the Company's customers. Based on a review of these factors, the Company will establish or adjust allowances for specific customers. As of December 31, 2022, and December 31, 2021, the allowance for credit losses totaled \$71 million and \$88 million, respectively.

Stock-Based Compensation

Compensation expense for the Company's stock-based compensation plans is measured using the fair value method. The fair value of stock option grants and restricted stock is amortized to expense using the straight-line method over the shorter of the vesting period or the remaining employee service period.

The Company provides compensation benefits to employees and non-employee directors under share-based payment arrangements, including various employee stock option plans.

Environmental Liabilities

When environmental assessments or remediations are probable and the costs can be reasonably estimated, remediation liabilities are recorded on an undiscounted basis and are adjusted as further information develops or circumstances change.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect reported and contingent amounts of assets and liabilities as of the date of the financial statements and reported amounts of revenues and expenses during the reporting period. Such estimates include but are not limited to, estimated losses on accounts receivable, estimated costs and related margins of projects accounted for over time, estimated

realizable value on excess and obsolete inventory, contingencies, estimated liabilities for litigation and environmental exposures and liquidated damages, estimated warranty costs, estimates related to pension accounting, estimates related to the fair value of Reporting Units for purposes of assessing goodwill and other indefinite-lived intangible assets for impairment and estimates related to deferred tax assets and liabilities, including valuation allowances on deferred tax assets. Actual results could differ from those estimates.

Contingencies

The Company accrues for costs relating to litigation claims and other contingent matters, including liquidated damage liabilities, when such liabilities become probable and reasonably estimable. In circumstances where the most likely outcome of a contingency can be reasonably estimated, we accrue a liability for that amount. Where the most likely outcome cannot be estimated, a range of potential losses is established and if no one amount in that range is more likely than others, the low end of the range is accrued. Such estimates may be based on advice from third parties or on management's judgement, as appropriate. Revisions to contingent liabilities are reflected in income in the period in which different facts or information become known or circumstances change that affect the Company's previous judgements with respect to the likelihood or amount of loss. Amounts paid upon the ultimate resolution of contingent liabilities may be materially different from previous estimates and could require adjustments to the estimated reserves to be recognized in the period such new information becomes known.

Net Income (Loss) Attributable to Company Per Share

The following table sets forth the computation of weighted average basic and diluted shares outstanding (in millions, except per share data):

	Year Ended December 31,		
	2022	2021	2020
Numerator:			
Net income (loss) attributable to Company	\$ 155	\$ (250)	\$ (2,542)
Denominator:			
Basic—weighted average common shares outstanding	390	386	384
Dilutive effect of employee stock options and other unvested stock awards	4	—	—
Diluted outstanding shares	394	386	384
Basic income (loss) attributable to Company per share	\$ 0.40	\$ (0.65)	\$ (6.62)
Diluted income (loss) attributable to Company per share	\$ 0.39	\$ (0.65)	\$ (6.62)
Cash dividends per share	\$ 0.20	\$ 0.05	\$ 0.05

Net income (loss) attributable to Company allocated to participating securities was immaterial for the years ended December 31, 2022, 2021 and 2020 and therefore not excluded from net income (loss) attributable to Company per share calculation. The Company had stock options outstanding that were anti-dilutive totaling 20 million, 21 million, and 26 million at December 31, 2022, 2021 and 2020, respectively.

Recently Issued Accounting Standards

In March 2020, the FASB issued ASU 2020-04, "Reference Rate Reform (Topic 848)." ASU 2021-01 was issued in January 2021 to further clarify the scope of the standard, which applies only to contracts, hedging relationships, and other transactions that reference LIBOR or another reference rate expected to be discontinued because of reference rate reform. ASU 2022-06 was issued in December 2022, which deferred the sunset date for applying the reference rate reform relief in Topic 848. The expedients and exceptions provided by the amendments do not apply to contract modifications made and hedging relationships entered into or evaluated after December 31, 2024, except for hedging relationships existing as of December 31, 2024, that an entity has elected certain optional expedients for and that are retained through the end of the hedging relationship. Management is currently assessing the impact of adopting ASU 2020-04 on the Company's financial position, results of operations and cash flows.

3. Derivative Financial Instruments

The Company uses derivative financial instruments to manage its foreign currency exchange rate risk. Forward currency contracts are executed to manage the foreign currency exchange rate risk on forecasted revenues and expenses denominated in currencies other than the functional currency of the operating unit (cash flow hedge). The Company also executes forward currency contracts to manage the foreign currency exchange rate risk on recognized nonfunctional currency monetary accounts (non-designated hedge).

At December 31, 2022, the Company has determined the fair value of its derivative financial instruments representing assets of \$8 million and liabilities of \$14 million (currency related derivatives) using level 2 inputs (inputs other than quoted prices in active markets for identical assets and liabilities that are observable either directly or indirectly for substantially the full term of the asset or liability) in the fair value hierarchy as the fair value is based on publicly available foreign exchange and interest rates at each financial reporting date. At December 31, 2022, the net fair value of the Company's foreign currency forward contracts totaled a net liability of \$6 million.

Forward currency contracts consist of (in millions):

Currency	Currency Denomination			
	December 31, 2022		December 31, 2021	
South Korean Won	KRW	65,980	KRW	17,600
Norwegian Krone	NOK	2,741	NOK	2,430
U.S. Dollar	USD	655	USD	415
Japanese Yen	JPY	460	JPY	476
Brazilian Real	BRL	291	BRL	—
Mexican Peso	MXN	160	MXN	637
South African Rand	ZAR	149	ZAR	124
Euro	EUR	125	EUR	106
Singapore Dollar	SGD	27	SGD	36
British Pound Sterling	GBP	16	GBP	14
Danish Krone	DKK	13	DKK	7
Canadian Dollar	CAD	2	CAD	—
Russian Ruble	RUB	—	RUB	1,128

Cash Flow Hedging Strategy

To protect against the volatility of forecasted foreign currency cash flows resulting from forecasted revenues and expenses, the Company maintains a cash flow hedging program. For derivative instruments that are designated and qualify as a cash flow hedge, the gain or loss on the derivative instrument is recorded in accumulated other comprehensive loss and reclassified into earnings in the same line item associated with the forecasted transaction and in the same period or periods during which the hedged transaction affects earnings (e.g., in "revenues" when the hedged transactions are cash flows associated with forecasted revenues). The Company includes time value in hedge relationships.

The Company does not expect a material amount to be reclassified into earnings within the next twelve months.

Non-designated Hedging Strategy

The Company enters into forward exchange contracts to hedge certain nonfunctional currency monetary accounts. The gain or loss on the derivative instrument is recognized in earnings in other income (expense), together with the changes in the hedged nonfunctional monetary accounts.

The amount of gain (loss) recognized in other income (expense), net was \$(18) million, \$(9) million and \$(3) million for the years ended 2022, 2021 and 2020, respectively.

The Company has the following fair values of its derivative instruments and their balance sheet classifications (in millions):

Fair Values of Derivative Instruments (In millions)						
Asset Derivatives			Liability Derivatives			
Balance Sheet Location	Fair Value December 31,		Balance Sheet Location	Fair Value December 31,		
	2022	2021		2022	2021	
Derivatives designated as hedging instruments under ASC Topic 815						
Foreign exchange contracts	Prepaid and other current assets	\$ 3	\$ 11	Accrued liabilities	\$ 3	\$ 2
Foreign exchange contracts	Other Assets	—	—	Other Liabilities	1	—
Total derivatives designated as hedging instruments under ASC Topic 815		<u>\$ 3</u>	<u>\$ 11</u>		<u>\$ 4</u>	<u>\$ 2</u>
Derivatives not designated as hedging instruments under ASC Topic 815						
Foreign exchange contracts	Prepaid and other current assets	\$ 5	\$ 7	Accrued liabilities	\$ 10	\$ 6
Total derivatives		<u>\$ 8</u>	<u>\$ 18</u>		<u>\$ 14</u>	<u>\$ 8</u>

4. Inventories, net

Inventories consist of (in millions):

	December 31,	
	2022	2021
Raw materials and supplies	\$ 479	\$ 350
Work in process	308	218
Finished goods and purchased products	1,404	1,207
	2,191	1,775
Less: Inventory reserve	(378)	(444)
Total	<u>\$ 1,813</u>	<u>\$ 1,331</u>

5. Property, Plant and Equipment, net

Property, plant and equipment consist of (in millions):

	Estimated Useful Lives	December 31,	
		2022	2021
Land		\$ 176	\$ 174
Buildings and improvements	5-35 Years	1,251	1,309
Operating equipment	2-20 Years	2,683	2,678
Rental equipment	2-15 Years	798	794
		4,908	4,955
Less: Accumulated Depreciation		(3,127)	(3,132)
		<u>\$ 1,781</u>	<u>\$ 1,823</u>

6. Goodwill and Intangible Assets

Goodwill and Other Indefinite-Lived Intangible Assets

The Company has approximately \$1.5 billion of goodwill and \$490 million of identified intangible assets at December 31, 2022. Goodwill is identified by segment as follows (in millions):

	Wellbore Technologies	Completion & Production Solutions	Rig Technologies	Total
Balance at December 31, 2020	308	473	712	1,493
Goodwill acquired during period	34	—	—	34
Balance at December 31, 2021	<u>\$ 342</u>	<u>\$ 473</u>	<u>\$ 712</u>	<u>\$ 1,527</u>
Goodwill acquired during period	3	7	—	10
Adjustment during the measurement period of assets acquired	(32)	—	—	(32)
Balance at December 31, 2022 (1)	<u>\$ 313</u>	<u>\$ 480</u>	<u>\$ 712</u>	<u>\$ 1,505</u>

(1) Accumulated goodwill impairment was \$7,261 million as of December 31, 2022.

Identified intangible assets with determinable lives consist primarily of customer relationships, trademarks, trade names, patents, and technical drawings acquired in acquisitions, and are being amortized in a manner consistent with the underlying cash flows over the estimated useful lives of 2-40 years. Amortization expense of identified intangibles is expected to be approximately \$44 million, \$39 million, \$36 million, \$34 million, and \$30 million for the next five years.

The net book values of identified intangible assets are identified by segment as follows (in millions):

	Wellbore Technologies	Completion & Production Solutions	Rig Technologies	Total
Balance at December 31, 2020	\$ 253	\$ 47	\$ 227	\$ 527
Additions to intangible assets	22	—	—	22
Amortization	(10)	(5)	(28)	(43)
Currency translation adjustments	(1)	—	(2)	(3)
Balance at December 31, 2021	<u>\$ 264</u>	<u>\$ 42</u>	<u>\$ 197</u>	<u>\$ 503</u>
Additions to intangible assets	3	—	—	3
Adjustment during the measurement period of assets acquired	32	—	—	32
Amortization	(17)	(5)	(29)	(51)
Currency translation adjustments	—	—	3	3
Balance at December 31, 2022	<u>\$ 282</u>	<u>\$ 37</u>	<u>\$ 171</u>	<u>\$ 490</u>

Identified intangible assets by major classification consist of the following (in millions):

	Gross	Accumulated Amortization	Net Book Value
December 31, 2021:			
Customer relationships	\$ 471	\$ (323)	\$ 148
Trademarks	174	(122)	52
Patents	145	(59)	86
Indefinite-lived trade names	196	—	196
Other	82	(61)	21
Total identified intangibles	<u>\$ 1,068</u>	<u>\$ (565)</u>	<u>\$ 503</u>
December 31, 2022:			
Customer relationships	\$ 499	\$ (351)	\$ 148
Trademarks	173	(127)	46
Patents	128	(66)	62
Indefinite-lived trade names	196	—	196
Other	104	(66)	38
Total identified intangibles	<u>\$ 1,100</u>	<u>\$ (610)</u>	<u>\$ 490</u>

Goodwill represents the excess of cost over the fair value of net assets acquired. Goodwill and intangibles with indefinite lives are not amortized. Goodwill is assigned to the reporting units that are expected to benefit from the synergies of a business combination. The recoverability of goodwill and indefinite-lived intangibles is assessed annually, or more frequently as needed when events or changes

have occurred that would suggest an impairment of carrying value, by determining whether the fair values of the applicable reporting units exceed their carrying values.

The impairment analysis compares the reporting unit's carrying value to the respective fair value. Fair value of the reporting unit is determined using significant unobservable inputs, or level 3 in the fair value hierarchy. These inputs are based on internal management estimates, forecasts and judgments, using discounted cash flow.

The discounted cash flow is based on management's forecast of operating performance for the reporting unit. The two main assumptions used in measuring goodwill impairment, which bear the risk of change and could impact the Company's goodwill impairment analysis, include the cash flow from operations from each reporting unit and its weighted average cost of capital. The starting point for each of the reporting unit's cash flow from operations is the detailed annual plan or updated forecast. Cash flows beyond the updated forecasted operating plans are estimated using a terminal value calculation, which incorporates historical and forecasted financial cyclical trends for each reporting unit and considered long-term earnings growth rates. The financial and credit market volatility directly impacts our fair value measurement through our weighted average cost of capital that we use to determine our discount rate. During times of volatility, significant judgment must be applied to determine whether credit changes are a short-term or long-term trend.

Management reviews finite-lived intangibles for indicators of impairment whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Cash flows expected to be generated by the finite-lived intangibles are estimated over the intangible asset's useful life based on updated projections on an undiscounted basis. If the evaluation indicates that the carrying value of the finite-lived intangible asset may not be recoverable, the potential impairment is measured at fair value.

During the fourth quarter of 2022, the Company performed its annual impairment test, as described in ASC Topic 350, as of October 1, 2022. Based on the Company's annual impairment test, the calculated fair values for all of the Company's reporting units with remaining goodwill were in excess of the respective reporting unit's carrying value. During the first quarter of 2020, negative market indicators constituted a triggering event and the results of the Company's test for impairment resulted in the Company recording \$1,295 million in impairment charges to goodwill. Additionally, \$83 million in charges to indefinite-lived intangible assets were recorded in 2020 for this triggering event.

The goodwill and indefinite-lived intangible impairment during 2020 was a triggering event that indicated that the Company's long-lived tangible assets and finite-lived intangible assets were also impaired. Impairment testing determined that certain long-lived assets associated with most of the Company's asset groups were not recoverable. The estimated fair value of these asset groups was below the carrying value and as a result, during the first quarter of 2020, the Company recorded impairment charges of \$209 million to customer relationships, patents, trademarks, tradenames, and other finite-lived intangible assets, \$262 million to property, plant and equipment, and \$42 million for right-of-use assets. Additionally, the Company recorded a \$224 million impairment on its equity investment in unconsolidated affiliates.

No impairment of goodwill or indefinite-lived intangible assets was recorded in 2022 or 2021.

7. Accrued Liabilities

Accrued liabilities consist of (in millions):

	December 31,	
	2022	2021
Compensation	\$ 329	\$ 209
Vendor costs	168	124
Taxes (non-income)	107	119
Warranty	70	73
Insurance	42	45
Commissions	18	17
Fair value of derivatives	13	8
Interest	7	6
Other	205	177
Total	\$ 959	\$ 778

8. Leases

The Company leases certain facilities and equipment to support its operations around the world. These leases generally require the Company to pay maintenance, insurance, taxes and other operating costs in addition to rent. Renewal options are common in longer term leases; however, it is rare that the Company intends to exercise a lease option at inception due to the cyclical nature of the

Company's business. Residual value guarantees are not typically part of the Company's leases. Occasionally, the Company sub-leases excess facility space, generally at terms similar to the source lease. The Company reviews new agreements to determine if they include a lease and, when they do, uses its incremental borrowing rate to determine the present value of the future lease payments as most do not include implicit interest rates. The Company recorded right-of-use asset impairment charges of \$42 million for the year ended December 31, 2020.

Components of leases are as follows (in millions):

	December 31,	
	2022	2021
<i>Current portion of lease liabilities:</i>		
Operating	\$ 67	\$ 76
Financing	20	23
Total	<u>\$ 87</u>	<u>\$ 99</u>
	December 31,	
	2022	2021
<i>Long-term portion of lease liability:</i>		
Operating	\$ 334	\$ 357
Financing	215	219
Total	<u>\$ 549</u>	<u>\$ 576</u>

Components of lease expense were as follows (in millions):

	Year Ended	
	December 31, 2022	December 31, 2021
<i>Lease cost</i>		
<i>Finance lease cost</i>		
Amortization of right-of-use assets	\$ 24	\$ 26
Interest on lease liabilities	9	10
<i>Operating lease cost</i>	73	83
<i>Short-term lease cost</i>	90	74
<i>Sub-lease income</i>	(8)	(9)
Total	<u>\$ 188</u>	<u>\$ 184</u>

Supplemental information related to the Company's leases is as follows (in millions):

	Years Ended	
	December 31, 2022	December 31, 2021
<i>Other information:</i>		
<i>Cash paid for amounts included in the measurement of lease liabilities:</i>		
Operating cash flows - finance leases	\$ 9	\$ 10
Operating cash flows - operating leases	73	83
Financing cash flows - finance leases	24	26
<i>Right-of-use assets obtained in exchange for new:</i>		
Operating lease liabilities	\$ 57	\$ 37
Finance lease liabilities	19	9
<i>Weighted average remaining lease term at December 31, 2022:</i>		
Operating leases	10 years	11 years
Finance leases	17 years	18 years
<i>Weighted average discount rate at December 31, 2022:</i>		
Operating leases	4.74 %	4.74 %
Finance leases	3.95 %	3.86 %

Future minimum lease commitments for leases with initial or remaining terms of one year or more at December 31, 2022, are payable as follows (in millions):

	Operating	Finance
2023	\$ 85	\$ 30
2024	72	27
2025	60	24
2026	49	20
2027	39	17
Thereafter	197	200
Total lease payments	502	318
Less: Interest	(101)	(83)
Present value of lease liabilities	\$ 401	\$ 235

9. Debt

Debt consists of (in millions):

	December 31,	
	2022	2021
\$1.1 billion in Senior Notes, interest at 3.95% payable semiannually, principal due on December 1, 2042	1,090	1,090
\$0.5 billion in Senior Notes, interest at 3.60% payable semiannually, principal due on December 1, 2029	495	494
Other debt	145	129
Total Debt	1,730	1,713
Less current portion	13	5
Long-term debt	\$ 1,717	\$ 1,708

Principal payments of debt for years subsequent to 2022 are as follows (in millions):

2023	13
2024	10
2025	21
2026	29
2027	12
Thereafter	1,661
	\$ 1,746

The Company has a revolving credit facility with a borrowing capacity of \$2.0 billion through October 30, 2024, and a borrowing capacity of \$1.7 billion from October 31, 2024, to October 30, 2025. The Company has the right to increase the commitments under this agreement to an aggregate amount of up to \$3.0 billion upon the consent of only those lenders holding any such increase. Interest under the multicurrency facility is based upon LIBOR, NIBOR or CDOR plus 1.25% subject to a ratings-based grid or the U.S. prime rate. The credit facility contains a financial covenant regarding maximum debt-to-capitalization ratio of 60%. As of December 31, 2022, the Company was in compliance with a debt-to-capitalization ratio of 27.7% and had no outstanding borrowings or letters of credit issued under the facility, resulting in \$2.0 billion of available funds.

Additionally, a consolidated joint venture of the Company borrowed \$120 million against a \$150 million bank line of credit for the construction of a facility in Saudi Arabia. Interest under the bank line of credit is based upon LIBOR plus 1.40%. The bank line of credit contains a financial covenant regarding maximum debt-to-equity ratio of 75%. As of December 31, 2022, the joint venture was in compliance. Upon completion of the facility construction in the fourth quarter of 2022, the Company will not have future borrowings on the line of credit, with repayments beginning December 2022 and final payment no later than June 2032. As of December 31, 2022, the Company has a carrying value of \$114 million in borrowings related to this line of credit. The carrying value of debt under the Company's consolidated joint venture approximates fair value because the interest rates are variable and reflective of current market rates. The Company has \$10 million in payments related to this line of credit due in the next twelve months. The Company can repay the entire outstanding facility balance without penalty at its sole discretion. Other debt at December 31, 2022 included \$31 million of funding provided by minority interest partners of NOV consolidated joint ventures, of which \$3 million is due in the next twelve months.

The Company had \$504 million of outstanding letters of credit at December 31, 2022, primarily in the U.S. and Norway, that are under various bilateral letter of credit facilities. Letters of credit are issued as bid bonds, advanced payment bonds and performance bonds.

At December 31, 2022 and 2021, the fair value of the Company's unsecured Senior Notes approximated \$1,215 million and \$1,610 million, respectively. The fair value of the Company's debt is estimated using Level 2 inputs in the fair value hierarchy and is based on quoted prices for those of similar instruments. At December 31, 2022 and 2021, the carrying value of the Company's unsecured Senior Notes approximated \$1,585 million and \$1,584 million, respectively.

10. Employee Benefit Plans

We have benefit plans covering substantially all our employees. Defined-contribution retirement plans cover most of the U.S. and Canadian employees, and benefits are generally based on employee deferrals and matching on those employee contributions. We also have defined contribution plans in Norway and the United Kingdom. For the years ended December 31, 2022, 2021 and 2020, expenses for defined-contribution retirement plans were \$67 million, \$34 million, and \$51 million, respectively, and all funding is current.

In 2021, NOV announced and filed for the defined benefit plan in the United States to be settled. As part of that process, the benefit accrual for the 20 employees represented by a collective bargaining agreement was ended as of November 30, 2021. The plan settlement, which would result in the full settlement of the Company's obligations, is expected to be completed in early 2023. Plan participants will receive their full accrued benefits from plan assets through annuity contracts with a qualifying third-party annuity provider. Upon settlement, we expect to recognize pre-tax pension settlement charges that will include (1) a non-cash charge for the recognition of all pre-tax actuarial losses accumulated in accumulated other comprehensive loss (\$8 million as of December 31, 2022) and (2) any cash contributions to settle the Plan's obligations (\$5 million net projected benefit obligation as of December 31, 2022). The actual amount of the settlement charges and any potential cash contribution will depend on various factors, including interest rates and plan asset returns.

In the third quarter of 2022, the Company offered a new benefit plan providing retiree medical coverage in the United States, and approximately 8,600 employees are eligible for this coverage. In addition, approximately 1,000 U.S. retirees and/or spouses participate in plans that provide post-retirement healthcare and/or life insurance benefits.

Net periodic benefit income (cost) for our Defined Benefit pension plans aggregated \$1 million, \$3 million, and \$3 million for the years ended December 31, 2022, 2021 and 2020, respectively.

The change in benefit obligation, plan assets and the funded status of the defined benefit pension plans in the United States, United Kingdom, Norway, Germany and the Netherlands and defined postretirement plans in the United States, using a measurement date of December 31, 2022 and 2021, is as follows (in millions):

At year end	Pension benefits		Postretirement benefits	
	2022	2021	2022	2021
Benefit obligation at beginning of year	\$ 594	\$ 641	\$ 34	\$ 43
Service cost	1	1	1	—
Interest cost	9	11	1	1
Actuarial loss (gain)	(135)	(5)	(5)	4
Benefits paid	(62)	(29)	(8)	(14)
Exchange rate loss (gain)	(25)	(12)	—	—
Plan amendments	—	—	27	—
Settlements	—	(13)	—	—
Benefit obligation at end of year	<u>\$ 382</u>	<u>\$ 594</u>	<u>\$ 50</u>	<u>\$ 34</u>
Fair value of plan assets at beginning of year	\$ 571	\$ 584	\$ —	\$ —
Actual return	(105)	32	—	—
Benefits paid	(62)	(29)	(8)	(15)
Company contributions	3	4	8	15
Exchange rate gain (loss)	(26)	(7)	—	—
Settlements	—	(13)	—	—
Fair value of plan assets at end of year	<u>\$ 381</u>	<u>\$ 571</u>	<u>\$ —</u>	<u>\$ —</u>
Funded status	<u>\$ (1)</u>	<u>\$ (23)</u>	<u>\$ (50)</u>	<u>\$ (34)</u>
Accumulated benefit obligation at end of year	<u>\$ 381</u>	<u>\$ 592</u>		

Liabilities associated with the funded status of the defined benefit pension plans are included in the balances of accrued liabilities and other liabilities in the Consolidated Balance Sheet.

Defined Benefit Pension Plans

Assumed long-term rates of return on plan assets, discount rates and rates of compensation increases vary for the different plans according to the local economic conditions. The assumption rates used for benefit obligations are as follows:

	Year Ended December 31,	
	2022	2021
Discount rate:		
United States plan	4.74% - 5.20%	1.80% - 2.20%
International plans	3.30% - 4.80%	1.00% - 1.90%
Salary increase:		
United States plan	N/A	N/A
International plans	2.50% - 3.75%	2.50% - 3.40%

The assumption rates used for net periodic benefit costs are as follows:

	Year Ended December 31,		
	2022	2021	2020
Discount rate:			
United States plan	1.80% - 2.20%	1.20% - 2.40%	2.50% - 3.20%
International plans	1.00% - 1.90%	0.70% - 1.80%	0.00% - 2.30%
Salary increase:			
United States plan	N/A	N/A	N/A
International plans	2.50% - 3.40%	1.75% - 2.90%	1.80% - 3.10%
Expected return on assets:			
United States plan	1.84%	3.90%	4.80%
International plans	1.00% - 4.00%	0.80% - 3.40%	0.00% - 4.50%

In determining the overall expected long-term rate of return for plan assets, the Company takes into consideration the historical experience as well as future expectations of the asset mix involved. As different investments yield different returns, each asset category is reviewed individually and then weighted for significance in relation to the total portfolio.

The majority of our plans have projected benefit obligations in excess of plan assets.

The Company expects to pay future benefit amounts on its pension plans of approximately \$11 million for each of the next five years and aggregate payments of \$114 million.

Plan Assets

The Company and its investment advisers collaboratively reviewed market opportunities using historic and statistical data, as well as the actuarial valuation reports for the plans, to ensure that the levels of acceptable return and risk are well-defined and monitored. Currently, the Company's management believes that there are no significant concentrations of risk associated with plan assets. Our pension investment strategy worldwide prohibits a direct investment in our own stock.

The following table sets forth by level, within the fair value hierarchy, the plan's assets carried at fair value (in millions):

	Fair Value Measurements			
	Total	Level 1	Level 2	Level 3
December 31, 2021:				
Equity securities	\$ 8	\$ —	\$ 8	\$ —
Bonds	372	—	372	—
Other (insurance contracts)	191	—	132	59
Total Fair Value Measurements	\$ 571	\$ —	\$ 512	\$ 59
December 31, 2022:				
Equity securities	\$ 4	\$ —	\$ 4	\$ —
Bonds	79	—	79	—
Other (insurance contracts)	298	—	260	38
Total Fair Value Measurements	\$ 381	\$ —	\$ 343	\$ 38

Level 3 inputs are unobservable (i.e., supported by little or no market activity). Level 3 inputs include management's own judgement about the assumptions that market participants would use in pricing the asset or liability (including assumptions about risk). The following table sets forth a summary of changes in the fair value of the plan's Level 3 assets (in millions):

	Level 3 Plan Assets
Balance at December 31, 2020	\$ 66
Actual return on plan assets still held at reporting date	(2)
Purchases, sales and settlements	(1)
Currency translation adjustments	(4)
Balance at December 31, 2021	\$ 59
Actual return on plan assets still held at reporting date	(16)
Purchases, sales and settlements	(1)
Currency translation adjustments	(4)
Balance at December 31, 2022	\$ 38

11. Accumulated Other Comprehensive Loss

The components of accumulated other comprehensive income (loss) are as follows (in millions):

	Currency Translation Adjustments	Derivative Financial Instruments, Net of Tax	Employee Benefit Plans, Net of Tax	Total
Balance at December 31, 2019	\$ (1,403)	\$ (4)	\$ (16)	\$ (1,423)
Accumulated other comprehensive income (loss) before reclassifications	(78)	4	(30)	(104)
Amounts reclassified from accumulated other comprehensive income (loss)	—	19	(1)	18
Balance at December 31, 2020	\$ (1,481)	\$ 19	\$ (47)	\$ (1,509)
Accumulated other comprehensive income (loss) before reclassifications	(34)	(5)	10	(29)
Amounts reclassified from accumulated other comprehensive income (loss)	—	(7)	(1)	(8)
Balance at December 31, 2021	\$ (1,515)	\$ 7	\$ (38)	\$ (1,546)
Accumulated other comprehensive income (loss) before reclassifications	(30)	(17)	(4)	(51)
Amounts reclassified from accumulated other comprehensive income (loss)	—	6	(2)	4
Balance at December 31, 2022	\$ (1,545)	\$ (4)	\$ (44)	\$ (1,593)

The components of amounts reclassified from accumulated other comprehensive income (loss) are as follows (in millions):

	2022			Year Ended December 31, 2021			2020		
	Derivative Financial Instruments	Employee Benefit Plans	Total	Derivative Financial Instruments	Employee Benefit Plans	Total	Derivative Financial Instruments	Employee Benefit Plans	Total
	Revenue	\$ 3	\$ —	\$ 3	\$ (1)	\$ —	(1)	\$ 17	\$ —
Cost of revenue	6	—	6	(8)	—	(8)	6	—	6
Selling, general, and administrative	—	(2)	(2)	—	(1)	(1)	—	(1)	(1)
Tax effect	(3)	—	(3)	2	—	2	(4)	—	(4)
	<u>\$ 6</u>	<u>\$ (2)</u>	<u>\$ 4</u>	<u>\$ (7)</u>	<u>\$ (1)</u>	<u>\$ (8)</u>	<u>\$ 19</u>	<u>\$ (1)</u>	<u>\$ 18</u>

The Company's reporting currency is the U.S. dollar. A majority of the Company's international entities in which there is a substantial investment have the local currency as their functional currency. As a result, currency translation adjustments resulting from the process of translating the entities' financial statements into the reporting currency are reported in other comprehensive income or (loss). The Company recorded other comprehensive loss of \$30 million, \$34 million and \$78 million for the years ended December 31, 2022, 2021 and 2020, respectively.

The effect of changes in the fair values of derivatives designated as cash flow hedges are accumulated in other comprehensive income (loss), net of tax, until the underlying transactions are realized. The movement in other comprehensive income (loss) from period to period will be the result of the combination of changes in fair value of open derivatives and the outflow of other comprehensive income (loss) related to cumulative changes in the fair value of derivatives that have settled in the current period. The accumulated effect was other comprehensive income (loss) of \$(11) million (net of \$(3) million tax), \$(12) million (net of \$2 million tax) and \$23 million (net of \$5 million tax) for the years ended December 31, 2022, 2021 and 2020.

12. Commitments and Contingencies

Our business is governed by laws and regulations, including those directed to the oilfield service industry, promulgated by U.S. federal and state governments and regulatory agencies, as well as international governmental authorities in the many countries in which we conduct business. In the United States these governmental authorities include: the U.S. Department of Labor, the Occupational Safety and Health Administration, the Environmental Protection Agency, the Bureau of Land Management, the Department of Treasury, Office of Foreign Asset Controls, state environmental agencies and many others. We are unaware of any material liabilities in connection with our compliance with such laws. New laws, regulations and enforcement policies may result in additional, presently unquantifiable, or unknown, costs or liabilities.

The Company is involved in various claims, regulatory agency audits and pending or threatened legal actions involving a variety of matters. The Company maintains insurance that covers many of the claims arising from risks associated with the business activities of the Company, including claims for premises liability, product liability, personal injury and other such claims. The Company carries substantial insurance to cover such risks above a self-insured retention. The Company believes, and the Company's experience has been, that such insurance has been enough to cover any such material risks.

The Company is also a party to claims, threatened and actual litigation, private arbitration, internal investigations of potential regulatory and compliance matters which arise both from legacy businesses that the Company has acquired over many years and from the Company's current ordinary day-to-day business activities. These regulatory matters and disputes involve private parties and/or government authorities, which assert claims against the Company for a broad spectrum of potential claims including: employment law claims, collective actions or class action claims under employment laws, intellectual property claims, (such as alleged patent infringement, and/or misappropriation of trade secrets by the company), premises liability claims, environmental claims, product liability claims, warranty claims, personal injury claims arising from exposure to or use of allegedly defective products, alleged regulatory violations, alleged violations of anti-corruption and anti-bribery laws and other commercial and/or regulatory claims seeking recovery for alleged actual or exemplary damages or fines and penalties. Such claims involve various theories of liability which include: negligence, strict liability, product liability, and other theories of liability. For some of these contingent claims, the Company's insurance coverage is inapplicable or an exclusion to coverage may apply. In such instances, settlement or other resolution of such claims, individually or collectively, could have a material financial or reputational impact on the Company. As of December 31, 2022, the Company recorded reserves in an amount believed to be sufficient, given the range of potential outcomes, for contingent liabilities representing all contingencies believed to be probable. These reserves include all costs expected for reclamation of a closed barite mine and product liability claims, as well as other circumstances involving material claims.

The Company has assessed the potential for additional losses above the amounts accrued as well as potential losses for matters that are believed to be not probable, but are reasonably possible. The Company sets accruals in accordance with GAAP based on its best judgment about the probable results of disputed claims, regulatory enforcement actions, tax and other governmental audits, and other contingencies. The litigation process as well as the outcome of regulatory oversight is inherently uncertain, and our best judgment concerning the probable outcome of litigation or regulatory enforcement matters may prove to be incorrect. No assurance can be given as to the outcome of these matters. The total potential loss on these matters cannot be determined; however, in our opinion, any ultimate liability, to the extent not otherwise provided for, will not materially affect our financial position, cash flow or results of operations. These estimated liabilities are based on the Company's assessment of the nature of these matters, their progress toward resolution, the advice of legal counsel and outside experts as well as management's experience. Because of uncertainty and risk inherent to litigation, arbitration, audits, governmental investigations and enforcement actions, the Company's actual liabilities incurred may exceed our estimated liabilities and reserves, which could have a material financial or reputational impact on the Company. In 2022, the Company received and paid a \$51 million transfer pricing tax assessment in Denmark. The Company and its advisors believe the assessment is without merit. The Company is presently appealing and believes it will be reimbursed following a successful appeals process. The payment has been recorded as a long-term receivable.

In many instances, the Company's products and services embody or incorporate trade secrets or patented inventions. From time to time, we are engaged in disputes concerning protection of the Company's trade secrets and confidential information, patents, and other intellectual property rights. Such disputes frequently involve complex, factual, technical and/or legal issues which result in high costs to adjudicate our rights and for which it may be difficult to predict the ultimate outcome. At any given time, the Company may be a plaintiff or defendant in disputes involving disputed intellectual property rights. The Company is currently pursuing, and intends to pursue future claims involving revenue recognized for technology related to drill bits. The Company is suing for breach of agreements pursuant to which certain drill bit manufacturers have licensed the Company's intellectual property. The amount of the Company's claims for outstanding receivables exceeds \$30 million dollars, and is likely to increase over time until we achieve resolution of such claims. Because of the importance of the Company's intellectual property to the Company's performance, an adverse result in such disputes could result in a material loss of revenue from royalties or a decline in sales of products protected by patents, which could materially and adversely impact our financial performance.

Further, in some instances, direct or indirect consumers of our products and services or members of the supply chain for our products and services become involved in governmental investigations, internal investigations, political or other enforcement matters. In such circumstances, such investigations may adversely impact the ability of consumers of our products, entities providing financial support to such consumers or entities in the supply chain to timely perform their business plans or to timely perform under agreements with us. We may, from time to time, become involved in these investigations, at substantial cost to the Company. We also are subject to trade regulations, supply chain regulations, and other regulatory compliance in which the laws and regulations of different jurisdictions conflict or these regulations may conflict with contractual terms. In such circumstances, our compliance with U.S. laws and regulations may subject us to risk of fines, penalties, or contractual liability in other jurisdictions. Our efforts to actively manage such risks may not always be successful which could lead to negative impacts on revenue or earnings.

The Company is exposed to customs and trade regulation risk in the countries in which we do business and countries from which or to which we import or export goods. Such trade regulations can be complex and conflicting, as different countries use trade regulation to promote conflicting policy objectives. Compliance with these laws and regulations present challenges which could result in future liabilities (for example, when laws conflict between countries). The Company may face increased tariffs and trade costs, loss of revenue, loss of customers, increased costs, the need for renegotiation of agreements, and other business disruptions. In addition, trade regulations, export controls, and other laws adversely impact our ability to do business in certain countries, e.g., Iran, Syria, Russia, China and Venezuela. In response to additional sanctions enacted by governments in the European Union, the United States, the United Kingdom, Switzerland, and other countries as a result of active armed conflict in Ukraine, we ceased new investments in Russia and have curtailed our activities in Russia. During the third quarter of 2022, we sold our business in Belarus and committed to a plan to sell our business in Russia. The sale is subject to government approval under Russian law. Litigation may result from the confluence of these events in Russia and Belarus and our response to the various sanctions as we work to comply with applicable laws and regulations. We also may incur severance costs as a result of conditions in Russia if we are unable to obtain government approval.

Uncertainty arising from the COVID-19 pandemic continues to adversely impact many jurisdictions and disrupt normal economic activities. For example, lockdowns in China have disrupted supply chains for the Company's vendors and products. The Company's ability to manufacture equipment and perform services could also be impaired and the Company could be exposed to liabilities resulting from additional interruption or delay in its ability to perform due to limited manpower, travel restrictions, difficulty obtaining visas, adverse health consequences to employees, supply chain disruption, inflationary pressures, and materials shortages. The Company continues to see operational delays due to supply chain disruption and closure or limitations imposed on our facilities and work force regulations. We also face sometimes conflicting regulatory and legal regulations, for example, vaccine mandates and prohibitions of vaccine mandates. We may face loss of workers, labor shortages, litigation, fines and/or other adverse consequences resulting from vaccine mandates and enforcement of other COVID-19 regulations.

Disputes may arise regarding application of force majeure contract provisions and allocation of responsibility among customers, the Company, and suppliers, resulting in material added cost and/or litigation. Our customers may attempt to cancel or delay projects, cancel contracts, or may invoke force majeure clauses. Our customers may also seek to delay or may default on their payments to us. As a result, the Company may be exposed to additional costs, liabilities and risks which could materially, adversely impact our financial performance and results. These potential operational and service delays resulting from the COVID-19 pandemic could result in contractual or other legal claims from our customers. At this time, it is not possible to quantify all these risks, but the combination of these factors could have a material impact on our financial results.

Due to market conditions and ongoing concerns about the energy transition, demand for our products and services may decline. Legal restrictions on exploration and production may impede our customer's ability to do business in certain jurisdictions. The political environment may adversely impact demand for hydrocarbons in different jurisdictions or world wide. The demand for energy may be constrained with adverse consequences for our customers and for the company.

13. Common Stock

NOV has authorized 1 billion shares of \$0.01 par value common stock. The Company also has authorized 10 million shares of \$0.01 par value preferred stock, none of which is issued or outstanding.

Cash dividends aggregated \$78 million and \$20 million for the years ended December 31, 2022 and 2021, respectively. The declaration and payment of future dividends is at the discretion of the Company's Board of Directors and will be dependent upon the Company's results of operations, financial condition, capital requirements and other factors deemed relevant by the Company's Board of Directors.

Total compensation cost that has been charged against income for all share-based compensation arrangements was \$67 million, \$78 million and \$105 million for 2022, 2021 and 2020, respectively. The total income tax benefit recognized before consideration of valuation allowance in the consolidated statements of income for all share-based compensation arrangements was \$3 million, \$2 million and \$3 million for 2022, 2021 and 2020, respectively.

The Company's stock-based compensation plan, known as the NOV Inc. Long-Term Incentive Plan (the "NOV Plan"), was approved by shareholders on May 11, 2018 and amended and restated on May 24, 2022. The NOV Plan provides for the granting of stock options, restricted stock, restricted stock units, performance awards, phantom shares, stock appreciation rights, stock payments and substitute awards. The number of shares authorized under the NOV Plan is 55.7 million. The NOV Plan is also subject to a fungible ratio concept, such that the issuance of stock options and stock appreciation rights reduces the number of available shares under the NOV Plan on a 1-for-1 basis, and the issuance of other awards reduces the number of available shares under the NOV Plan on a 1.5-for-1 basis. At December 31, 2022, approximately 17.3 million shares remained available for future grants under the NOV Plan.

The Company also has outstanding awards under its other stock-based compensation plan known as the National Oilwell Varco, Inc. Long-Term Incentive Plan (the "Plan"), however the Company is no longer granting new awards under the Plan. The Plan provides for the granting of stock options, performance-based share awards, restricted stock, phantom shares, stock payments and stock appreciation rights ("SARs"). The number of shares authorized under the Plan is 69.4 million. The Plan is subject to a fungible ratio concept, such that the issuance of stock options and SARs reduces the number of available shares under the Plan on a 1-for-1 basis, and the issuance of other awards reduces the number of available shares under the Plan on a 3-for-1 basis.

Stock Options

Options granted under our stock-based compensation plans generally vest over a three-year period starting one year from the date of grant and expire ten years from the date of grant. The purchase price of options granted may not be less than the closing market price of NOV common stock on the date of grant.

Stock option information summarized below includes amounts for the NOV Plan and the Plan and stock plans of acquired companies. Options outstanding at December 31, 2022 under the stock option plans have exercise prices between \$15.00 and \$72.66 per share, and expire at various dates from February 16, 2023 to February 16, 2032.

The following summarizes options activity:

	Year Ended December 31,					
	2022		2021		2020	
	Number of Shares	Average Exercise Price	Number of Shares	Average Exercise Price	Number of Shares	Average Exercise Price
Shares under option at beginning of year	21,276,961	\$ 42.09	21,005,502	\$ 45.70	21,310,099	\$ 47.68
Granted	1,492,020	16.73	1,669,511	15.00	1,650,262	20.23
Forfeited	(1,574,642)	65.44	(1,398,052)	63.65	(1,954,859)	45.75
Exercised	(113,951)	17.77	—	—	—	—
Shares under option at end of year	21,080,388	\$ 38.68	21,276,961	\$ 42.09	21,005,502	\$ 45.70
Exercisable at end of year	17,988,842	\$ 42.46	18,039,330	\$ 46.27	17,893,434	\$ 49.25

The following summarizes information about stock options outstanding at December 31, 2022:

Range of Exercise Price	Weighted-Avg Remaining Contractual Life	Options Outstanding		Options Exercisable	
		Shares	Weighted-Avg Exercise Price	Shares	Weighted-Avg Exercise Price
\$15.00 - \$30.00	6.42	7,741,072	\$ 21.81	4,649,526	\$ 25.19
\$30.01 - \$50.00	3.81	6,525,740	36.26	6,525,740	36.26
\$50.01 - \$72.66	1.47	6,813,576	60.18	6,813,576	60.18
Total	4.01	21,080,388	\$ 38.68	17,988,842	\$ 42.46

The weighted-average fair value of options granted during 2022, 2021 and 2020, was approximately \$6.28, \$5.75 and \$5.83 per share, respectively, as determined using the Black-Scholes option-pricing model. The total intrinsic value of options exercised during 2022 and 2021 was \$1 million and zero, respectively.

The determination of fair value of share-based payment awards on the date of grant using an option-pricing model is affected by our stock price as well as assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, the expected stock price volatility over the term of the awards, and actual and projected employee stock option exercise activity. The use of the Black Scholes model requires the use of actual employee exercise activity data and the use of a number of complex assumptions including expected volatility, risk-free interest rate, expected dividends and expected term.

Valuation Assumptions:	Year Ended December 31,		
	2022	2021	2020
Expected volatility	43.6%	43.4%	35.0%
Risk-free interest rate	1.9%	0.6%	1.2%
Expected dividend yield	1.2%	0.0%	1.0%
Expected term (in years)	5.4	5.1	4.8

The Company used the actual volatility for traded options for the past 10 years prior to option date as the expected volatility assumption required in the Black Scholes model.

The risk-free interest rate assumption is based upon observed interest rates appropriate for the term of our employee stock options. The dividend yield assumption is based on the history and expectation of dividend payouts. The estimated expected term is based on actual employee exercise activity for the past ten years. Forfeitures are accounted for as they occur.

The following summary presents information regarding outstanding options at December 31, 2022 and changes during 2022 with regard to options under all stock option plans:

	Shares	Weighted-Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value
Outstanding at December 31, 2021	21,276,961	\$ 42.09	4.49	\$ —
Granted	1,492,020	\$ 16.73		
Forfeited	(1,574,642)	\$ 65.44		
Exercised	(113,951)	\$ 17.77		
Outstanding at December 31, 2022	<u>21,080,388</u>	\$ 38.68	4.01	\$ —
Exercisable at December 31, 2022	<u>17,988,842</u>	\$ 42.46	3.28	\$ —

At December 31, 2022, total unrecognized compensation cost related to nonvested stock options was \$10 million. This cost is expected to be recognized over a weighted-average period of three years. The total fair value of stock options vested in 2022, 2021 and 2020 was approximately \$10 million, \$12 million and \$18 million, respectively. Cash received from option exercises for 2022 was \$2 million. Cash received from option exercises in 2021 and 2020 was zero. The actual tax benefit (expense) realized for the tax deductions from option exercises was zero for in 2022, 2021, and 2020.

Stock Appreciation Rights

On December 20, 2017, the Company made a tender offer to exchange SARs issued to certain employees on February 24, 2016 (“2016 SARs”) for cash, amended SARs, and new stock options. The transaction was structured to provide the employees an equal long-term incentive compensation value, while alleviating volatility in the Company’s earnings caused by required mark-to-market accounting on outstanding SARs. Of the outstanding 2016 SARs, 94.75% were exchanged resulting in a total cash payment of \$14 million and granting of 3,613,707 new stock options on the exchange date with an exercise price of \$34.32 and a fair value of \$8.47, with vesting matched to the exchanged 2016 SARs.

The following summary presents information regarding outstanding SARs:

	Year Ended December 31,			
	2022		2021	
	Number of Shares	Average Exercise Price	Number of Shares	Average Exercise Price
Shares under SARs at beginning of year	1,193,934	\$ 28.40	1,234,565	\$ 28.40
Granted	—	—	—	—
Forfeited	(88,828)	28.61	(40,631)	28.32
Exercised	—	—	—	—
Shares under SARs at end of year	<u>1,105,106</u>	\$ 28.39	<u>1,193,934</u>	\$ 28.40
Exercisable at end of year	<u>1,105,106</u>	\$ 28.39	<u>1,186,296</u>	\$ 28.44

The Company recognized no expense in 2022, 2021, or 2020. There was no liability for cash-settled SARs at December 31, 2022.

Restricted Shares

The Company issues restricted stock awards and restricted stock units to officers and key employees in addition to stock options. On February 15, 2022, under the NOV Plan, the Company granted 1,492,020 stock options with a fair value of \$6.28 per option and an exercise price of \$16.73 per share; 2,877,894 restricted stock units with a fair value of \$16.73 per share; and performance share awards (PSAs) to senior management employees with potential payouts varying from zero to 1,188,884 shares. The stock options vest over a three-year period from the grant date. The restricted stock units vest in three equal annual installments commencing on the first anniversary of the grant date. The 2022 PSAs can be earned based on performance against two established goals over a three-year period: 85% with a TSR (total shareholder return) goal and 15% with an internal NVA (“NOV Value Added”, a return on capital metric) goal. TSR performance is determined by comparing the Company’s TSR with the TSR of the members of the Philadelphia Stock Exchange’s Oil Services Sector Index (OSX) for the three-year performance period. The TSR portion of the performance share awards is subject to a vesting cap equal to 100% of Target Level if the Company’s absolute TSR is negative, regardless of relative TSR results. Conversely, if the Company’s absolute TSR is greater than 15% annualized over the three-year performance period the payout amount shall not be less than 50% of Target Level, regardless of relative TSR results. The NVA goal is based on the Company’s improvement in NVA from the beginning of the performance period until the end of the performance period. NVA is calculated as an amount equal to the Company’s (a) gross cash earnings less (b) average gross operating assets times an amount equal to a required return on assets, with certain adjustments.

On May 24, 2022 the Company granted 76,257 restricted stock units with a fair value of \$19.12 per share. The restricted stock units were granted to non-employee members of the board of directors and vest on the first anniversary of the grant date.

The following summary presents information regarding outstanding restricted shares:

	Year Ended December 31,					
	2022		2021		2020	
	Number of Units	Weighted-Average Grant Date Fair Value	Number of Units	Weighted-Average Grant Date Fair Value	Number of Units	Weighted-Average Grant Date Fair Value
Nonvested at beginning of year	6,936,574	\$ 21.32	6,073,963	\$ 31.85	6,274,308	\$ 33.10
Granted	3,509,425	\$ 17.67	3,772,842	\$ 15.03	3,166,402	\$ 19.98
Vested	(2,863,385)	\$ 17.11	(2,672,507)	\$ 15.38	(3,229,624)	\$ 20.09
Forfeited	(394,431)	\$ 26.00	(237,724)	\$ 63.65	(137,123)	\$ 45.75
Nonvested at end of year	<u>7,188,183</u>	<u>\$ 18.30</u>	<u>6,936,574</u>	<u>\$ 21.32</u>	<u>6,073,963</u>	<u>\$ 31.85</u>

At December 31, 2022, there was approximately \$66 million of unrecognized compensation cost related to nonvested restricted stock awards and restricted stock units, which is expected to be recognized over a weighted-average period of two years.

14. Revenue

Disaggregation of Revenue

The following tables disaggregate our revenue by destinations, as we believe it best depicts how the nature, amount, timing and uncertainty of our revenue and cash flows are affected by economic factors. In the tables below, North America includes only the U.S. and Canada (in millions):

	Year Ended December 31, 2022				
	Wellbore Technologies	Completion & Production Solutions	Rig Technologies	Eliminations	Total
North America	\$ 1,407	\$ 1,024	\$ 448	\$ —	\$ 2,879
International	1,306	1,511	1,541	—	4,358
Eliminations	64	53	45	(162)	—
	<u>\$ 2,777</u>	<u>\$ 2,588</u>	<u>\$ 2,034</u>	<u>\$ (162)</u>	<u>\$ 7,237</u>
Land	\$ 2,066	\$ 1,538	\$ 543	\$ —	\$ 4,147
Offshore	647	997	1,446	—	3,090
Eliminations	64	53	45	(162)	—
	<u>\$ 2,777</u>	<u>\$ 2,588</u>	<u>\$ 2,034</u>	<u>\$ (162)</u>	<u>\$ 7,237</u>

Year Ended December 31, 2021

	Wellbore Technologies	Completion & Production Solutions	Rig Technologies	Eliminations	Total
North America	\$ 904	\$ 789	\$ 275	\$ —	\$ 1,968
International	991	1,131	1,434	—	3,556
Eliminations	64	43	30	(137)	—
	<u>\$ 1,959</u>	<u>\$ 1,963</u>	<u>\$ 1,739</u>	<u>\$ (137)</u>	<u>\$ 5,524</u>
Land	\$ 1,423	\$ 1,250	\$ 390	\$ —	\$ 3,063
Offshore	472	670	1,319	—	2,461
Eliminations	64	43	30	(137)	—
	<u>\$ 1,959</u>	<u>\$ 1,963</u>	<u>\$ 1,739</u>	<u>\$ (137)</u>	<u>\$ 5,524</u>

Year Ended December 31, 2020

	Wellbore Technologies	Completion & Production Solutions	Rig Technologies	Eliminations	Total
North America	\$ 824	\$ 751	\$ 227	\$ —	\$ 1,802
International	988	1,639	1,661	—	4,288
Eliminations	55	43	31	(129)	—
	<u>\$ 1,867</u>	<u>\$ 2,433</u>	<u>\$ 1,919</u>	<u>\$ (129)</u>	<u>\$ 6,090</u>
Land	\$ 1,308	\$ 1,426	\$ 473	\$ —	\$ 3,207
Offshore	504	964	1,415	—	2,883
Eliminations	55	43	31	(129)	—
	<u>\$ 1,867</u>	<u>\$ 2,433</u>	<u>\$ 1,919</u>	<u>\$ (129)</u>	<u>\$ 6,090</u>

The Company did not have any customers with revenues greater than 10% of total revenue for the years ended December 31, 2022, 2021, or 2020.

Contract Assets and Liabilities

Contract assets include unbilled amounts when revenue recognized exceeds the amount billed to the customer under contracts where revenue is recognized over-time. There were no impairment losses recorded on contract assets for the years ending December 31, 2022, 2021 and 2020.

Contract liabilities consist of advance payments, billings in excess of revenue recognized and deferred revenue.

The changes in the carrying amount of contract assets and contract liabilities are as follows (in millions):

	Contract Assets	Contract Liabilities
Balance at December 31, 2021	\$ 461	\$ 392
Provision, net	(1)	—
Billings	(1,062)	1,123
Revenue recognized	1,265	(1,071)
Currency translation adjustments and other	22	—
Balance at December 31, 2022	<u>\$ 685</u>	<u>\$ 444</u>

15. Income Taxes

The domestic and foreign components of income (loss) before income taxes were as follows (in millions):

	Year Ended December 31,		
	2022	2021	2020
Domestic	\$ 113	\$ (257)	\$ (2,169)
Foreign	125	27	(610)
	<u>\$ 238</u>	<u>\$ (230)</u>	<u>\$ (2,779)</u>

The components of the provision for income taxes consisted of (in millions):

	Year Ended December 31,		
	2022	2021	2020
Current:			
Federal	\$ (1)	\$ 4	\$ (279)
State	-	(1)	(4)
Foreign	86	23	106
Total current income tax provision	<u>85</u>	<u>26</u>	<u>(177)</u>
Deferred:			
Federal	3	(1)	7
State	—	—	—
Foreign	(5)	(10)	(72)
Total deferred income tax provision	<u>(2)</u>	<u>(11)</u>	<u>(65)</u>
Total income tax provision	<u>\$ 83</u>	<u>\$ 15</u>	<u>\$ (242)</u>

The difference between the effective tax rate reflected in the provision for income taxes and the U.S. federal statutory rate was as follows (in millions):

	Year Ended December 31,		
	2022	2021	2020
Federal income tax at U.S. statutory rate	\$ 50	\$ (48)	\$ (584)
Foreign income tax rate differential	1	(9)	(30)
Goodwill impairment	—	—	271
Reduction of FTC carryforwards	—	—	184
Tax Benefit from CARES Act	—	—	(83)
Change in deferred tax valuation allowance	24	31	(83)
Nondeductible expenses	18	17	44
Foreign dividends, net of foreign tax credits	27	54	28
Change in uncertain tax positions	4	13	20
State income taxes - net of federal benefit	—	(1)	(4)
Income tax credits	(5)	(11)	—
Other	(36)	(31)	(5)
Total income tax provision	<u>\$ 83</u>	<u>\$ 15</u>	<u>\$ (242)</u>

The effective tax rate for the year ended December 31, 2022 was 34.9%, compared to (6.5%) for 2021. For the year-ended 2022, the effective tax rate was negatively impacted by current year losses in certain jurisdictions with no tax benefit, partially offset by favorable adjustments related to foreign currency translation gains and the utilization of losses and tax credits for prior year tax returns. For the year ended December 31, 2021 the effective tax rate was negatively impacted by losses in certain jurisdictions with no tax benefit, partially offset by favorable adjustments related to utilization of losses and tax credits for prior year tax returns.

Significant components of our deferred tax assets and liabilities were as follows (in millions):

	December 31,	
	2022	2021
Deferred tax assets:		
Allowances and operating liabilities	\$ 276	\$ 297
Net operating loss carryforwards	324	446
Stock Compensation	51	56
Tax credit carryforwards	292	398
Other	119	135
Valuation allowance	(920)	(1,127)
Total deferred tax assets	<u>142</u>	<u>205</u>
Deferred tax liabilities:		
Tax over book depreciation	49	56
Capital leases	73	76
Intangible assets	34	52
Deferred income	16	51
Accrued tax on unremitted earnings	32	33
Other	6	3
Total deferred tax liabilities	<u>210</u>	<u>271</u>
Net deferred tax liability	<u>\$ 68</u>	<u>\$ 66</u>

The valuation allowance decreased by \$207 million during 2022. This decrease is comprised of \$128 million due to the expiration of foreign tax credit carryforwards in the US, \$62 million for the removal of deferred tax assets for operations in Russia and Belarus, \$25 million to remove other forfeited NOLs resulting from legal entity mergers and dissolutions, \$13 million related to FX and \$3 million related to changes in Other Comprehensive Income, partially offset by an increase of \$24 million related to current year changes in the carrying value of deferred tax assets.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows (in millions):

	2022	2021	2020
Unrecognized tax benefit at beginning of year	\$ 60	\$ 57	\$ 38
Gross increase for tax positions in prior years	9	8	25
Gross decrease for tax positions in prior years	(1)	(1)	(2)
Cash Settlements	(1)	(1)	(1)
Lapse of statute of limitations	(5)	(3)	(3)
Unrecognized tax benefit at end of year	<u>\$ 62</u>	<u>\$ 60</u>	<u>\$ 57</u>

The balance of unrecognized tax benefits at December 31, 2022, 2021 and 2020 was \$62 million, \$60 million and \$57 million, respectively. Accruals related to prior year domestic and foreign jurisdiction issues resulted in uncertain tax position increases of \$9 million in 2022. Resolutions of domestic and foreign jurisdiction audits resulted in a \$1 million decrease in uncertain tax provisions for both the years ended December 31, 2022 and 2021.

Substantially all of the unrecognized tax benefits, if ultimately realized, would be recorded as a benefit to the effective tax rate. The Company does not anticipate any material change within the next twelve months due to settlements and conclusions of tax examinations. To the extent penalties and interest would be assessed on any underpayment of income tax, such accrued amounts have been classified as a component of income tax expense in the financial statements consistent with the Company's policy. For the years ended December 31, 2022, 2021 and 2020, we recorded income tax expense of \$8 million, \$8 million and \$2 million, respectively, for interest and penalty related to unrecognized tax benefits. As of December 31, 2022 and 2021, the Company had accrued \$23 million and \$20 million, respectively, of interest and penalty relating to unrecognized tax benefits.

The Company is subject to taxation in the United States as well as various states and foreign jurisdictions. The Company has significant operations in the United States, Norway, Saudi Arabia, Brazil, China, the United Kingdom, the Netherlands, Denmark, and Mexico. Tax years that remain subject to examination by major tax jurisdictions vary by legal entity, but are generally open in the U.S. for tax years ending after 2013 and outside the U.S. for tax years ending after 2017.

Net operating loss carryforwards by jurisdiction and expiration as of December 31, 2022 were as follows (in millions):

	Federal	State	Foreign	Total
2023 - 2027 Expiration	\$ 15	\$ 4	\$ 63	\$ 82
2028 - 2042 Expiration	16	425	314	755
Unlimited Expiration	320	—	498	818
Total Net Operating Loss (NOL)	<u>\$ 351</u>	<u>\$ 429</u>	<u>\$ 875</u>	<u>\$ 1,655</u>
Tax Effected NOL	<u>\$ 74</u>	<u>\$ 28</u>	<u>\$ 222</u>	<u>\$ 324</u>

The Company has \$273 million of excess foreign tax credits in the United States as of December 31, 2022, of which \$144 million, \$96 million, \$12 million, \$11 million, and \$10 million will expire in 2027, 2028, 2030, 2031, and 2032 respectively. As of December 31, 2022, the Company has remaining tax-deductible goodwill of \$83 million, resulting from acquisitions. The amortization of this goodwill is deductible over various periods ranging up to 9 years.

16. Business Segments. and Geographic Areas

The Company's operations are organized into three operating segments: Wellbore Technologies, Completion & Production Solutions and Rig Technologies.

Wellbore Technologies

The Company's Wellbore Technologies segment designs, manufactures, rents, and sells a variety of equipment and technologies used to perform drilling operations, and offers services that optimize their performance, including: solids control and waste management equipment and services; portable power generation; drill pipe; wired pipe; drilling optimization and automation services; tubular inspection, repair and coating services; instrumentation; measuring and monitoring; downhole and fishing tools; steerable technologies; and drill bits.

Wellbore Technologies focuses on oil and gas companies and supports drilling contractors, oilfield service companies, and oilfield equipment rental companies. Demand for the segment's products and services depends on the level of oilfield drilling activity by oil and gas companies, drilling contractors, and oilfield service companies.

Completion & Production Solutions

The Company's Completion & Production Solutions segment integrates technologies for well completions and oil and gas production. The segment designs, manufactures, and services equipment and technologies needed for hydraulic fracture stimulation, including downhole multistage fracturing tools, pressure pumping trucks, blenders, sanders, hydration units, injection units, flowline, and manifolds; well intervention, including coiled tubing units, coiled tubing, and wireline units and tools; well construction, including premium connections and liner hangers; onshore production, including composite pipe, surface transfer and progressive cavity pumps, and artificial lift systems; and, offshore production, including floating production systems and subsea production technologies. The segment also manufactures industrial pumps and mixers.

Completion & Production Solutions supports service companies and oil and gas companies. Demand for the segment's products depends on the level of oilfield completions and workover activity by oilfield service companies and drilling contractors, and capital spending plans by oil and gas companies and oilfield service companies.

The segment also designs and manufactures equipment for industrial markets. This includes specialized, technology-driven progressive cavity pumps and mixers for a wide breadth of industrial end markets with high failure costs, premium pole products to support connectivity, lighting, and power for municipal and residential applications including 5G, smart-city infrastructure, roads and highways, and energy-grid modernization. Demand for these products is driven by general industrial activity and infrastructure spend.

Rig Technologies

The Company's Rig Technologies segment manufactures and supports the capital equipment and integrated systems needed to drill oil and gas wells on land and offshore as well as other marine-based markets, including offshore wind vessels. The segment designs, manufactures and sells land rigs, offshore drilling equipment packages, including installation and commissioning services, and drilling rig components that mechanize and automate the drilling process and rig functionality. Equipment and technologies the segment provides to customers include: substructures, derricks, and masts; cranes; jacking systems; pipe lifting, racking, rotating, and assembly systems; fluid transfer technologies, such as mud pumps; pressure control equipment, including blowout preventers; power transmission systems, including drives and generators; rig instrumentation and control systems; mooring, anchor, and deck handling machinery; major equipment components for offshore wind construction vessels; and pipelay and construction systems. The segment also provides spare

parts, repair, and rentals as well as comprehensive remote equipment monitoring, technical support, field service, and customer training through an extensive network of aftermarket service and repair facilities strategically located in major areas of drilling operations around the world.

Rig Technologies supports land and offshore drillers. Demand for the segment's products depends on drilling contractors' and oil and gas companies' capital spending plans, specifically capital expenditures on rig construction and refurbishment; and secondarily on the overall level of oilfield drilling activity, which drives demand for spare parts, service, and repair for the segment's large installed base of equipment. The segment also designs and builds equipment for wind turbine installation companies, where demand is dependent on global investment into offshore wind energy developments.

Geographic Areas:

The following table presents consolidated revenues by country based on sales destination of the products or services (in millions):

	Year Ended December 31,		
	2022	2021	2020
United States	\$ 2,603	\$ 1,760	\$ 1,634
Brazil	495	316	224
Saudi Arabia	488	316	343
Norway	351	365	464
China	296	222	288
Canada	277	207	168
United Kingdom	199	204	222
United Arab Emirates	157	130	221
Singapore	131	143	242
South Korea	88	32	33
Other Countries	2,152	1,829	2,251
Total	\$ 7,237	\$ 5,524	\$ 6,090

The following table presents plant, property and equipment by country based on the location (in millions):

	December 31,	
	2022	2021
United States	\$ 883	\$ 898
Saudi Arabia	240	231
Brazil	94	87
United Kingdom	72	84
Denmark	68	72
South Korea	66	60
United Arab Emirates	64	65
Canada	50	59
Mexico	27	28
Singapore	13	14
Russia	-	10
Other Countries	204	215
Total	\$ 1,781	\$ 1,823

Business Segments:

The following table presents selected financial data by business segment (in millions):

	Wellbore Technologies	Completion & Production Solutions	Rig Technologies	Eliminations and corporate (1)	Total
December 31, 2022					
Revenue	\$ 2,777	\$ 2,588	\$ 2,034	\$ (162)	\$ 7,237
Operating profit (loss) ⁽²⁾	304	69	144	(253)	264
Capital expenditures	109	59	34	12	214
Depreciation and amortization	150	62	73	16	301
Goodwill	313	480	712	—	1,505
Total assets	2,992	2,748	3,074	1,321	10,135
December 31, 2021					
Revenue	\$ 1,959	\$ 1,963	\$ 1,739	\$ (137)	\$ 5,524
Operating profit (loss) ⁽²⁾	74	(65)	43	(186)	(134)
Capital expenditures	77	46	74	4	201
Depreciation and amortization	158	62	71	15	306
Goodwill	342	473	712	-	1,527
Total assets	2,670	2,465	2,621	1,794	9,550
December 31, 2020					
Revenue	\$ 1,867	\$ 2,433	\$ 1,919	\$ (129)	\$ 6,090
Operating profit (loss) ⁽²⁾	(858)	(977)	(362)	(228)	(2,425)
Capital expenditures	87	48	80	11	226
Depreciation and amortization	187	75	77	13	352
Goodwill	308	473	712	—	1,493
Total assets	2,665	2,472	2,923	1,869	9,929

- (1) Sales from one segment to another generally are priced at estimated equivalent commercial selling prices; however, segments originating an external sale are credited with the full profit to the Company. Eliminations and corporate costs include intercompany transactions conducted between the three reporting segments that are eliminated in consolidation, as well as corporate costs not allocated to the segments. Intercompany transactions within each reporting segment are eliminated within each reporting segment. Also included in the eliminations and corporate costs column are capital expenditures and total assets related to corporate. Corporate assets consist primarily of cash and fixed assets.
- (2) Segment operating profit for 2022 includes charges, net of related credits, for: Russia impairment and other charges (Wellbore Technologies \$60 million; Completion & Production Solutions \$39 million; and, Rig Technologies \$24 million); credits related to gains on sales of previously reserved inventory (Wellbore Technologies zero; Completion & Production Solutions \$(8) million; and, Rig Technologies \$(27) million); and severance and other restructuring costs (Wellbore Technologies zero; Completion & Production Solutions \$5 million; and, Rig Technologies \$3 million). Segment operating loss for 2021 includes charges, net of related credits, for: inventory write-downs net of gains on sales of previously reserved inventory (Wellbore Technologies \$(2) million; Completion & Production Solutions \$(12) million; and, Rig Technologies \$1 million); and severance and other restructuring costs (Wellbore Technologies \$32 million; Completion & Production Solutions \$12 million; and, Rig Technologies \$19 million).

17. Impairment and Other Charges

Beginning February 2022, as a result of armed conflict in Ukraine, governments in the European Union, the United States, the United Kingdom, Switzerland, and other countries have enacted sanctions against Russia and Russian interests. Among other things, these sanctions include controls on the export, re-export, and in-country transfer in Russia of certain goods, supplies, and technologies, including some that we use in our business in Russia. They also impose restrictions on doing business with specially designated nationals, including certain state-owned Russian customers, certain financial institutions and certain individuals and restrict or prohibit new investments and business activities in Russia. As previously disclosed, in response to these sanctions, the Company ceased new investments and curtailed our activities in Russia. Further, during the third quarter of 2022, the Company sold its business in Belarus and committed to a plan to sell its businesses in Russia. The sale is subject to government approval under Russian law.

As a result of these actions, we recorded \$127 million in impairment and other charges for the year ended December 31, 2022, of which \$51 million relates to accumulated foreign currency translation adjustment losses for Russia and Belarus. The impairment and other charges are reported in “Cost of revenue” (\$76 million for the year ended December 31, 2022) and “Selling, general and administrative” (\$51 million for the year ended December 31, 2022) in our Consolidated Statements of Income (Loss). As of December 31, 2022, all our Russian assets and liabilities were classified as held for sale and reported in “Prepaid and Other Current Assets” and “Accrued Liabilities”, respectively, in our Consolidated Balance Sheet. We expect to complete the sale of our Russian entities within the next 12 months, subject to regulatory approval.

SCHEDULE II
NOV INC.
VALUATION AND QUALIFYING ACCOUNTS
Years Ended December 31, 2022, 2021 and 2020
(in millions)

	Balance beginning of year	Additions (Deductions) charged to costs and expenses	Charge off's and other	Balance end of year
Allowance for credit losses:				
2022	\$ 88	\$ 5	\$ (22)	\$ 71
2021	100	5	(17)	88
2020	132	7	(39)	100
Reserve for excess and obsolete inventories:				
2022	\$ 444	\$ (18)	\$ (48)	\$ 378
2021	577	73	(206)	444
2020	843	367	(633)	577
Valuation allowance for deferred tax assets:				
2022	\$ 1,127	\$ 24	\$ (231)	\$ 920
2021	1,093	31	3	1,127
2020	1,175	(83)	1	1,093

SUBSIDIARIES OF THE REGISTRANT

Name	State or Country of Incorporation
Acker Holdings LLC	United States
Advanced Wirecloth, S. de R.L. de C.V.	Mexico
AF Global FZE	United Arab Emirates
American Pipe and Construction International	United States
Ameron B.V.	Netherlands
Ameron International Corporation	United States
Ameron Pole Products LLC	United States
Ameron Polyplaster Industria E Comercio de Tubos Ltda.	Brazil
Ameron Singapore Holding, LLC	United States
Andergauge Limited	United Kingdom
Andergauge Redback, LLC	United States
APL France SAS [in liquidation]	France
APL Norway AS	Norway
Arabian Rig Manufacturing Company	Saudi Arabia
ASEP Otomotiv Sanayi Ticaret Ltd.	Turkey
Big Red Tubulars Limited	Virgin Islands, British
Bondstrand Ltd.	Saudi Arabia
Chemineer, Inc.	United States
Coil Services Middle East LLC	United Arab Emirates
Coöperatie Intelliserv Holding U.A.	Netherlands
Coöperatie NOV NL U.A.	Netherlands
Elmar Far East Pty Ltd	Australia
Environmental Procedures LLC	United States
Fiber Glass Systems (Qingdao) Composite Piping Co., Ltd.	China
Fiber Glass Systems Oman L.L.C.	Oman
Fiber Glass Systems, L.P.	United States
Fiberspar Australia Pty. Ltd.	Australia
Fibra Ingenieria y Construccion S.A.	Chile
Fjords Processing (Shanghai) Co., Ltd.	China
Fjords Processing Australia Pty Ltd	Australia
Fjords Processing France SAS	France
Fjords Processing Korea Co. Ltd.	Korea, Republic of
Fjords Processing Limited	United Kingdom
Fjords Processing Middle East DMCC	United Arab Emirates
Fjords Processing UK Ltd.	United Kingdom
Fryma S.a.r.l.	France
GPEX, L.P.	United States
Grant Prideco (Singapore) Pte Ltd	Singapore
Grant Prideco de Venezuela, S.A.	Venezuela, Bolivarian Republic of
Grant Prideco III C. V.	Netherlands
Grant Prideco Jersey Limited	Jersey Island/Delaware
Grant Prideco Mauritius Limited	Mauritius
Grant Prideco Netherlands B.V.	Netherlands
Grant Prideco PC Composites Holdings, LLC	United States
Grant Prideco, Inc.	United States
Grant Prideco, S. de R.L. de C.V.	Mexico
GustoMSC B.V.	Netherlands
Hebei Huayouyiji Tuboscope Coating Co., Ltd.	China
Hydralift AmClyde, Inc.	United States
Hydralift France SAS	France
Intelliserv GP Holdings LLC	United States

Intelliserv International Holding, Ltd	Cayman Islands
IntelliServ Norway AS	Norway
Intelliserv, Inc.	United States
Intelliserv, LLC	United States
JiangYin Tuboscope Tubular Development Co., Ltd	China
Keystone Tower Systems, Inc.	United States
Midsund Bruk AS	Norway
Mono Group Pension Trustees Limited	United Kingdom
Mono Pumps New Zealand Company	New Zealand
Monoflo NOV S.A.I.C.	Argentina
Moyno, Inc.	United States
MSI Pipe Protection Technologies UK Limited	United Kingdom
National Oilwell (U.K.) Limited	United Kingdom
National Oilwell Algeria	Algeria
National Oilwell de Venezuela, C.A.	Venezuela, Bolivarian Republic of
National Oilwell Varco (Beijing) Investment Management Co. Ltd.	China
National Oilwell Varco (Thailand) Ltd.	Thailand
National Oilwell Varco Algeria	Algeria
National Oilwell Varco Almansoori Services	United Arab Emirates
National Oilwell Varco Bahrain WLL	Bahrain
National Oilwell Varco Belgium SA	Belgium
National Oilwell Varco de Bolivia S.R.L.	Bolivia
National Oilwell Varco de Chile - Servicios Limitada	Chile
National Oilwell Varco Denmark I/S	Denmark
National Oilwell Varco do Brasil Ltda.	Brazil
National Oilwell Varco Egypt LLC	Egypt
National Oilwell Varco Eurasia, LLC	Russian Federation
National Oilwell Varco Guatemala, Limitada	Guatemala
National Oilwell Varco Guyana Inc.	Guyana
National Oilwell Varco Hungary Limited Liability Company	Hungary
National Oilwell Varco Korea Co., Ltd.	Korea, Republic of
National Oilwell Varco MSW S.A.	Argentina
National Oilwell Varco Muscat L.L.C.	Oman
National Oilwell Varco Norway AS	Norway
National Oilwell Varco Peru S.R.L.	Peru
National Oilwell Varco Petroleum Equipment (Shanghai) Co., Ltd.	China
National Oilwell Varco Poland Sp.z.o.o.	Poland
National Oilwell Varco Pte. Ltd.	Singapore
National Oilwell Varco Rig Equipment Trading (Shanghai) Co., Ltd.	China
National Oilwell Varco Romania S.R.L.	Romania
National Oilwell Varco Solutions, S.A. de C.V.	Mexico
National Oilwell Varco UK Limited	United Kingdom
National Oilwell Varco Ukraine LLC	Ukraine
National Oilwell Varco, L.P.	United States
National-Oilwell Pte. Ltd.	Singapore
National-Oilwell Pty Ltd	Australia
NOV - Oil Services Angola, LDA.	Angola
NOV (Asia) Inc.	Mauritius
NOV (Barbados) Holding SRL	Barbados
NOV (Barbados) SRL	Barbados
NOV (Caymans), Ltd.	Cayman Islands
NOV (Malaysia) Sdn. Bhd.	Malaysia
NOV Africa Pty Ltd	South Africa
NOV APL Limited	Cyprus
NOV Australia Pty Ltd	Australia
NOV Azerbaijan LLC	United States

NOV Brandt Europe France	France
NOV Brandt Oilfield Services Middle East LLC	United Arab Emirates
NOV Canada ULC	Canada
NOV CAPS Pte. Ltd.	Singapore
NOV Completion and Production Solutions Korea Ltd.	Korea, Republic of
NOV Completion Tools LLC	Russian Federation
NOV Denmark Coöperatief U.A.	Netherlands
NOV Doha Energy Trading and Services LLC	Qatar
NOV Downhole Argentina, LLC	United States
NOV Downhole Eurasia Limited	United Kingdom
NOV Downhole Italia S.R.L.	Italy
NOV Downhole KZ, LLP	Kazakhstan
NOV Downhole Malaysia Sdn. Bhd.	Malaysia
NOV Downhole Pty Ltd	Australia
NOV Downhole Thailand, LLC	United States
NOV Elmar (Middle East) Limited	United Kingdom
NOV Energy Mexico, S. de R.L. De C.V.	Mexico
NOV Equipment Manufacturing Sole Proprietorship LLC	United Arab Emirates
NOV Eurasia Holding LLC	United States
NOV Expatriate Services, Inc.	United States
NOV FGS Malaysia Sdn Bhd	Malaysia
NOV FGS Singapore (Pte.) Ltd	Singapore
NOV Flexibles Equipamentos E Servicos Ltda.	Brazil
NOV Fluid Control B.V.	Netherlands
NOV Gabon SARL	Gabon
NOV GEO LP1 LLC	United States
NOV GEO LP2 LLC	United States
NOV Germany Holding GmbH	Germany
NOV Ghana Limited	Ghana
NOV Grant Prideco L.L.C.	United Arab Emirates
NOV Holding Danmark ApS	Denmark
NOV Holding Sub UK 1 Limited	United Kingdom
NOV Holding UK 1 Limited	United Kingdom
NOV Holding UK 2 Limited	United Kingdom
NOV Holdings B.V.	Netherlands
NOV India Private Limited	India
NOV Intelliserv UK Limited	United Kingdom
NOV International Holding LLC	United States
NOV Intervention & Stimulation Equipment US, LLC	United States
NOV Intervention and Stimulation Equipment – Aftermarket Comércio de Equipamentos e Serviços Ltda.	Brazil
NOV (Jiangsu) Energy Equipment Limited	China
NOV Kenya Limited	Kenya
NOV Kostroma LLC	Russian Federation
NOV Kuwait Light & Heavy Equipment Repairing & Maintenance Co.	Kuwait
NOV Mexico Holding LLC	United States
NOV MFG India Private Limited	India
NOV Middle East FZCO	United Arab Emirates
NOV Mozambique Limitada	Mozambique
NOV NL Mexico Holding B.V.	Netherlands
NOV Oil & Gas Services Egypt (S.A.E)	Egypt
NOV Oil & Gas Services Sénégal S.A.R.L.	Senegal
NOV Oil & Gas Services Uganda Limited	Uganda, Republic of
NOV Oil and Gas Services Ghana Limited	Ghana
NOV Oil and Gas Services Namibia (Proprietary) Limited	Namibia
NOV Oil and Gas Services Nigeria Limited	Nigeria

NOV Oil and Gas Services South Africa (Pty) Limited	South Africa
NOV Oilfield Services Tanzania Limited	Tanzania, United Republic of
NOV Oilfield Services Vostok LLC	Russian Federation
NOV Oilfield Solutions Ltd.	Nigeria
NOV Park II B.V.	Netherlands
NOV Process & Flow Technologies AS	Norway
NOV Process & Flow Technologies Malaysia Sdn. Bhd.	Malaysia
NOV Process & Flow Technologies Pte. Ltd.	Singapore
NOV Process & Flow Technologies UK Limited	United Kingdom
NOV Products Middle East FZE	United Arab Emirates
NOV QFZ LLC	Qatar
NOV Rig Solutions Pte. Ltd.	Singapore
NOV Romania, LLC	United States
NOV Saudi Arabia Co. Ltd.	Saudi Arabia
NOV Saudi Arabia Trading Co.	Saudi Arabia
NOV Services Ltd.	Cayman Islands
NOV Servicios de Personal Mexico, S. de R.L. de C.V.	Mexico
NOV Tanajib Kuwait for Services and Maintenance of Oil Rigs, Refineries and Petrochemicals, W.L.L.	Kuwait
NOV Tuboscope Italia S.R.L.	Italy
NOV Tuboscope Middle East LLC	United Arab Emirates
NOV Tuboscope NL B.V.	Netherlands
NOV Tubulars and Connectors Ltd.	Nigeria
NOV UK (Angola Acquisitions) Limited	United Kingdom
NOV UK Finance Limited	United Kingdom
NOV UK Holdings Limited	United Kingdom
NOV UK Holdings LLC	United States
NOV UK Korea LP	United Kingdom
NOV Wellbore Technologies do Brasil Equipamentos E Serviçoes Ltda.	Brazil
NOV Wellbore Technologies Norway LLC	United States
NOV Wellsite Services Germany GmbH	Germany
NOV Worldwide B.V.	Netherlands
NOV-BLM SAS	France
NOVM Holding LLC	United States
NOW International LLC	United States
NOW Oilfield Services, LLC	United States
NQL Holland B.V.	Netherlands
Pesaka Inspection Services SDN.BHD.	Malaysia
Pipex Limited	United Kingdom
Pipex PX Limited	United Kingdom
PT Fjords Processing Indonesia	Indonesia
PT H-Tech Oilfield Equipment	Indonesia
PT Managed Pressure Operations	Indonesia
PT National Oilwell Varco	Indonesia
PT NOV Oilfield Services	Indonesia
PT Profab Indonesia	Indonesia
R&M Energy Systems Australia Pty Ltd	Australia
R&M Energy Systems de Venezuela, C.A.	Venezuela, Bolivarian Republic of
R&M Singapore Holding LLC	United States
RE.MAC.UT. S.r.l.	Italy
ReedHycalog International Holding, LLC	United States
ReedHycalog UK Limited	United Kingdom
ReedHycalog, L.P.	United States
RHI Holding LLC	United States
Robannic Overseas Finance A.V.V.	Aruba
Robbins & Myers B.V.	Netherlands

Robbins & Myers Foundation	United States
Robbins & Myers Holdings UK Limited	United Kingdom
Robbins & Myers Holdings, LLC	United States
Robbins & Myers Italia S.R.L.	Italy
Robbins & Myers N.V.	Curacao
Robbins & Myers, Inc.	United States
Romaco S.a.r.l.	France
Slip Clutch Systems Limited	United Kingdom
STAR Sudamtex Tubulares S.A.	Venezuela, Bolivarian Republic of
Subseaflex Holding ApS	Denmark
T-3 Energy Services Cayman Holdings, Ltd.	Cayman Islands
T-3 Energy Services Cayman, Ltd.	Cayman Islands
T-3 Energy Services Mexico, S. de R.L. de C.V.	Mexico
T-3 Energy Services, LLC	United States
T-3 Investment Corporation IV	United States
T-3 Mexican Holdings, Inc.	United States
Telluride Insurance Limited	Bermuda
Tianjin Grant TPCO Drilling Tools Company Limited	China
Tuboscope & Co. LLC	Oman
Tuboscope (Holding U.S.) LLC	United States
Tuboscope Brandt de Venezuela, S.A.	Venezuela, Bolivarian Republic of
Tuboscope Norge AS	Norway
NOV Germany GmbH	Germany
Tuboscope Vetco (France) SAS	France
Tuboscope Vetco (Österreich) GmbH	Austria
Tuboscope Vetco Capital Limited	United Kingdom
Tuboscope Vetco de Argentina S.A.	Argentina
Tuboscope Vetco Moscow CJSC	Russian Federation
Tubular Coatings Solutions Ltd.	Saudi Arabia
Tucom Composites Polyester Sanayi Ticaret Ltd.	Turkey
Urban WLY, LP	United States
Varco BJ B.V.	Netherlands
Varco CIS, LLC	Russian Federation
Varco International de Venezuela, C.A.	Venezuela, Bolivarian Republic of
Varco US Holdings LLC	United States
Varco, L.P.	United States
Vetco Enterprise GmbH	Switzerland
Vetco Saudi Arabia Ltd.	Saudi Arabia
Visible Assets, Inc.	United States
voestalpine Tubulars Corporation	United States
voestalpine Tubulars GmbH	Austria
voestalpine Tubulars GmbH & Co KG	Austria
Woolley, Inc.	United States
XL Systems Antilles, N.V.	Curacao
XL Systems Europe B.V.	Netherlands
XL Systems International, Inc.	United States

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the following Registration Statements:

Form	Description
S-8	National-Oilwell, Inc. Stock Award and Long Term Incentive Plan, Value Appreciation and Incentive Plan A and Value Appreciation and Incentive Plan B (No. 333-15859),
S-8	National-Oilwell Retirement and Thrift Plan (No. 333-36359),
S-8	National Oilwell Varco, Inc. Long-Term Incentive Plan (No. 333-123310),
S-8	National Oilwell Varco, Inc. Employee Stock Purchase Plan (No. 333-123301),
S-8	Varco International Inc. 2003 Equity Participation Plan; Stock Option Plan for Non-Employee Directors, as amended; Varco International, Inc. 1990 Stock Option Plan; 1994 Directors' Stock Option Plan; Varco International, Inc. 401(k)/Profit Sharing Plan (No. 333-123287),
S-8	Varco International, Inc. Deferred Compensation Plan (No. 333-123286),
S-8	National-Oilwell, Inc. Amended and Restated Stock Award and Long-Term Incentive Stock Plan (No. 333-118721),
S-8	National Oilwell Varco, Inc. Long-Term Incentive Plan (No. 333-159333),
S-8	National Oilwell Varco, Inc. Long-Term Incentive Plan (No. 333-188818),
S-8	National Oilwell Varco, Inc. Long-Term Incentive Plan (No. 333-211537),
S-8	National Oilwell Varco, Inc. 2018 Long-Term Incentive Plan (No. 333-224892),
S-8	National Oilwell Varco, Inc. 2018 Long-Term Incentive Plan (No. 333-231779),
S-3	Registration Statement on Form S-3 for the registration of debt securities (No. 333-234373),
S-8	National Oilwell Varco, Inc. 2018 Long-Term Incentive Plan (No. 333-238529), and
S-8	NOV Inc. Long-Term Incentive Plan (No. 333-265171)

of our reports dated February 14, 2023, with respect to the consolidated financial statements and effectiveness of internal control over financial reporting of NOV Inc. included in this Annual Report (Form 10-K) of NOV Inc. for the year ended December 31, 2022.

/s/ Ernst & Young LLP

Houston, Texas
February 14, 2023

CERTIFICATION

I, Clay C. Williams, certify that:

1. I have reviewed this annual report on Form 10-K for the fiscal year ended December 31, 2022 of NOV Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer 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 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: February 14, 2023

By: /s/ Clay C. Williams

Clay C. Williams

Chairman, President and Chief Executive Officer

CERTIFICATION

I, Jose A. Bayardo, certify that:

1. I have reviewed this annual report on Form 10-K for the fiscal year ended December 31, 2022 of NOV Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer 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 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: February 14, 2023

By: /s/ Jose A. Bayardo

Jose A. Bayardo

Senior Vice President and Chief Financial Officer

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350

In connection with the Annual Report of NOV Inc. (the "Company") on Form 10-K for the year ended December 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Clay C. Williams, Chairman, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 14, 2023

By: /s/ Clay C. Williams

Clay C. Williams

Chairman, President and Chief Executive Officer

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350

In connection with the Annual Report of NOV Inc. (the "Company") on Form 10-K for the year ended December 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Jose A. Bayardo, Senior Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 14, 2023

By: /s/ Jose A. Bayardo

Jose A. Bayardo

Senior Vice President and Chief Financial Officer

Mine Safety Disclosures

Our mines are operated subject to the regulation of the Federal Mine Safety and Health Administration (“MSHA”), under the Federal Mine Safety and Health Act of 1977 (the “Mine Act”). The following mine safety data is provided pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Dodd-Frank Act”).

As required by the reporting requirements of the Dodd-Frank Act, as amended, the table below presents the following information for the year ended December 31, 2022. (in whole dollars) (Unaudited)

Mine	Section 104 S&S Citations	Section 104(b) Orders	Section 104(d) Citations and Orders	Section 110(b)(2) Violations	Section 107(a) Orders	Total Dollar Value of MSHA Assessments Proposed	Total Number of Mining Related Fatalities	Received Notice of Pattern of Violations Under Section 104(e)	Received Notice of Potential to have Patterns Under Section 104(e)	Legal Actions Pending as of Last Day of Period	Legal Actions Initiated During Period	Legal Actions Resolved During Period
Dry Creek (26-02646)	—	—	—	—	—	\$ —	—	no	no	—	—	—
Osino Barite Mill (26-02724)	—	—	—	—	—	\$ —	—	no	no	—	—	—

