

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

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2022

OR

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

For the transition period from _____ to _____

Commission File Number 001-14273

CORE LABORATORIES N.V.

(Exact name of registrant as specified in its charter)

The Netherlands
(State or other jurisdiction of incorporation or organization)

Van Heuven Goedhartlaan 7 B

1181 LE Amstelveen

The Netherlands
(Address of principal executive offices)

Not Applicable
(I.R.S. Employer Identification No.)

Not Applicable
(Zip Code)

Registrant's telephone number, including area code: **(31-20) 420-3191**

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 Shares, EUR 0.02 Par Value Per Share	CLB	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 Exchange Act. Yes No

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

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

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

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company Emerging growth company

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

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

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 Act). Yes No

As of June 30, 2022, the aggregate market value of common shares held by non-affiliates of the registrant was approximately \$908,507,042.

As of February 3, 2023, the number of common shares outstanding was 46,633,934.

DOCUMENTS INCORPORATED BY REFERENCE

The information required by Part III of this Report, to the extent not set forth herein, is incorporated herein by reference from the registrant's definitive proxy statement relating to the Annual Meeting of Shareholders to be held in 2023, which definitive proxy statement shall be filed with the Securities and Exchange Commission within 120 days after the end of the fiscal year to which this Report relates.

CORE LABORATORIES N.V.
FORM 10-K FOR THE FISCAL YEAR ENDED DECEMBER 31, 2022
TABLE OF CONTENTS

	<u>Page</u>
<u>PART I</u>	
Item 1. Business	1
Item 1A. Risk Factors	12
Item 1B. Unresolved Staff Comments	21
Item 2. Properties	21
Item 3. Legal Proceedings	21
Item 4. Mine Safety Disclosures	21
<u>PART II</u>	
Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	22
Item 6. [Reserved]	23
Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations	24
Item 7A. Quantitative and Qualitative Disclosures about Market Risk	40
Item 8. Financial Statements and Supplementary Data	41
Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	41
Item 9A. Controls and Procedures	41
Item 9B. Other Information	42
Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections	42
<u>PART III</u>	
Item 10. Directors, Executive Officers and Corporate Governance	43
Item 11. Executive Compensation	43
Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	43
Item 13. Certain Relationships and Related Transactions and Director Independence	43
Item 14. Principal Accountant Fees and Services	43
<u>PART IV</u>	
Item 15. Exhibits and Financial Statement Schedules	44
Item 16. Form 10-K Summary	44

PART I

ITEM 1. BUSINESS

General

Core Laboratories N.V. is a Netherlands limited liability company. We were established in 1936 and are one of the world's leading providers of proprietary and patented reservoir description and production enhancement services and products to the oil and gas industry. These services and products can enable our clients to evaluate and improve reservoir performance and increase oil and gas recovery from their new and existing fields. We have over 70 offices in more than 50 countries and have approximately 3,600 employees.

On January 17, 2023, the Company announced its intention to reorganize the Company's corporate structure, which will include redomestication (the "Redomestication") of the parent company from the Netherlands to the United States as Core Laboratories Inc., a Delaware corporation. Following shareholder approval, the Redomestication will be completed through a series of steps, as follows:

- (i) Core Laboratories N.V. will merge with and into Core Laboratories Luxembourg S.A, a wholly-owned subsidiary of Core Laboratories N.V., with Core Laboratories Luxembourg S.A. surviving, and
- (ii) As soon as practicable thereafter, Core Laboratories Luxembourg S.A. will migrate out of Luxembourg and redomesticate into the state of Delaware, as Core Laboratories Inc., which will become the ultimate parent company.

Upon completion of the transaction, Core Laboratories N.V. shareholders will hold one share of common stock of Core Laboratories Inc. for each common share of Core Laboratories N.V. owned immediately prior to the Redomestication. The Company's shares will continue to trade uninterrupted during and upon completion of the Redomestication.

The Redomestication requires a shareholder vote for approval, which will be conducted through an extraordinary general meeting of the Company's shareholders, anticipated to occur in late March of 2023. If shareholder approval is obtained, the transaction is expected to become effective approximately 30 days following the date of the extraordinary general meeting.

References to "Core Lab", "the Company", "we", "our", and similar phrases are used throughout this Annual Report on Form 10-K (this "Form 10-K") and relate collectively to Core Laboratories N.V. and its consolidated affiliates.

Business Strategy

Our business strategy is to provide advanced technologies that improve reservoir performance by (i) continuing the development of proprietary technologies through client-driven research and development, (ii) expanding the services and products offered throughout our global network of offices and (iii) acquiring complementary technologies that add key technologies or market presence and enhance existing services and products.

Development of New Technologies, Services and Products

We conduct research and development to meet the needs of our clients who are continually seeking new services and technologies to lower their costs of finding, developing and producing oil and gas. While the aggregate number of wells being drilled per year has fluctuated relative to market conditions, oil and gas producers have, on a proportional basis, increased expenditures on technology services to improve their understanding of the reservoir, increase production of oil and gas from their producing fields, and more recently, Carbon Capture and Sequestration ("CCS") projects. We intend to continue concentrating our efforts on services and technologies that improve reservoir performance, increase oil and gas recovery, CCS projects and other projects directed at the global objectives in reducing carbon emissions.

International Expansion of Services and Products

Another component of our business strategy is to broaden the spectrum of services and products offered to our clients on a global basis. We intend to continue using our worldwide network of offices to offer our services and products that have been developed internally or obtained through acquisitions. This global emphasis allows us to enhance our revenue through efficient utilization of our worldwide network.

Acquisitions

We continually review potential acquisitions to add key services and technologies, enhance market presence or complement existing business.

More information relating to any significant acquisitions is included in Note 3 - *Acquisitions and Divestures* of the Notes to the Consolidated Financial Statements.

Operations

We derive our revenue from services and product sales to clients primarily in the oil and gas industry.

We operate our business in two segments. These complementary operating segments provide different services and products and utilize different technologies for evaluating and improving reservoir performance and increasing oil and gas recovery from new and existing fields. Disclosure relating to the operations and financial information of these operating segments is included in Note 22 - *Segment Reporting and Other Disaggregated Information* of the Notes to the Consolidated Financial Statements.

- *Reservoir Description*: Encompasses the characterization of petroleum reservoir rock, and reservoir fluids samples to increase production and improve recovery of crude oil and natural gas from our clients' reservoirs. We provide laboratory-based analytical and field services to characterize properties of crude oil and crude oil-derived products to the oil and gas industry. We also provide proprietary and joint industry studies based on these types of analyses and manufacture associated laboratory equipment. In addition, we provide reservoir description capabilities that support various activities associated with energy transition projects, including services that support carbon capture, utilization and storage, hydrogen storage, geothermal projects, and the evaluation and appraisal of mining activities around lithium and other elements necessary for energy storage.
- *Production Enhancement*: Includes services and manufactured products associated with reservoir well completions, perforations, stimulation, production and well abandonment. We provide integrated diagnostic services to evaluate and monitor the effectiveness of well completions and to develop solutions aimed at increasing the effectiveness of enhanced oil recovery projects.

We offer our services worldwide through a global network of offices. Services accounted for 71%, 73% and 77% of our revenue from continuing operations for the years ended December 31, 2022, 2021 and 2020, respectively.

We manufacture products primarily in five facilities for distribution on a global basis. Product sales accounted for 29%, 27% and 23% of our revenue from continuing operations for the years ended December 31, 2022, 2021 and 2020, respectively.

Reservoir Description

Commercial oil and gas fields consist of porous and permeable reservoir rocks that contain crude oil, natural gas and formation water. Due to the density differences of the fluids, natural gas typically caps the field and overlies an oil layer, which overlies the water. We provide services that characterize the porous reservoir rock, all three reservoir fluids and their derived products. Services relating to these fluids include determining the quality and measuring the quantity of the reservoir fluids and their derived products, such as gasoline, diesel and biofuels. This includes determining the value of different crude oil and natural gases by analyzing the individual components of complex hydrocarbons. Reservoir fluid analyses contribute approximately 65% to 70% of Reservoir Description revenue. We also provide more advanced laboratory analyses which measure reservoir hydrocarbons at reservoir conditions to determine the changes in the hydrocarbon's physical properties with changing pressure and temperature.

We analyze samples of reservoir rocks for their porosity, which determines reservoir storage capacity, and for their permeability, which defines the ability of the fluids to flow through the rock. These measurements are used to determine how much oil and gas are present in a reservoir and the rates at which the oil and gas can be produced. We also use our proprietary services and technologies to correlate the reservoir description data to wireline logs and other subsurface data.

The combined use of both the reservoir rock and fluid data are invaluable to oil companies to determine the most efficient method and optimize the recovery, processing and refinement of these hydrocarbons. Early evaluations and key decisions about well performance and viability are important for optimizing a reservoir. This is accomplished by using proprietary and patented laboratory methods, including both traditional physical measurements and more recently introduced new technologies, such as Core Lab's Non-Invasive Technologies for Reservoir OptimizationSM ("NITROSM") services. NITROSM services includes Dual Energy Computed Tomography ("DECT"), Micro Computed Tomography, high and low frequency nuclear magnetic

resonance, high-resolution gamma logging and continuous high energy x-ray fluorescence, along with other Core Lab proprietary technologies.

Core Lab's proprietary DECT scanner-based deliverables generate millimeter-scale three dimensional images and accompanying high-resolution petrophysical logs on cored intervals by calibrating DECT information to the vast library of physical measurements in Core Lab's proprietary database. The DECT deliverables from Core Lab are more detailed than down-hole logs and provide better bed resolution as well as accurate information on rock properties such as lithology, porosity, density, rock strength and acoustic velocities.

DECT, when combined with Continuous Dual Gamma and Scanning X-ray Fluorescence (“CS-XRF”), allows Core Lab to assess continuous high-resolution elemental composition of the cored intervals. A proprietary formation-specific “inversion” technique can be used to convert the detailed elemental composition to a continuous mineral log enabling us to generate detailed lithologic descriptions of the reservoir and to perform a comprehensive reservoir characterization.

Core Lab conducts a wide variety of physical laboratory measurements to measure and evaluate fluid flow through the rock, often at in-situ reservoir temperatures and pressures. These are most commonly applied to conventional reservoirs. We have also developed unique analytical processes to understand the flow characteristics and saturation profiles of unconventional reservoir systems including (1) High Frequency Nuclear Magnetic Resonance measurements to gain insights into movable vs. non-movable fluid saturations of these complex systems; and (2) Enhanced Oil Recovery of shale reservoirs by evaluating the effectiveness of gas cycling in nano-pore structures to significantly increase long-term production rates and volumes.

Core Lab has been at the forefront of digital transformation technologies for more than two decades. Core Lab's extensive, proprietary databases and analog technologies, coupled with artificial intelligence (“AI”) and machine learning, help our clients improve efficiencies and lower operating costs throughout the upstream value chain. The analysis and integration, of these critical datasets is enhanced because of Core Lab's proprietary RAPID™ database. Core Lab's Digital Innovation Group works collaboratively with multiple international and national oil companies on projects that utilize several of Core Lab's proprietary digital technologies and services. Core Lab's proprietary Advanced Rock Typing technology combines Core Lab's vast, comprehensive database of physical measurements, and World Wide Rock Catalog™ with its proprietary image acquisition technology and innovative AI image recognition. Core Lab's proprietary World Wide Rock Catalog™ provides a database and analog reference set for predicting properties when physical measurements are unavailable. These technologies provide clients with analog data sets in situations where acquisition of new conventional core may not be possible. High-resolution images of wellbore cuttings and sidewall cores are quickly and efficiently matched with analogs from Core Lab's proprietary database of samples from around the world. Physically measured data sets from the matching analogs are delivered to our clients in time to make appraisal and development decisions.

Core Lab's proprietary legacy portfolio of geological studies and rock and fluid property datasets on conventional reservoirs and seals, accessible through Core Lab's database platform, RAPID™, are being leveraged in energy transition projects as well, and are proving invaluable to operators evaluating potential CCS sites in onshore and offshore Miocene and Oligocene reservoirs along the U.S. Gulf Coast. These legacy studies, originally conducted to evaluate hydrocarbon reservoirs, provide critical data for reconnaissance, benchmarking, and risk reduction ahead of new coring projects for CCS site assessment.

Core Lab's Digital Innovation Group integrates results and interpretations into a comprehensive, web-enabled platform, RAPID™, for client access. This allows our clients to gain insight into their core intervals at an accelerated pace, for both non-invasive technologies as well as time-honored physical laboratory measurements. Through this integrated visually interactive platform, key reservoir performance indicators are presented, evaluated and shared within client workgroups.

Core Lab also applies its rock fluid and data analytical capabilities to CO₂ and other gas and liquid projects. These projects may be for enhanced oil recovery in mature fields, or for CO₂-CCS projects.

Core Lab holds various patents, trade secrets, and proprietary designs for laboratory equipment required to analyze reservoir rocks as well as the properties and phase behavior of reservoir fluids and derived products. We manufacture a wide range of ambient and reservoir condition rock and fluid analysis laboratory equipment for our own use throughout our international laboratory network. Among these devices are complex, high-pressure, high temperature, reservoir condition, multi-phase flow systems and full visualization Pressure-Volume-Temperature cells, along with the ancillary equipment required to support these laboratory programs. We also sell equipment of this type to universities, government institutes, and client company research labs.

While recognizing the need to optimize the logistical chain of our clients, from producing well to retail sales of petroleum products, a state-of-the-art IT platform CONNECT: was launched to efficiently acquire and optimize workflows of our field data, laboratory analysis, and any other observations relevant to our client base. The system is designed for single data entry,

and that data can be used for further analysis and, more importantly, be shared with our clients by process flow dashboards with key performance indicators. The system can also share real-time data on mobile devices, enabling our clients to make quick decisions. This methodology of sharing data has been embraced by an increasing number of clients, as it has not only saved them costs, but, more importantly, the data can be used for trend analysis in many ways, such as the ability to forecast bottlenecks, thus eliminating waste and increasing efficiency. Two experience centers have been set up, in the U.S. and Europe, where our clients can get acquainted with optimizing the flow of business as well as our advanced systems for data analysis. All initiatives are meant to increase efficiency and add value to our client base. All data is being made available through dashboard technology, which for internal purposes is being used to measure the efficiency of workflows throughout the organization.

We added new modules to our suite of IT platforms in 2021 that enhance the distribution chain of our customers, with similar structure of using dashboard technology, enabling the customer to monitor live progress as well as operational data.

We conduct numerous large-scale, multi-company reservoir management projects, applying proprietary and state-of-the-art techniques from the earliest phases of a field development program until the last economic barrel of oil is recovered. We initiate and deliver a group of international and U.S. based consortium studies to evaluate both conventional and unconventional reservoirs. These projects are of increasing importance to oil companies as the incremental barrel is often the lowest cost and most profitable barrel in the reservoir. Producing incremental barrels increases our clients' cash flows which we believe will result in additional capital expenditures by our clients, and ultimately further opportunities for us.

These industry consortium projects provide critical reservoir information to a broad spectrum of clients in a cost effective manner. These studies focus on regions of client interest across the globe, and include both conventional and unconventional reservoir targets. Studies often run for several years and new studies are initiated in response of current or upcoming client activity in a region. Core Lab retains rights of ownership to complete joint industry projects studies, which can be resold at a later date. Many of them examine unconventional reservoirs, particularly in the U.S. and Canada. For example, our Permian Basin study evaluates the petrophysical, geochemical, completion and production characteristics of this very active play in West Texas. Our clients use this information, not only to improve their drilling and production activities, but also to evaluate potential acquisition and divestiture opportunities.

Our data bases, technology and analytical methods also allow us to assist our clients in other ways. Many of our clients have begun investing in and developing other sources of energy, including renewables. Some of these initiatives include deployment of technologies associated with the assessment of strata to establish strategies tied to hydrogen storage and mining of elements such as lithium, which are critical components of batteries for energy storage. Our measuring and analytical techniques may also be used to assist our clients with reporting requirements associated with carbon emissions.

Production Enhancement

Core Lab's Production Enhancement group provides products and diagnostic services to help optimize well completions, reservoir operations and field development strategies, in order to increase recoverable reserves in the most efficient way. These product offerings include perforating technologies to establish communication between the wellbore and the reservoir. Diagnostic services are used to assess well completions and field floods. Two commonly used production enhancement methods are (i) hydraulic fracturing of the reservoir rock to improve flow and (ii) flooding a reservoir with water, carbon dioxide, nitrogen or hydrocarbon gases to drive more oil and gas to the producing wellbores. Many oilfields today are hydraulically fractured and/or flooded to maximize oil and gas recovery. Although Core Lab is not a hydraulic fracturing company, Core Lab does provide services that are used by operators to develop and optimize hydraulic fracturing and field flood projects and to evaluate the success of those projects. These services, products and expertise play a key role in the success of both methodologies.

The hydraulic fracturing of a producing formation is achieved by pumping a fluid slurry containing a proppant material into the reservoir zone at extremely high pressures. This fractures the rock and the proppant material "props" or holds the fracture open after the pressure pumping is complete, so that reservoir fluids can flow through a highly conductive fracture into the production wellbore. Data on rock type and strength generated in the Reservoir Description operating segment are critical for determining the proper design of the hydraulic fracturing treatment. In addition, further testing indicates whether the fluid slurry is compatible with the reservoir rock so that damage does not occur that would otherwise restrict production. Core Lab also provides testing of various propping agents and software to help select the best propping agent based on net present value calculations of client investments. The proprietary and patented ZERO WASH® tracer technology is used to confirm optimum cluster efficiency, stage spacing, stimulated reservoir volume and increased ultimate recovery.

SPECTRACHEM®, a chemical frac water tracing service, is another proprietary and patented technology developed for optimizing hydraulic fracture performance. SPECTRACHEM® is used to aid operators in determining the efficiency of the fracturing fluids used. SPECTRACHEM® tracers enable operators to evaluate the quantity of fracturing fluid and reservoir fluid

that returns to the wellbore after a hydraulic fracturing event. This technology also enables clients to evaluate load recovery, gas breakthrough, fluid leak-off and breaker efficiency, all of which are important factors for optimizing oil and/or natural gas production after the formation is hydraulically fractured.

The SPECTRACHEM® service is used for determining the effectiveness and efficiency of the hydraulic fracture stimulation of long, multi-stage horizontal wells in oil- and gas-shale plays in unconventional reservoirs. SPECTRACHEM® data sets are used to determine if and how effectively each frac stage is flowing. Frac stages with ineffective flows may warrant further stimulation or remedial actions, while guiding improvements in future frac designs and flowback procedures.

Core Lab's engineers have developed and implemented new applications for the proprietary SPECTRACHEM® service to determine whether horizontal wells are unobstructed and flowing through the entire length of a horizontal well. Leveraged by operators in the Permian, Eagle Ford, Wolfcamp, Bakken and Haynesville plays, this technology can identify wellbore obstructions, often caused by inter-well communication, wellbore fill, or dissolvable plug remnants. By applying this technology, clients can identify and remediate well obstructions that can negatively impact well performance, reserve calculations and reserve-based lending.

Another unique completion monitoring system, COMPLETION PROFILER™, helps to determine flow rates from reservoir zones after they have been hydraulically fractured. This provides clients with a baseline of early production information that can be compared to subsequent data later in the life of the well to see how hydrocarbon production from different reservoir layers or different quality rock varies over time.

The FLOWPROFILER™ service, a proprietary hydrocarbon-based tracer technology, which is a further development of the patented SPECTRACHEM® technology quantifies the hydrocarbon production from discrete segments in multi-stage horizontal well completions in unconventional tight-oil or gas plays. This service incorporates both liquid and solid controlled-release, oil-soluble tracers for oil reservoirs which are different from gas tracers used for gas reservoirs. FLOWPROFILER™ technology and the analytical methodology for identifying the hydrocarbon-soluble tracers are the protected intellectual property of Core Lab.

The FLOWPROFILER™ technology employs unique hydrocarbon-soluble tracers and water-soluble tracers introduced into specific, physically isolated stages via the stimulation proppant stream. The hydrocarbon-soluble tracers partition into the crude oil and gas associated with each stage, while the water-soluble tracers remain in the stimulation fluid. When the well is flowed, oil, gas and water samples are collected and analyzed in the laboratory to identify and quantify oil or gas flows from each stage as well as the cleanup of the stimulation fluid. Stages not at optimum flow rates can be identified, precipitating remedial efforts to increase flow and recovery rates, and providing valuable insights for future wells. This service is used to monitor offset well interference by sampling offset well oil, gas and water production. The amount of tracer detected in offset wells is used to help clients optimize both horizontal and vertical well spacing and the optimum amount of fracturing fluids for each stage.

There has been a broadening acceptance of FLOWPROFILER™EDS, a proprietary technology, which is an engineered delivery system ("EDS"). The break-through EDS technology delivers time-released diagnostics for evaluating the crude-oil flow from each stage of a hydraulically fractured completion. This technology comprises proprietary 40/70 or 100 mesh particles, chemically engineered to bond specifically with proprietary oil tracers. This allows for precise placement of tracers in the propped fracture, thus providing accurate identification of oil production by stage. Crude-oil production by stage is determined using this Core Lab-developed technology that enables the diagnostic tracer to be absorbed and chemically bonded to durable, proppant-size particles that are injected with the frac sand. The tracer will release from the engineered particles once they contact the reservoir's crude oil, enabling Core Lab to assess which stages are contributing to crude-oil production.

Core Lab also conducts dynamic flow tests of the reservoir fluids through reservoir rock, at actual reservoir pressure and temperature, to realistically simulate the flooding of a producing zone. Patented technologies, such as Saturation Monitoring by the Attenuation of X-rays ("SMAX™"), help in designing the enhanced recovery projects. After a field flood is initiated, Core Lab is often involved in monitoring the progress of the flood to ensure that the maximum amount of incremental production is achieved using the SPECTRAFLOOD™ technology, which was developed to optimize sweep efficiency during field floods.

Core Lab's patented PACKSCAN® technology is used to evaluate gravel pack effectiveness in unconsolidated reservoirs. PACKSCAN® measures density changes in the gravel pack annulus to verify the competency of the gravel pack without requiring any additional rig time.

In addition to Core Lab's many patented reservoir diagnostic technologies, Production Enhancement has established itself as a global leader in the manufacturing and distribution of high-performance perforating products. Core Lab's unique understanding of complex reservoirs supports our ability to supply perforating systems engineered to maximize well

productivity by reducing, eliminating and overcoming formation damage caused during the drilling and completion of oil and gas wells. This "systems" approach to the perforation of an oil or gas well has resulted in numerous patented products.

SuperHERO™ (High Efficiency Reservoir Optimization) and HERO-HR™ (Hard Rock) are examples of the patented perforating systems. The SuperHERO™ charge evolved from the HERO™ charge technology and use a proprietary and patented design of powdered metal liners and explosives technology resulting in a deeper and cleaner perforating tunnel into the oil and gas reservoir. This allows greater flow of hydrocarbons to the wellbore and helps to maximize hydrocarbon recovery from the reservoir. The more recent charge development of the HERO-HR™ charges, resulted in Core Lab also having the deepest penetrating perforating charges on the market as certified by API testing.

HERO™PerFRAC leverages the HERO™ technology. In addition to the benefits of HERO™ technology, HERO™PerFRAC charges are designed specifically for optimizing fracture stimulation well completions by providing low standard deviation which minimizes tortuosity effects. This results in less required surface horsepower and less time which both translate into lower costs needed to complete the fracturing operation. In addition to optimizing stimulation operations with faster, lower cost programs, well production is also enhanced by not only the better well stimulations but the improved near debris free perforation tunnels as the well fluids come back into the casing from the rock. Core Lab's manufacturing operations in the United States and Canada continue to meet the global demand for our perforating systems through facility expansion in addition to gains in efficiency and productivity.

Consistent with the HERO™PerFRAC uniform hole size option, the ReFRAC product line was also introduced and has experienced increasing client acceptance. The ReFRAC technology is utilized in mechanically isolated re-stimulation programs where the internal string is used to isolate older, depleted stages in previously under-stimulated wells. The ReFRAC technology creates a uniform hole size through two strings of casing. This re-completion method is gaining popularity because it allows operators to perforate, pump and stimulate new rock between the original stages of the well, increasing hydrocarbon recovery without the expense of drilling and completing a new well. Operators using Core Lab's ReFRAC technology have reported they can now complete twice as many stages per day compared to conventional perforating systems, reducing their operating costs and improving cash flow.

The HERO™ line of perforating charges, HERO™PerFRAC, SuperHERO™, HERO-HR™ and ReFRAC charges can eliminate the ineffective perforations that would otherwise limit daily oil and natural gas production and hinder the optimal fracture stimulation programs needed for prolific production from the Permian Basin, Bakken, Eagle Ford, Marcellus, Niobrara and similar oil- and gas-shale formations.

Core Lab's proprietary downhole energetic solutions and instrumentation are designed to systemize, simplify, automate, and de-risk the deployment of perforating systems, which are utilized by international oil and gas operators for well completions. The Ballistics Delivery System ("BDS™") provides a unique range of perforating tools and equipment, which have been developed to provide a number of advantages over existing technology. The BDS™ tools facilitate perforation accuracy while addressing wellbore assurance concerns and optimizing safety, thus alleviating some of the challenges encountered when perforating. It also assists with issues incurred with high underbalanced perforating, running heavy/long assemblies, oriented perforating, depth control, reduction in fishing risk, and acquiring wellbore pressure data as guns fire. Core Lab's BDS™ and the GoFire Addressable Switch are key differentiators of Core Lab's preassembled GoGun™ Adaptive Perforating System. The GoGun™ Adaptive Perforating System provides an open architecture design. This allows for optimal utilization of perforating energetics and, importantly, the onsite flexibility of altering completion designs for greater wellsite efficiency and improved Stimulated Reservoir Volume.

Core Lab's next generation, HERO™PerFRAC energetic technology, is available in combination with the new, patent pending Oriented GoGun™. This new offering provides our clients with a technological solution for achieving: 1) extreme limited entry perforating capability, 2) precisely aligned perforations, and 3) minimized connections and completion string length. Casing erosion around perforations can occur when stimulating unconventional reservoirs. Larger perforating holes preferentially increase in size and take more frac fluid, robbing stimulation from smaller perforating holes, which results in inconsistent breakdown of the formation. The consistent-sized holes generated by the latest HERO™PerFRAC charges reduce this problem. Core Lab partnered with major U.S. operators to design custom, consistent-hole-size charges that can be aligned in a specific orientation in order to achieve uniform breakdown across each stage. By eliminating the need for reusable orientation subassemblies, the Oriented GoGun™ minimizes the number of connections and saves time at the wellsite by not having to recapture and redress the orienting subs.

Core Lab's Production Enhancement operating segment commissioned a cutting-edge, Reservoir Optimized Completions Lab ("ROC Lab™") in Godley, Texas. The ROC Lab™ is designed to determine the best energetic solutions for a specific rock type, to maximize productivity of an operator's reservoir. The ROC Lab™ features an industry-leading, Ultra High Pressure/High Temperature perforation test vessel. The test vessel is paired with a proprietary flow system that uses highly

specialized, internally developed and manufactured pumps and flow controllers. Combined, these technologies create a proprietary flow loop capable of dynamically displacing oil, brine and gas through rock samples that have been perforated with preselected energetics. Core Lab leverages its multi-decade expertise in conducting multi-phase fluid flow tests through porous medium to optimize this technological investment.

Core Lab's proprietary Plug and Abandonment Perforating System ("PAC™") is utilized to optimize a slot recovery process through a lean casing recovery program. PAC™ allows for reduced rig time and efficient recovery of the interior casing, while eliminating risks and creating opportunities for production from untapped reservoir sections.

Core Lab's Production Enhancement team has experienced technical services personnel to support clients through our global network of offices for the everyday use of our perforating systems and the rapid introduction of new products. Our personnel are capable of providing client training and on-site services in the completion of oil and gas wells. The patented X-SPAN® and GTX-SPAN® casing patches are supported by our technical services personnel. Market applications in Canada's steam-assisted gravity drainage environment have resulted in an upgrade in temperature ratings to as much as 600°F. These systems are capable of performing in high temperature as well as high pressure oil and gas environments and are used to seal non-productive reservoir zones from the producing wellbore.

Marketing and Sales

We market and sell our services and products through a combination of sales representatives, technical seminars, trade shows and print advertising. Direct sales and marketing are carried out by our sales force, technical experts and operating managers, as well as by sales representatives and distributors in various markets where we do not have offices. Our Business Development group manages a Large Account Management Program to better serve our largest and most active clients by meeting with key personnel within their organizations to ensure the quality of our services and products are meeting their expectations and addressing any issues or needs in a timely manner.

Research and Development

The market for our services and products is characterized by changing technology and frequent product introduction. As a result, our success is dependent upon our ability to develop or acquire new services and products on a cost-effective basis and to introduce them into the marketplace in a timely manner. Many of our acquisitions have allowed us to obtain the benefits of the acquired company's research and development projects without incurring significant costs if we had attempted to develop the services and products ourselves. We incur costs as part of internal research and development, and these costs are charged to expense as incurred and reflected in the operational results of the associated operating segment. We intend to continue committing financial resources and effort to the development and acquisition of new services and products. Over the years, we have made a number of technological advances, including the development of key technologies utilized in our operations. Substantially all of our new technologies are the result of requests and guidance from our clients, particularly major oil companies.

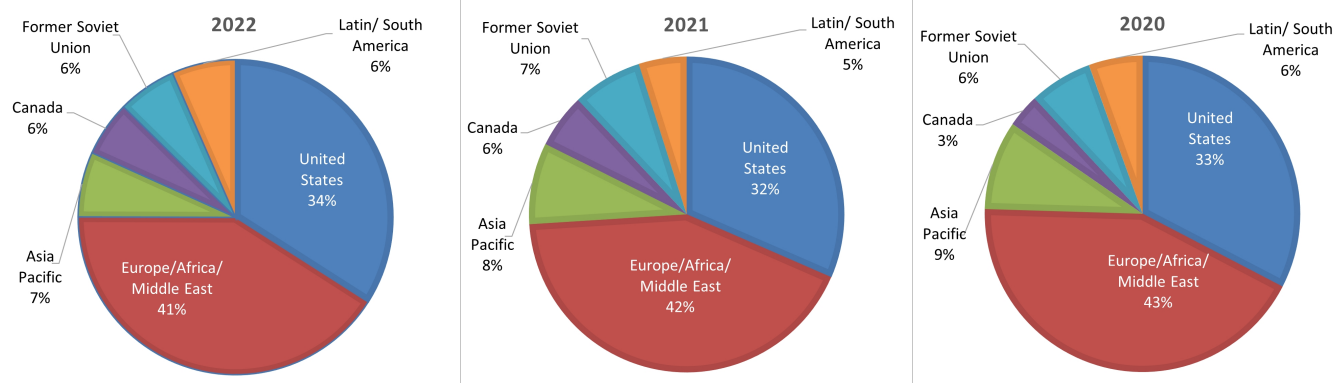
Patents and Trademarks

We believe our patents, trademarks, technology, trade secrets and other intellectual property rights are an important factor in maintaining our technological advantage, although no single one of these is considered essential to our success. Typically, we will seek to protect our intellectual property in all jurisdictions where we believe the cost of such protection is warranted. While we have patented some of our key technologies, we do not patent all of our proprietary technology even where regarded as patentable. We protect our intellectual property, including through the use of appropriate confidentiality agreements, legal enforcement proceedings and by other means.

International Operations

We operate facilities in more than 50 countries. Our non-U.S. operations accounted for 66%, 68% and 67% of our revenue from operations during the years ended December 31, 2022, 2021 and 2020, respectively. We attribute service revenue to the country in which the service was performed rather than where the reservoir or project is located, while we attribute product sales revenue to the country where the product was shipped as we feel this gives a clearer view of our operations. We do, however, have significant levels of service revenue performed and recorded in the U.S. that are sourced from projects on non-U.S. oilfields.

The following graphs and table summarize our reported revenue by geographic region for the years ended December 31, 2022, 2021 and 2020:



	United States	Europe/Africa/ Middle East	Asia Pacific	Canada	Former Soviet Union	Latin/ South America	Consolidated
2022	\$ 166,701	\$ 200,863	\$ 32,688	\$ 27,797	\$ 29,514	\$ 32,172	\$ 489,735
2021	\$ 148,183	\$ 199,798	\$ 39,308	\$ 26,167	\$ 33,804	\$ 22,992	\$ 470,252
2020	\$ 158,937	\$ 208,862	\$ 44,440	\$ 16,616	\$ 31,498	\$ 26,914	\$ 487,267

While we are subject to fluctuations and changes in currency exchange rates relating to our international operations, we attempt to limit our exposure to foreign currency fluctuations by limiting the amount in which our foreign contracts are denominated in a currency other than the U.S. dollar. However, the ultimate decision as to the proportion of the foreign currency component within a contract usually resides with our clients. Consequently, we are not always able to eliminate our foreign currency exposure. We have not historically engaged in and are not currently engaged in any significant currency hedging or trading transactions designed to compensate for adverse currency fluctuations.

Environment and Climate

Governmental Laws and Regulations

We are subject to stringent governmental laws and regulations, both in the United States and other countries, pertaining to protection of the environment. Compliance with environmental legal requirements in the United States at the federal, state or local levels may require acquiring permits to conduct regulated activities, incurring capital expenditures to limit or prevent emissions, discharges and any unauthorized releases, and complying with stringent practices to handle, recycle and dispose of certain wastes. Failure to comply with these laws and regulations may result in the assessment of administrative, civil and criminal penalties, the imposition of remedial or corrective obligations, the occurrence of delays or cancellations in the permitting, performance or expansion of projects and the issuance of injunctive relief in affected areas.

We have developed policies and procedures associated with the management, handling, recycling or disposal of chemicals and gases and other materials and wastes resulting from our operations. In areas where environmental regulations do not exist, we have established other policies and procedures in efforts to preserve the environment.

Additionally, our analytical and manufacturing processes involve the handling and use of numerous chemicals and gases as well as the generation of wastes. Spills or other unauthorized releases of these chemicals, gases, and wastes at our facilities, whether by us or prior owners or operators, or at offsite locations where we transport them for recycling or disposal, could subject us to environmental liability, either from the applicable government agency or private landowners or other third parties. Such liabilities could be strict, joint and several, as is applicable in the United States under such laws as the federal Comprehensive Environmental Response, Compensation and Liability Act and the federal Resource Conservation and Recovery Act and analogous state laws. This could also include costs of cleaning up chemicals and wastes released into the environment and for damages to persons, properties or natural resources. As a result of such actions, we could be required to remove previously disposed wastes (including wastes disposed of or released by prior owners or operators), remediate environmental contamination (including contaminated groundwater), and undertake measures to prevent future contamination. We may be subject to claims alleging personal injury or property damage as a result of alleged exposure to hazardous substances as well as damage to natural resources. We may not be able to recover some or any of these remedial or corrective costs from insurance.

Environmental laws and regulations, and their interpretation, frequently change, and have tended to become more stringent over time. New, modified or stricter enforcement of environmental laws and regulations could be adopted or implemented that

significantly increase our compliance costs, pollution mitigation costs, or the cost of any remediation of environmental contamination that may become necessary, and these costs could have a material adverse effect on our business, financial condition, results of operation, or cash flows.

Historically, our environmental compliance costs have not had a material adverse effect on our results of operations; however, there can be no assurance that such costs will not be material in the future or that such future compliance will not have a material adverse effect on our business or results of operations.

Our clients in the oil and gas industry are also subject to many of the same laws and regulations relating to environmental protection in the United States and in foreign countries where we operate. In particular, we, our third-party vendors that supply us with goods and services in support of our business, and our clients are subject to an increased governmental and public focus on risks associated with the threat of climate change arising from the emission of greenhouse gases ("GHG"). Our and our clients' compliance with such existing, or any new or amended legal requirements that are placed into effect and applicable in areas where we or our clients conduct operations, could result in our or our clients' incurring significant additional expense and operating restrictions. Our costs may not be fully recoverable from our clients and, thus, could reduce net income. To the extent any such existing or future legal requirements result in increased costs or restrictions or cancellation in the operation of our clients, such developments could reduce demand for our products and services and have an indirect material adverse effect on our business.

In addition, we depend on the demand for our products and services from the oil and gas industry and, therefore, are affected by changing taxes, price controls, tariffs and trade restrictions, and other laws and regulations relating to the oil and gas industry in general, including those specifically directed to hydraulic fracturing, onshore production, air pollution, and climate change.

Access to capital is another risk that may be impacted by climate change policies as shareholders, bondholders and institutional lenders currently invested in fossil-fuel energy companies or supporting entities such as ours but concerned about the potential effects of climate change may elect in the future to shift some or all of their investments into non-fossil fuel energy related sectors.

Consequently, to the extent one or more of these climate-related events are incurred by us, our third party vendors, or our clients, any of us could incur increased costs, we could incur disruptions to our operations as a result of our vendor's inability to supply us with goods and services, and our clients in particular could elect to delay, restrict or cancel drilling, exploration or production programs, which could reduce demand for our products and services, any of which developments could have a material adverse effect on our business, financial condition, results of operations, or cash flows.

Climate Related Initiatives

We are committed to reducing our physical risks and environmental footprint associated with climate change while improving our performance and sustainability in line with the global transition toward lower carbon sources of energy. Core Lab has demonstrated its transparency and accountability vital to tracking progress by disclosing its environmental impact through the Carbon Disclosure Project (a non-profit that runs the world's leading environmental disclosure platform, "CDP") annual survey since 2014.

Physical Risk Analysis

In 2020, Core Lab conducted a physical risk assessment with the aid of a third-party sustainability data company for 100 of our locations to understand the exposure of our facilities and capital assets to climate change physical impacts under future climate change scenarios. Physical risks evaluated were water stress, flooding, heatwave, cold wave, hurricane, wildfire, and sea level rise using three climate scenarios over time periods of 2020 (baseline), 2030 and 2050. Overall, we face moderate physical risk with our greatest exposure to water stress and cold wave. Our overall exposure stays consistent throughout the scenarios, although exposure to cold wave does show decline through the scenarios. These physical risks could result in loss of revenue, increase in our costs, including insurance premiums, or affect the availability of insurance against such risks.

We do not have locations that are in a natural, rural environment. Before opening a new location, potential impacts to the environment and community are considered by executive management. In the event we close a particular location, we ensure that the land and building are properly returned to a suitable condition. We also take steps to ensure that any potential environmental conditions have been remediated as required by local regulation and standards.

GHG Emissions

Core Laboratories maintains a sustainability management system that tracks our consumption of non-renewable resources. We also have engaged a third-party sustainability data company to quantify the impact of emissions categorized as:

- Scope 1 (direct GHG emissions that occur from sources that we control or own),
- Scope 2 (indirect GHG emissions associated with the purchase of electricity, steam, heat, or cooling) or
- Scope 3 (indirect emissions that occur upstream or downstream in our value chain)

This system assists us in setting science-based targets for our Scope 1 and Scope 2 emissions. Science-based targets aim to help companies work towards limiting the increase in global average temperatures to below 2°C, a limit agreed upon by leading climate scientists and governments to ensure long-term sustainability and profitability. These tools focus the Company's efforts on reducing our environmental footprint and provide the data needed to create other climate targets and goals.

Our operational footprint is primarily from our office buildings and laboratories and their related electricity consumption (Scope 2 emission) and use of natural gas heating (Scope 1 emission). In our efforts to reduce GHG emissions, we choose responsible alternative sources of electricity, such as renewable sources or low-carbon emission natural gas when there are options available. We also consume fuel to operate field vehicles (Scope 1 emission), however, this is limited to our staff working in the field and is not a significant emission component of our total operations. Most of the value chain emissions (Scope 3 emissions) occur upstream from our operations and are from purchased goods and services.

Occupational Safety and Health Regulations

Our operations in the United States are subject to stringent occupational safety and health laws and regulations, which are intended to protect worker health and safety, including the federal Occupational Safety and Health Act, which establishes requirements to protect the health and safety of workers. The U.S. Occupational Safety and Health Administration ("OSHA") hazard communication standard, the Environmental Protection Agency ("EPA") community right-to-know regulations under Title III of the federal Superfund Amendment and Reauthorization Act and comparable state statutes require maintenance of information about hazardous materials used or produced in operations and provision of this information to employees, state and local government authorities and citizens. The federal Bureau of Alcohol, Tobacco, Firearms and Explosives ("ATF") establishes requirements for the safe use and storage of explosives. Substantial fines and penalties can be imposed and orders or injunctions limiting or prohibiting certain operations may be issued in connection with any failure to comply with these laws and regulations. Foreign countries in which we conduct operations may also have analogous controls that regulate our worker safety-related activities, which controls may impose additional, or more stringent requirements. Consistent with our quality assurance and control principles, we have established proactive worker safety policies in the United States and foreign countries, which meet or exceed applicable worker safety legal requirements.

As discussed above, our processes involve the handling and use of numerous chemicals and gases as well as the generation of waste which could cause harm to our employees. Such work is performed in an industrial or laboratory setting, or at our clients' worksite which would also require travel. These types of conditions are susceptible to workplace accidents.

Historically, our worker safety compliance costs have not had a material adverse effect on our results of operations; however, there can be no assurance that such costs will not be material in the future or that such future compliance will not have a material adverse effect on our business or results of operations.

Competition

The business in which we engage is competitive. Some of our competitors are divisions or subsidiaries of companies that are larger and have greater financial and other resources than we have. While no one company competes with us in all of our service and product lines, we face competition in these lines, primarily from independent regional companies and internal divisions of major integrated oil and gas companies. We compete in different service and product lines to various degrees on the basis of price, technical performance, availability, quality and technical support. Our ability to compete successfully depends on elements both within and outside of our control, including successful and timely development of new services and products, performance and quality, client service, pricing, industry trends and general economic trends.

Reliance on the Oil and Gas Industry

Our business and operations are substantially dependent upon the condition of the global oil and gas industry. Future downturns in the oil and gas industry, or in the oilfield services business as well as the adoption and implementation of legislation, executive orders, and other regulatory initiatives that seek to combat climate change by restricting fossil fuel activities, limiting GHG emissions, certain methods of extraction of oil and gas, or the locations in which such activities may be conducted, may have a material adverse effect on our financial position, results of operations or cash flows. This risk factor is

perhaps amplified given recent pronouncements and actions taken by the executive and/or legislative branches of the U.S. government in an uncertain and shifting political environment.

The oil and gas industry is highly cyclical and has been subject to significant economic downturns at various times as a result of numerous factors affecting the supply of and demand for oil and natural gas, including the level of capital expenditures of the oil and gas industry, the level of drilling activity, the level of production activity, market prices of oil and gas, economic conditions existing in the world, interest rates and the cost of capital, environmental regulations, tax policies, political requirements of national governments, coordination by the Organization of Petroleum Exporting Countries ("OPEC"), cost of producing oil and natural gas, and technological advances.

The success of our business has been underpinned by developing industry leading technologies used in evaluating and improving reservoir performance, increasing oil and gas recovery from new and existing fields, as well as evaluating potential CCS sites in the subsurface both onshore and offshore. Many of these technologies have been developed to meet the needs of our clients, which continue to evolve with demands in both traditional energy sources and with energy transition. As energy transition continues to evolve, our business may become more dependent on the continued innovation and adoption of our industry leading technologies.

Human Capital

We are primarily a service provider in the oilfield services industry, so our workforce includes employees who are highly skilled professionals, including engineers and geologists, and other technical personnel, in addition to our administrative employees. As of December 31, 2022, we had approximately 3,600 employees. We do not have any material collective bargaining agreements and consider relations with our employees to be good.

Our Core Values: (1) Safety Awareness, (2) Honesty & Integrity, (3) Customer Focus, (4) Building Trust and (5) Employee Development, define us as a company and are the framework that unite us on the path toward achieving our goals and propelling Core Lab forward. These values represent and establish the foundation by which we treat each other, conduct our business and simply define “how we do things around here”. By embedding our Core Values into our operating strategies, we ensure that our company culture and mission also drive our Environmental, Social and Governance ("ESG") sustainability efforts. We keep our employees informed of major business developments through CoreConnect, a communication initiative to drive connection and engagement between employees and executive leadership and through contact by extended leadership teams, periodic emails, quarterly newsletters, quarterly reports, and annual events.

Core Lab values its employees and is committed to providing resources that engage employees, enhance their work experience, and develop them for the future. To assist in this pledge, Core Lab has created its talent management strategy based on the employee life cycle. To ensure we have a diverse employee population reflective of our communities and client base, we’ve implemented recruiting practices that support and encourage the hiring and retention of diverse talent. Our total rewards approach is aligned to our business strategy and country-specific market influences. We offer competitive compensation and benefit programs in each country where we operate. Our approach not only encompasses competitive compensation and benefits, but also personal and professional growth opportunities within a global performance culture.

We develop our employees through performance management processes, competency-based development plans and training both in leadership and functional areas while also offering educational assistance programs. Recently, we expanded our talent assessment process to identify emerging technical and leadership talent across the Company. Our annual performance management cycle is an ongoing process that enables managers and employees to collaborate throughout the year to set performance goals and development objectives that align to business objectives. This process is designed to help employees understand where they add value to the organization, provide focus on and discussion around career aspirations, and reward employees for high performance.

We aspire to attract a diverse group of employees and create an inclusive work culture where differences are valued. We recognize the unique perspectives and thoughts that all people bring to our environment stimulates innovation and generates out-of-the-box solutions that benefit our employees, clients and industry. We promote a culture-centric focus on the health and safety of our employees and the environment with a pro-active approach towards identifying and managing risks through recognition, evaluation, and education. We empower our employees by fostering a sense of responsibility for managing their own work environment through open communication, and a management-supported “zero accident” culture.

Web Site Access to Our Periodic SEC Reports

Our primary internet address is <http://www.corelab.com>. We file or furnish Quarterly Reports on Form 10-Q, Annual Reports on Form 10-K, Current Reports on Form 8-K, and any amendments to those reports with the U.S. Securities and Exchange

Commission ("SEC"). These reports are available free of charge through our web site as soon as reasonably practicable after they are filed or furnished electronically with the SEC. We may from time to time provide important disclosures to investors by posting them in the investor relations section of our web site, as allowed by SEC rules.

The SEC maintains an internet website at <http://www.sec.gov> that contains reports, proxy and information statements, and other information regarding our company that we file electronically with the SEC. References to the Company's website in this Form 10-K are provided as a convenience and do not constitute, and should not be deemed, an incorporation by reference of the information contained on, or available through, the website, and such information should not be considered part of this Form 10-K.

ITEM 1A. RISK FACTORS

Our forward-looking statements are based on assumptions that we believe to be reasonable but that may not prove to be accurate. All of our forward-looking information is, therefore, subject to risks and uncertainties that could cause actual results to differ materially from the results expected. All known, material risks and uncertainties are discussed below.

Risk factors associated with the industry in which we operate

Events beyond Core Lab's control, including a global or domestic health crisis, have resulted and may continue to result in unexpected adverse operating and financial results.

The COVID-19 pandemic has significantly reduced demand for our services, and has had, and is likely to continue to have, a material adverse effect on our financial condition, results of operations and cash flows. The effects of the COVID-19 pandemic have resulted in a significant and swift reduction in international and U.S. economic activity. The reduced demand for oil caused by this unprecedented global health and economic crisis, coupled with an oversupply of oil, led to a decrease of oil prices. Government reaction to the pandemic and restrictions and limitations applied by governments, continued widespread growth in infections, travel restrictions, quarantines, or site closures as a result of the virus could, among other things, impact the ability of Core Lab's employees and contractors to perform their duties, cause increased technology and security risk due to extended and company-wide telecommuting, lead to disruptions in Core Lab's logistics and negatively affect customer relationships as a result. All of these factors may impact the timing of the recognition of revenue and results of operations for a particular quarter.

The extent to which our operating and financial results will continue to be affected by COVID-19 will depend on various factors and consequences beyond our control, which will depend on numerous evolving factors and future developments that we are not able to predict, including, but not limited to, the following:

- the length of time that the pandemic continues;
- its effect on the demand for oil and natural gas;
- the response of the overall economy and the financial markets;
- the effect of governmental actions taken in response to the pandemic; and
- the speed and effectiveness of responses to combat the virus, including vaccine development and distribution.

Any of those outcomes could have a material adverse effect on Core Lab's business, financial condition, results of operations and cash flows and could perhaps amplify risk factors described in this Form 10-K.

Any cost reduction initiatives that Core Lab undertakes may not deliver the results it expects, and these actions may adversely affect its business.

In response to the financial risks presented by COVID-19, Core Lab implemented a variety of cost-cutting measures which began in March 2020, continued in 2021 and were partially restored in 2022. As business conditions change the Company may need to implement additional cost-cutting measures that may adversely affect its business. These cost-cutting measures have included reductions in the quarterly dividend, base salaries of senior executives and employees, annual capital expenditures, implementation of temporary employee furloughs, and workforce reductions, among other reductions of corporate and operating costs.

In addition, these initiatives could result in disruptions to Core Lab's operations. Any cost-cutting measures could also negatively impact Core Lab's business by delaying the introduction of new products or technologies, interrupting service of

additional products, or impacting employee retention. There can be no assurance that additional costs will not offset any such reductions of its operations. If Core Lab's operating costs are higher than expected, or if it does not maintain adequate control of its costs and expenses, Core Lab's results of operations will suffer. If Core Lab is unable to mitigate these or other potential risks related to its cost cutting initiatives, it may disrupt Core Lab's business or could have a material adverse effect on its financial condition and results of operations.

Downturns in the oil and gas industry, or in the oilfield services business, may have a material adverse effect on our financial condition or results of operations.

The oil and gas industry is highly cyclical and demand for the majority of our oilfield services and products is substantially dependent on the level of expenditures by the oil and gas industry for the exploration, development and production of crude oil and natural gas reserves, which are sensitive to oil and natural gas prices and generally dependent on the industry's view of future oil and gas prices. There are numerous factors affecting the supply of and demand for our services and products, which are summarized as:

- general and economic business conditions, including market prices of oil and gas and expectations about future prices;
- the adoption of legal requirements or taxation;
- changes in existing laws, regulations or other governmental actions;
- cost of producing and the ability to deliver oil and natural gas;
- the level of drilling and production activity;
- financial condition of our client base and their ability to fund capital expenditures;
- coordination by the OPEC;
- civil unrest or political uncertainty in oil producing or consuming countries;
- level of consumption of oil, gas and petrochemicals by consumers;
- availability of services and materials for our clients to grow their capital expenditures and to deliver product to market; and
- availability of materials and equipment from key suppliers.

The oil and gas industry has historically experienced periodic downturns, which have been characterized by diminished demand for our oilfield services and products and downward pressure on the prices we charge. A significant downturn in the oil and gas industry could result in a reduction in demand for oilfield services and could adversely affect our operating results.

Changes in macro-economic factors impacting the oil and gas industry may negatively affect our ability to accurately predict client demand, which could cause us to hold excess or obsolete inventory and experience a reduction in gross margins and financial results.

We cannot accurately predict which or what level of our services and products our clients will need in the future. Orders are placed with our suppliers based on forecasts of client demand and, in some instances, we may establish buffer inventories to accommodate anticipated demand. Our forecasts of client demand are based on multiple assumptions, each of which may introduce errors into the estimates. In addition, many of our suppliers require a longer lead time to provide products than our clients' demand for delivery of our finished products. If we overestimate client demand, we may allocate resources to the purchase of materials or manufactured products that we may not be able to sell when we expect to, if at all. As a result, we could hold excess or obsolete inventory, which would reduce gross margin and adversely affect financial results. Conversely, if we underestimate client demand or if insufficient manufacturing capacity is available, we could miss revenue opportunities and potentially lose market share and damage our client relationships. In addition, any future significant cancellations or deferrals of service contracts or product orders could materially and adversely affect profit margins, increase product obsolescence and restrict our ability to fund our operations.

We are subject to the physical effects of climate change, which may adversely affect our business and results of operations.

Core Laboratories operates from locations around the globe and provides services in coastal regions and coastal cities and services related to marine shipping activities of our clients. These locations and activities are susceptible to the physical effects of climate change, such as increased frequency or severity of tropical storm systems, hurricanes, droughts, floods, extreme winter weather, or geologic/geophysical conditions that may result in:

- decreased or lost production capacity;
- loss of or reduced supply chain availability;
- temporary closure of locations due to electricity outages, damages or disruptions caused by extreme weather events;
- displacement of employees; and
- increase in premium for or reduced ability to obtain insurance for property, business interruption and liability.

Risk factors associated with our international presence

We depend on the results of our international operations, which expose us to risks inherent in doing business abroad.

We conduct our business in over 50 countries. Our operations, and those of our clients, are subject to the various laws, regulations and other legal requirements of those respective countries as well as various risks peculiar to each country, which may include, but are not limited to:

- global economic conditions;
- political actions and requirements of national governments including trade restrictions, embargoes, seizure, detention, nationalization and expropriation of assets;
- interpretation of tax statutes and requirements of taxing authorities worldwide, including the United States, routine examination by taxing authorities and assessment of additional taxes, penalties and/or interest;
- trade and economic sanctions, tariffs or other restrictions imposed by the European Union, the United Kingdom, the United States or other countries;
- civil unrest;
- acts of terrorism;
- fluctuations and changes in currency exchange rates (see section below);
- the impact of inflation;
- difficulty in repatriating foreign currency received in excess of the local currency requirements;
- current conditions in oil producing countries such as Venezuela, Nigeria, Libya, Iran and Iraq considering their potential impact on the world markets; and
- geopolitical conflicts in the countries or regions we operate in, including the Russia-Ukraine conflict.

Historically, economic downturns and political events have resulted in lower demand for our services and products in certain markets. The continuing instability in the Middle East, North Africa and Ukraine, and the potential for activity from terrorist groups that the U.S. government has cautioned against have further heightened our exposure to international risks. The global economy is highly influenced by public confidence in the geopolitical environment and the situation in the Middle East, North Africa, Russia and Ukraine continues to be highly fluid; therefore, we expect to experience heightened international risks.

From time to time, certain geopolitical conflicts may lead to imposition of economic sanctions and associated export controls applicable to our operations. These sanctions may be imposed against certain countries, companies and individuals that may restrict or prohibit transactions involving the countries, companies and individuals identified, which may also further restrict or prohibit us in conducting sales and maintaining operations in any of these jurisdictions.

Our operations may be adversely affected by sanctions, export controls, and similar measures targeting Russia and other countries and territories as well as other responses to Russia's military conflict in Ukraine.

The recent geopolitical conflict between Russia and Ukraine has resulted in the U.S. government, European Union, the United Kingdom and other countries imposing broad-ranging and coordinated economic sanctions and export control measures against Russia, Belarus, the Crimea Region of Ukraine, the so-called Donetsk People's Republic and the so-called Luhansk People's Republic, including, among others:

- a prohibition on doing business with certain Russian companies, large financial institutions, officials and oligarchs;
- a prohibition on commercial activities in the so-called Donetsk People's Republic and the so-called Luhansk People's Republic;

- a commitment by certain countries and the European Union to remove selected Russian banks from the Society for Worldwide Interbank Financial Telecommunications (“SWIFT”), the electronic banking network that connects banks globally;
- a ban on imports of Russian crude oil and certain refined petroleum products originating in or exported from Russia to the European Union, subject to limited exceptions;
- a ban on imports of Russian crude oil, liquefied natural gas and coal to the United States;
- a ban on new investment in the Russian energy sector; and
- enhanced export controls and trade sanctions targeting Russia’s importation of certain goods and technology, including restrictive measures on the export and re-export of dual-use goods, stricter licensing policy with respect to issuing export licenses, and increased use of “end-use” controls to block or impose licensing requirements on exports.

Due to the international scope of our operations, the Company is subject to various laws and regulations, including regulations issued by the U.S. Department of Treasury, the U.S. Department of State, the Bureau of Industry and Security and Office of Foreign Asset Control, as well as the counterparts of these agencies in foreign countries. The Company actively monitors changes in these regulations as they pertain to the goods and services we provide and their impact on our business, including our business partners and customers.

As the conflict in Ukraine continues, these sanctions may change and be expanded, which could further hinder the Company’s ability to do business in Russia or with certain Russian entities, which could have an adverse impact on the Company’s financial condition and results of operations. Furthermore, in retaliation against new international sanctions and as part of measures to stabilize and support the volatile Russian financial and currency markets, Russian authorities imposed significant currency control measures aimed at restricting the outflow of foreign currency and capital from Russia, imposed various restrictions on transacting with non-Russian parties, banned exports of various products and other economic and financial restrictions.

The Company routinely screens existing business partners globally against Specially Designated National / Restricted Persons lists. All new engagements with business partners are screened prior to the beginning of any business relationship. Individuals or entities that become subject to applicable sanctions are immediately blocked from further commercial activity with the Company until confirmed by the Company’s legal counsel whether permissible to proceed pursuant to a general or special license or other exemption, or a change in facts.

Furthermore, while we have policies, procedures and internal controls in place designed to ensure compliance with applicable sanctions and trade restrictions, and though the current effects from the Russia-Ukraine conflict have, thus far, not resulted in a material adverse impact to the Company’s financial condition or results of operations, our employees, contractors, and agents may take actions in violation of such policies and applicable law and we could be held ultimately responsible. We rely on our employees to adhere to the policies, procedures and internal controls we have established to maintain compliance with evolving sanctions and export controls. To that end, we have implemented training programs, both in person and online, to educate our employees on applicable sanctions and export controls laws. If we are held responsible for a violation of U.S. or other countries’ sanctions laws, we may be subject to various penalties, any of which could have a material adverse effect on our business, financial condition or results of operations.

Should future sanctions require us to cease or wind down our Russian operations, our assets located there may be impacted and could become subject to impairment. As of December 31, 2022, the Company’s fixed assets in Russia were \$4.1 million, or approximately 4% of the Company’s total fixed assets and less than 1% of the Company’s total assets. Additionally, the Company leases its operating facilities in Russia, and as of December 31, 2022, the contractual obligation to exit these leased facilities is approximately \$1.0 million. For the year ended December 31, 2022, revenue attributable to our operations in Russia was \$22.9 million, representing less than 5% of the Company’s total revenue. Additionally, for the year ended December 31, 2022, we released \$0.6 million of accrued withholding tax associated with \$12.0 million of undistributed earnings from our Russian subsidiary, which are not expected to be distributed in the foreseeable future. Also, cessation of our Russian operations resulting from future sanctions may cause us to incur employee severance and other associated costs statutorily required under local labor laws.

During the year ended December 31, 2022, revenue attributable to the Company’s Ukraine operations and fixed assets located in Ukraine, were not significant to the Company’s total revenue and total fixed assets.

We are actively monitoring the situation in Ukraine and assessing its impact on our operations in the region, including our business partners and customers. We have not experienced any material interruptions in our infrastructure, supplies or networks needed to support our operations. However, the situation is rapidly evolving and the United States, the European Union, the United Kingdom and other countries may implement additional sanctions, export controls or other measures against Russia, Belarus and other countries, regions, officials, individuals or industries in the respective territories. We have no way to predict the progress or outcome of the conflict in Ukraine or its impacts in Ukraine, Russia or Belarus as the conflict, and any resulting government responses, are fluid and beyond our control.

The Russia-Ukraine conflict may also heighten many other risks, any of which could materially and adversely affect our business and results of operations. Such risks include, but are not limited to, adverse effects on global macroeconomic conditions, including increased inflation; increased volatility in the price and demand of oil and natural gas, increased exposure to cyberattacks; limitations in our ability to implement and execute our business strategy; risks to employees and contractors that we have in the region; disruptions in global supply chains; exposure to foreign currency fluctuations and potential nationalizations and assets seizures in Russia, constraints or disruption in the capital markets and our sources of liquidity; our potential inability to service our remaining performance obligations and potential contractual breaches and litigation.

Our results of operations may be significantly affected by foreign currency exchange rate risk.

We are exposed to risks due to fluctuations in currency exchange rates. By the nature of our business, we derive a substantial amount of our revenue from our international operations, where certain of our customer contracts are in foreign currencies that subject us to risks relating to fluctuations in currency exchange rates.

Our results of operations may be adversely affected because our efforts to comply with applicable anti-corruption laws such as the United States' Foreign Corrupt Practices Act (the "FCPA") and the United Kingdom's Anti-Bribery Act (the "ABA") could restrict our ability to do business in foreign markets relative to our competitors who are not subject to these laws.

We operate in many parts of the world that have experienced governmental corruption to some degree and, in certain circumstances, strict compliance with anti-bribery laws may conflict with local customs and practices. We may be subject to competitive disadvantages to the extent that our competitors are able to secure business, licenses or other preferential treatment by making payments to government officials and others in positions of influence or through other methods that we are prohibited from using.

We are subject to the regulations imposed by the FCPA and the ABA, which generally prohibits us and our intermediaries from making improper payments to foreign officials for the purpose of obtaining or keeping business. In particular, we may be held liable for actions taken by our strategic or local partners even though our partners are not subject to these laws. Any such violations could result in substantial civil and/or criminal penalties and might adversely affect our business, results of operations or financial condition. In addition, our ability to continue to work in these parts of the world discussed above could be adversely affected if we were found to have violated certain laws, including the FCPA and the ABA.

Because we are a Netherlands company, it may be difficult for you to take legal action against our supervisory directors or us and it may not be possible to obtain or enforce judgments against us.

Although we are a Netherlands company, our assets are located in a variety of countries. In addition, not all members of our Board of Supervisory Directors (the "Supervisory Board") are residents of the same countries as other supervisory directors. As a result, it may not be possible for you to effect service of process within certain countries upon our supervisory directors, or to enforce against our supervisory directors or use judgments of courts of certain countries predicated upon civil liabilities under a country's federal securities laws. Because there is no treaty between certain countries and the Netherlands providing for the reciprocal recognition and enforcement of judgments, some countries' judgments are not automatically enforceable in the Netherlands or in the United States, where the principal market for our shares is located. In addition, there is doubt as to whether a court in one country would impose civil liability on us or on the members of the Supervisory Board in an original action brought against us or our supervisory directors in a court of competent jurisdiction in another country and predicated solely upon the federal securities laws of that other country.

Risk factors associated with technology advancement

If we are not able to develop or acquire new services or products or our services and products become technologically obsolete, our results of operations may be adversely affected.

The market for our services and products is characterized by changing technology and product introduction. As a result, our success is dependent upon our ability to develop or acquire new services and products on a cost-effective basis and to introduce them into the marketplace in a timely manner. While we intend to continue committing substantial financial resources and effort to the development or acquisition of new services and products, we may not be able to successfully differentiate our services and products from those of our competitors. Our clients may not consider our proposed services and products to be of value to them; or if the proposed services and products are of a competitive nature, our clients may not view them as superior to our competitors' services and products. In addition, we may not be able to adapt to evolving markets and technologies, develop or acquire new services or products, or achieve and maintain technological advantages.

If we are unable to continue developing or acquiring competitive services and products in a timely manner in response to changes in technology, our business and operating results may be materially and adversely affected. In addition, continuing development or acquisition of new products inherently carries the risk of inventory obsolescence with respect to our older products.

If we are unable to obtain patents, licenses and other intellectual property rights covering our services and products, our operating results may be adversely affected.

Our success depends, in part, on our ability to obtain patents, licenses and other intellectual property rights covering our services and products. To that end, we have obtained certain patents and intend to continue to seek patents on some of our inventions, services and products. While we have patented some of our key technologies, we do not patent all of our proprietary technology, even when regarded as patentable. The process of seeking patent protection can be long and expensive. There can be no assurance that patents will be issued from currently pending or future applications or that, if patents are issued, they will be of sufficient scope or strength to provide meaningful protection or any commercial advantage to us. In addition, effective copyright and trade secret protection may be unavailable or limited in certain countries. Litigation, which could demand significant financial and management resources, may be necessary to enforce our patents or other intellectual property rights. Also, there can be no assurance that we can obtain licenses or other rights to necessary intellectual property on acceptable terms.

Our operations are subject to the risk of cyber-attacks that could have a material adverse effect on our consolidated results of operations and consolidated financial condition.

Our information technology systems are subject to possible breaches and other threats that could cause us harm. Although we devote significant resources to protect our systems, there can be no assurance that our systems will prevent or limit the effects of cyber-attacks or will be sufficient to prevent or detect, or to avoid a material adverse impact on our systems when such attacks do occur. If our systems for protecting against cyber-attacks prove not to be sufficient, we could be adversely affected by loss or damage of intellectual property, proprietary information, client data, our reputation, interruption of business operations, or additional costs to prevent, respond to, or mitigate cyber-attacks. These risks could have a material adverse effect on our business, results of operations, and financial condition.

Risk factors associated with our supply chain, resources, liquidity and capital management

We are subject to the risk of supplier concentration.

Certain of our product lines depend on a limited number of third party suppliers and vendors available in the marketplace. As a result of this concentration in some of our supply chains, our business and operations could be negatively affected if our key suppliers were to experience significant disruptions affecting the price, quality, availability or timely delivery of their products. For example, we have a limited number of vendors for our manufactured product lines. The partial or complete loss of any one of our key suppliers, or a significant adverse change in the relationship with any of these suppliers, through consolidation or otherwise, would limit our ability to manufacture and sell certain of our products.

There are risks relating to our acquisition strategy. If we are unable to successfully integrate and manage businesses that we have acquired and any businesses acquired in the future, our results of operations and financial condition could be adversely affected.

One of our key business strategies is to acquire technologies, operations and assets that are complementary to our existing business. There are financial, operational and legal risks inherent in any acquisition strategy, including:

- increased financial leverage;

- ability to obtain additional financing;
- increased interest expense; and
- difficulties involved in combining disparate company cultures and facilities.

The success of any completed acquisition will depend on our ability to effectively integrate the acquired business into our existing operations. The process of integrating acquired businesses may involve unforeseen difficulties and may require a disproportionate amount of our managerial and financial resources. In addition, possible future acquisitions may be larger and for purchase prices significantly higher than those paid for earlier acquisitions. No assurance can be given that we will be able to continue to identify additional suitable acquisition opportunities, negotiate acceptable terms, obtain financing for acquisitions on acceptable terms or successfully acquire identified targets. Our failure to achieve consolidation savings, to incorporate the acquired businesses and assets into our existing operations successfully or to minimize any unforeseen operational difficulties could have a material adverse effect on our financial condition and results of operation.

We may be unable to attract and retain skilled and technically knowledgeable employees, which could adversely affect our business.

Our success depends upon attracting and retaining highly skilled professionals and other technical personnel. A number of our employees are highly skilled engineers, geologists and highly trained technicians, and our failure to continue to attract and retain such individuals could adversely affect our ability to compete in the oilfield services industry. In periods of high utilization, there may be a shortage of skilled and technical personnel available in the market, potentially compounding the difficulty of attracting and retaining these employees. As a result, our business, results of operations and financial condition may be materially adversely affected.

We require a significant amount of cash to service our indebtedness, make capital expenditures, fund our working capital requirements and pay our dividend, and our ability to generate cash may depend on factors beyond our control.

Our ability to make payments on and to refinance our indebtedness, to fund planned capital expenditures, and pay our dividend depends, in part, on our ability to generate cash in the future. This ability is, to a certain extent, subject to general economic, financial, competitive, legislative, regulatory and other factors that are beyond our control.

No assurance can be given that we will generate sufficient cash flows from operations or that future borrowings will be available to us in an amount sufficient to enable us to service and repay our indebtedness or to fund our other liquidity needs. If we are unable to satisfy our debt obligations, we may have to undertake alternative financing plans, such as refinancing or restructuring our indebtedness, selling assets, reducing or delaying capital investments or seeking to raise additional capital. We cannot assure that any refinancing or debt restructuring would be possible or, if possible, would be completed on favorable or acceptable terms, that any assets could be sold or that, if sold, the timing of the sales and the amount of proceeds realized from those sales would be favorable to us or that additional financing could be obtained on acceptable terms.

Disruptions in the capital and credit markets could adversely affect our ability to refinance our indebtedness, including our ability to borrow under our existing revolving credit facility. Banks that are party to our existing revolving credit facility may not be able to meet their funding commitments to us if they experience shortages of capital and liquidity or if they experience excessive volumes of borrowing requests from us and other borrowers within a short period of time.

Risk factors associated with health, safety and the environment

We are subject to a variety of environmental and occupational safety and health laws and regulations, which may result in increased costs and significant liability to our business.

We are subject to a variety of stringent governmental laws and regulations, both in the United States and foreign countries relating to protection of the environment, and occupational health and safety. Certain of these laws and regulations may impose joint and several, strict liability for environmental liabilities, such as the remediation of historical contamination or recent spills, and failure to comply with such laws and regulations could result in the assessment of damages, fines and penalties, the imposition of remedial or corrective action obligations, the occurrence of delays or cancellations in permitting or development of projects, or the suspension or cessation of some or all of our operations. These stringent laws and regulations could require us to acquire permits or other authorizations to conduct regulated activities, install and maintain costly equipment and pollution control technologies, impose specific safety and health standards addressing work protection, or to incur costs or liabilities to mitigate or remediate pollution conditions caused by our operations or attributable to former owners or operators.

Additionally, our clients are also subject to many of the same laws and regulations relating to environmental protection and occupational safety and health in the United States and in foreign countries where we operate. To the extent existing environmental laws and regulations or any new or more stringently enforced environmental legal requirements significantly increase our clients' compliance costs, pollution mitigation costs or remedial costs, our clients could elect to delay, restrict or cancel drilling, exploration or production programs, which could reduce demand for our products and services and have a material adverse effect on our business, financial condition, results of operations, or cash flows. See Part I, Item 1, "Environment and Climate" for more discussion on these matters.

Legislative and regulatory initiatives relating to oil and gas development and the potential for related litigation could result in increased costs and additional operating restrictions or delays for our clients, which could reduce demand for our products or services.

Environmental laws and regulations could limit our clients' exploration and production activities. For example, hydraulic fracturing continues to attract considerable public and governmental attention, both in the United States and in foreign countries, resulting in various controls applied to fracturing activities or locations where such activities may be performed. Although we do not directly engage in drilling or hydraulic fracturing activities, we provide products and services to operators in the oil and gas industry.

Hydraulic fracturing is a process used by oil and gas exploration and production operators in the completion of certain oil and gas wells whereby water, sand or other proppants and chemical additives are injected under pressure into subsurface formations to stimulate gas and, to a lesser extent, oil production. Some countries outside the United States, such as Bulgaria, the Czech Republic and France, currently have imposed moratoria on hydraulic fracturing while other countries, such as Canada, allow fracturing activities but those activities are not as widely pursued as they are in the United States. In the United States, the fracturing process is typically regulated by state oil and gas commissions, but several federal agencies have asserted regulatory authority over certain aspects of the process.

A growing number of states have adopted, and other states are considering adopting, legal requirements that could impose more stringent disclosure, permitting and/or well construction requirements on hydraulic fracturing operations, and local governments may also seek to adopt ordinances within their jurisdictions regulating the time, place and manner of hydraulic fracturing activities.

If new or more stringent U.S. or foreign federal, regional, state or local legal restrictions related to the hydraulic fracturing process are adopted in areas where our exploration and production clients operate, those clients could incur potentially significant added costs to comply with such requirements and experience delays, curtailment or cancellation in the pursuit of exploration, development or production activities, which could reduce demand for our products and services.

See "Environment and Climate" and "Occupational Safety and Health Regulations", under Item 1 of this Form 10-K for further discussion on environmental and worker safety and health matters.

We are subject to compliance with governmental regulations associated with climate change, energy conservation measures, or initiatives that stimulate demand for alternative forms of energy that could result in increased costs, limit the areas in which our clients' oil and natural gas production may occur and reduce demand for our services, which may adversely affect our business and results of operations.

Climate change continues to attract considerable public, political and scientific attention in the United States and in foreign countries. See Part I, Item 1, "Environment and Climate" for more discussion on the risks associated with attention to the threat of climate change and restriction of GHG emissions. New or amended legislation, executive actions, regulations or other regulatory initiatives that impose more stringent oil and gas sector requirements or fees on GHG emissions or restrict the areas in which this sector may produce oil and natural gas or generate GHG emissions could result in increased compliance costs or costs of producing fossil fuels. Additionally, political, financial and litigation risks may result in our clients restricting, delaying or canceling operational or production activities, incurring liability for infrastructure damages as a result of climatic changes, restricting access to capital, or impairing the ability to continue to operate in an economic manner, which could reduce demand for our products and services. Fuel conservation measures, alternative fuel requirements and increasing consumer demand for, or legislative incentives supporting, alternative energy sources (such as wind, solar, geothermal and tidal) could also reduce demand for oil and natural gas. The occurrence of one or more of these developments could have a material adverse effect on our business, financial condition and results of operation.

Increasing attention to environmental, social and governance ("ESG") matters may impact our business.

The European Union ("EU"), regulations associated with ESG and sustainability have been, and are being implemented and we anticipate that these regulatory requirements will continue to expand in the EU, the United States and globally. As a result, numerous regulatory initiatives have been made, and are likely to continue to be made, at the international, national, regional and state levels of government to monitor and limit existing emissions of GHGs or implement laws, policies or regulatory initiatives that may contribute to energy conservation measures, stimulate demand for alternative forms of energy or limit areas where fossil fuel production may occur, which may translate into reduced demand for our services.

Investor and societal expectations regarding voluntary ESG disclosures, and consumer demand for alternative forms of energy may result in increased costs, reduced demand for our services, reduced profits, increased risks of governmental investigations and private party litigation, and negative impacts on our stock price and access to capital markets. Our managerial ESG Steering Team is the primary group for overseeing and managing our ESG initiatives. Team members review the implementation and effectiveness of our ESG programs and policies and report on these matters to the Board of Supervisory Directors. While we have sought voluntary aspirational goals for GHG emission reductions from base year 2018, we note that even with our governance oversight in place, we may not be able to adequately identify or manage ESG-related risks and opportunities, which may include failing to achieve ESG-related aspirational goals. We have published voluntary disclosures regarding ESG matters under an annual Sustainability Report and the Global Reporting Initiative, an international independent standards organization. From time to time, statements in those voluntary disclosures may be based on aspirational expectations and assumptions that may or may not be representative of current or actual risks or events or forecasts of expected risks or events, including the costs associated therewith. Such expectations and assumptions may be prone to error or subject to misinterpretation given the lack of an established single approach to identifying, measuring and reporting on many ESG matters.

Risk factors associated with the Redomestication

The expected benefits of the Redomestication may not be realized.

There can be no assurance that all of the anticipated benefits of the Redomestication will be achieved. Achieving the anticipated benefits of the Redomestication is subject to a number of risks and uncertainties, including factors that we do not and cannot control. In addition, if the expected benefits of the Redomestication do not meet expectations of investors or securities analysts, the price of our common stock following completion of the Redomestication may decline.

If the Redomestication does not qualify as a "reorganization" under Section 368(a) of the U.S. Internal Revenue Code of 1986, as amended, Core Lab Shareholders may be required to pay U.S. federal income taxes.

It is intended that the steps in the Redomestication qualify as a form of "reorganization" within the meaning of Section 368(a) of the U.S. Internal Revenue Code of 1986, as amended (the "Code"). Although Vinson & Elkins L.L.P., Core Lab's U.S. tax counsel, is currently of the opinion that the Redomestication should qualify as a form of reorganization within the meaning of Section 368(a) of the Code, and Core Lab, Core Laboratories Luxembourg S.A. and Core Laboratories Inc. intend to file tax returns consistent with this intended tax treatment, this tax treatment is not free from doubt. Your tax advisor may not agree with our intended tax treatment and the IRS may assert, or a court may sustain, a contrary position.

If the Redomestication did not qualify as a form of reorganization within the meaning of Section 368(a) of the Code, Core Lab Shareholders would generally recognize taxable gain or loss upon their exchange of stock pursuant to the Redomestication, as applicable.

Core Lab will allocate time and resources to effecting the Redomestication and incur non-recurring costs related to the Redomestication.

Core Lab and its management has allocated and will continue to be required to allocate time and resources to effecting the completion of the Redomestication and related and incidental activities. There is a risk that the challenges associated with managing these various initiatives may have a business impact and that consequently the underlying businesses will not perform in line with expectations. This could have an adverse effect on the business, financial condition and reputation of Core Laboratories Inc.

In addition, Core Lab expects to incur a number of non-recurring costs associated with the Redomestication, including legal fees, accountants' fees, proxy solicitor fees, filing fees, mailing expenses and financial printing expenses. There can be no assurance that the actual costs will not exceed those estimated and the actual completion of the Redomestication may result in additional and unforeseen expenses. Most of these costs will be payable whether or not the Redomestication is completed. While it is expected that benefits of the Redomestication achieved by Core Laboratories Inc. will offset these transaction costs over time, this net benefit may not be achieved in the short-term or at all, particularly if the Redomestication is delayed or does

not happen at all. These combined factors could adversely affect the business, operating profit and overall financial condition of Core Laboratories Inc.

Core Lab may choose to defer or abandon the Redomestication.

Even if Core Lab Shareholder approval has been obtained and other conditions required to complete the Redomestication have been satisfied, Core Lab may decide to defer or abandon the Redomestication at any time prior to the Effective Time of the Redomestication and in such case Core Lab will have incurred costs and will have directed attention and resources relating to the Redomestication, but will not realize any of the anticipated benefits of the Redomestication.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Currently, we have over 70 offices (totaling approximately 2.2 million square feet of space) in more than 50 countries. In these locations, we lease approximately 1.3 million square feet and own approximately 0.9 million square feet. We serve our worldwide clients through six Advanced Technology Centers ("ATCs") that are located in Aberdeen, Scotland; Abu Dhabi, United Arab Emirates; Calgary, Canada; Houston, Texas; Kuala Lumpur, Malaysia; and Rotterdam, The Netherlands. The ATCs provide support for our more than 50 regional specialty centers located throughout the global energy producing provinces. In addition, our more significant manufacturing facilities are located in Godley, Texas, Red Deer, Alberta, Canada and Pyle, Wales which are included in our Production Enhancement operating segment. Our facilities are adequate for our current operations; however, expansion into new facilities or the replacement or modification of existing facilities may be required to accommodate future growth.

ITEM 3. LEGAL PROCEEDINGS

See Note 13 - *Commitments and Contingencies* of the Notes to the Consolidated Financial Statements.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Price Range of Common Shares

Our common shares trade on the New York Stock Exchange ("NYSE") under the symbol "CLB". Our common shares also traded on the Euronext Amsterdam Stock Exchange until our voluntary delisting effective December 3, 2022.

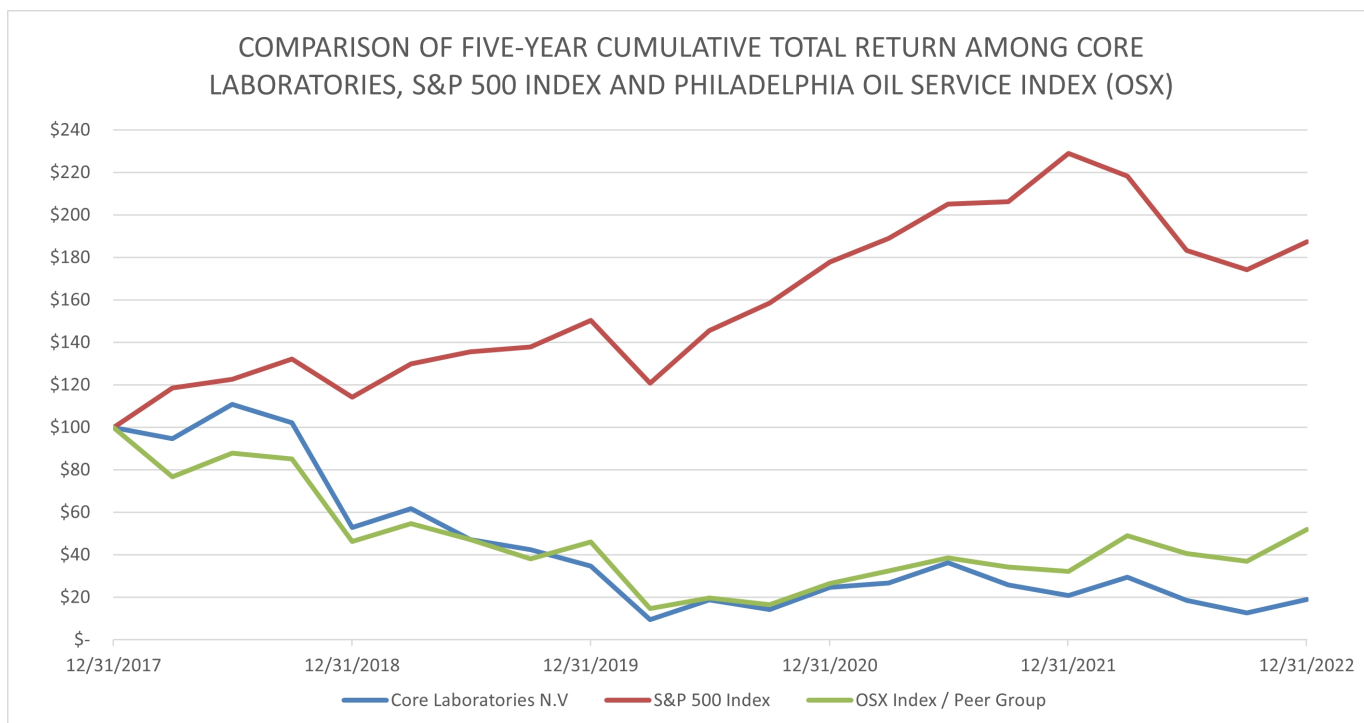
On February 3, 2023, the closing price, as quoted by the NYSE, was \$26.17 per share and there were 46,633,934 common shares issued and outstanding held by approximately 211 record holders. These amounts exclude shares held by us as treasury shares.

See Part III, "Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters" for discussion of equity compensation plans.

Performance Graph

The following performance graph compares the performance of our common shares to the Standard & Poor's 500 Index and the Philadelphia Oil Service Index ("OSX") for the period beginning December 31, 2017 and ending December 31, 2022. Core Lab is now an established member of the OSX which includes a greater concentration of our most direct peers.

The graph assumes that the value of the investment in our common shares and each index was \$100 at December 31, 2017 and that all dividends were reinvested. The stockholder return set forth below is not necessarily indicative of future performance. The following graph and related information is "furnished" and shall not be deemed "soliciting material" or to be "filed" with the SEC, nor shall such information be incorporated by reference into any future filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, as amended (the "Exchange Act") except to the extent that Core Laboratories specifically incorporates it by reference into such filing.



Share Repurchases in the Fourth Quarter of 2022

The following table provides information about our purchases of equity securities that are registered by us pursuant to Section 12 of the Exchange Act during the three months ended December 31, 2022:

Period	Total Number Of Shares Purchased	Average Price Paid Per Share	Total Number Of Shares Purchased As Part Of A Publicly Announced Program	Maximum Number Of Shares That May Be Purchased Under The Program ⁽²⁾
October 1, 2022 to October 31, 2022 ⁽¹⁾	11,654	\$ 13.51	—	4,562,471
November 1, 2022 to November 30, 2022 ⁽¹⁾	689	\$ 19.70	—	4,564,602
December 1, 2022 to December 31, 2022 ⁽¹⁾	69,948	\$ 20.32	—	4,602,742
Total	<u>82,291</u>	<u>\$ 19.35</u>	<u>—</u>	

(1) During the quarter, 82,291 shares were surrendered to us by participants in a stock-based compensation plan to settle any personal tax liabilities which may result from the award.

(2) During the quarter, 124,717 treasury shares were distributed relating to stock-based awards, including 38,293 in October, 2,820 in November and 83,604 in December.

In connection with our initial public offering in September 1995, our shareholders authorized our Management Board to repurchase up to 10% of our issued share capital, the maximum allowed under Dutch law at the time, for a period of 18 months. This authorization was renewed at subsequent annual or special shareholder meetings. At our annual shareholders' meeting on May 19, 2022, our shareholders authorized an extension until November 19, 2023 to purchase up to 10% of our issued share capital. The repurchase of shares in the open market is at the discretion of management pursuant to this shareholder authorization.

From the activation of the share repurchase program through December 31, 2022, we have repurchased 40,265,843 shares for an aggregate purchase price of approximately \$1.7 billion, or an average price of \$41.35 per share. At December 31, 2022, we held 67,168 shares in treasury and have the authority to repurchase 4,602,742 additional shares under our stock repurchase program as described in the preceding paragraph.

ITEM 6. [RESERVED]

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

Core Laboratories N.V. is a Netherlands limited liability company. We were established in 1936 and are one of the world's leading providers of proprietary and patented reservoir description and production enhancement services and products to the oil and gas industry, primarily through client relationships with many of the world's major, national and independent oil companies.

We operate our business in two segments. These complementary operating segments provide different services and products and utilize different technologies for evaluating and improving reservoir performance and increasing oil and gas recovery from new and existing fields:

- *Reservoir Description*: Encompasses the characterization of petroleum reservoir rock and reservoir fluids samples to increase production and improve recovery of crude oil and natural gas from our clients' reservoirs. We provide laboratory-based analytical and field services to characterize properties of crude oil and crude oil-derived products to the oil and gas industry. We also provide proprietary and joint industry studies based on these types of analyses and manufacture associated laboratory equipment. In addition, we provide reservoir description capabilities that support various activities associated with energy transition projects, including services that support carbon capture, utilization and storage, hydrogen storage, geothermal projects, and the evaluation and appraisal of mining activities around lithium and other elements necessary for energy storage.
- *Production Enhancement*: Includes services and manufactured products associated with reservoir well completions, perforations, stimulations, production and well abandonment. We provide integrated diagnostic services to evaluate and monitor the effectiveness of well completions and to develop solutions aimed at increasing the effectiveness of enhanced oil recovery projects.

General Overview

We provide services as well as design and produce products which enable our clients to evaluate and improve reservoir performance and increase oil and gas recovery from new and existing fields. These services and products are generally in higher demand when our clients are investing capital in their field development programs that are designed to increase productivity from existing fields or when exploring for appraising and developing new fields. Our clients' investment in capital expenditure programs tends to correlate over the longer term to oil and natural gas commodity prices. During periods of higher, stable prices, our clients generally invest more in capital expenditures and, during periods of lower or volatile commodity prices, they tend to invest less. Consequently, the level of capital expenditures by our clients impacts the demand for our services and products.

The following table summarizes the annual average and year-end worldwide and U.S. rig counts for the years ended December 31, 2022, 2021 and 2020, as well as the annual average and year-end spot price of a barrel of WTI crude, Europe Brent crude and an MMBtu of natural gas:

	2022	2021	2020
Baker Hughes Worldwide Average Rig Count ⁽¹⁾	1,747	1,362	1,351
Baker Hughes U.S. Average Rig Count ⁽¹⁾	721	475	436
Baker Hughes U.S. Land-based Average Rig Count ⁽¹⁾	706	461	420
Baker Hughes Worldwide Year-End Rig Count ⁽²⁾	1,835	1,563	1,095
Baker Hughes U.S. Year-End Rig Count ⁽²⁾	780	579	339
Baker Hughes U.S. Land-based Year-End Rig Count ⁽²⁾	763	565	324
Average Crude Oil Price per Barrel WTI ⁽³⁾	\$ 94.90	\$ 68.14	\$ 39.17
Average Crude Oil Price per Barrel Brent ⁽⁴⁾	\$ 100.93	\$ 70.86	\$ 41.96
Average Natural Gas Price per MMBtu ⁽⁵⁾	\$ 6.45	\$ 3.89	\$ 2.02
Year-end Crude Oil Price per Barrel WTI ⁽³⁾	\$ 80.16	\$ 75.33	\$ 48.35
Year-end Crude Oil Price per Barrel Brent ⁽⁴⁾	\$ 82.82	\$ 77.24	\$ 51.22
Year-end Natural Gas Price per MMBtu ⁽⁵⁾	\$ 3.52	\$ 3.82	\$ 2.36

(1) Twelve month average rig count as reported by Baker Hughes - Worldwide Rig Count.

(2) Year-end rig count as reported by Baker Hughes - Worldwide Rig Count.

(3) Average daily and year-end West Texas Intermediate ("WTI") crude spot price as reported by the U.S. Energy Information Administration ("EIA").

(4) Average daily and year-end Europe Brent crude spot price as reported by the EIA.

(5) Average daily and year-end Henry Hub natural gas spot price as reported by the EIA.

The events associated with the COVID-19 pandemic that began in 2020 continued in 2021 and began to subside in 2022. Certain international countries continued mandated shut-downs, home sheltering and social distancing policies that initially caused uncertainty in the demand for crude oil and associated products; however demand for these products has recovered more quickly than global production causing crude-oil commodity prices to increase significantly. Although U.S. land drilling and completion activities continued to show improvement during 2021 and strengthened in 2022, activity still remains well below pre-pandemic levels. Additionally, in the first half of 2022, international activity continued to be adversely impacted by increasing infection rates associated with new variant strains of the COVID-19 virus during 2021 and 2022, which has continued to cause business disruptions associated with government mandated shut-downs, travel restrictions, quarantine protocols and worksite closures in various international regions. These disruptions started to ease during second half of 2022.

The prices for both WTI and Brent crude oil decreased significantly at the end of the first quarter of 2020 and remained low throughout most of 2020. Crude-oil prices subsequently recovered in 2021 with more significant improvement during the second half of 2021, and the average price was 71% higher than in 2020, as growth in production was not keeping pace with the resurgence in consumer demand. The geopolitical conflict between Russia and Ukraine that erupted in February 2022, has also resulted in disruptions to traditional supply chains associated with the movement of crude oil, primarily reducing the level of crude oil sourced from Russia and being imported into various European ports. These disruptions have caused another sharp increase in the price of crude oil throughout the majority of 2022, which resulted in the average price being 41% higher in 2022 compared to 2021. However, in order to reduce oil prices in 2022, the United States government also released approximately 1 million barrels of oil per day from its Strategic Petroleum Reserve (“SPR”) during most of 2022, reducing the United States SPR by approximately 220 million barrels.

In general, activities associated with the exploration of oil and gas in the U.S. onshore market are more sensitive to changes in the crude-oil commodity prices, as opposed to larger international and offshore projects which take multiple years to plan and develop, and once announced and started, will continue through completion, despite changes in the current price of crude oil. Activity levels in the U.S. onshore market also responded immediately to the changes in demand, decreasing significantly to historically low levels in 2020, which bottomed in the summer of 2020, and subsequently began to recover in the second half of 2020 and into 2021. However, the growth in production has not kept pace with the resurgence in demand for energy produced from oil and gas, coupled with an adverse impact from global supply-chain challenges especially during the latter part of 2021. Crude-oil commodity prices remain volatile and continued to increase significantly during 2022, as a result of the Russia-Ukraine geopolitical conflict and the additional uncertainty in supply of crude oil and natural gas. The activities associated with the production of oil and gas increased throughout 2022; however, growth moderated due to limitations in personnel, equipment, supply chain disruptions, as well as the allocation of capital resources by oil and gas producing companies.

Information published by the EIA, shows that the inventory of wells drilled but uncompleted (a “DUC” well) in the United States, was 7,737 as of December 31, 2020, and declined to 5,099 and 4,577 at end of 2021 and 2022, respectively. This data indicates that during the period of higher activity prior to 2020, operators were drilling wells but not completing them as the DUC inventory grew. The activity levels began to decline in 2020 as operators began to drill fewer new wells and were completing some of the wells that had been previously drilled. As drilling and completing activity levels began to recovery in the second half of 2021 and 2022, the number of wells completed continued to outpace the number of new wells drilled during these periods.

In the U.S., the average land-based rig count increased approximately 10% from 2020 to 2021 as drilling activity began to recover from the disruptions caused by the COVID-19 pandemic. The growth in U.S. land drilling activity continued and the pace accelerated in 2022, as the U.S. average land-based rig count increased approximately 53% in 2022. Demand for product sales increased in tandem with the increase in the rig count and the increase in drilling and completing well activity. Demand for services has also improved and partially recovered but at a slower pace than demand for completion products. Activities on development projects and producing fields in U.S. unconventional reservoirs showed an increase when the commodity price strengthened, and demand for both services and product sales to this market responded accordingly.

Outside of the U.S., activities associated with the exploration for, and production of, oil also showed a decline in 2021 primarily due to the prolonged impact from the global pandemic as reflected by a decrease of 3% in the average number of active rigs outside the United States. In 2022, activity in most international regions increased which is reflected by an increase of 16% in the average number of active rigs outside the U.S. Long-term international and offshore projects which are commonly announced through Final Investment Decisions and subsequently initiated are not as susceptible or at-risk to delay or suspension due to short-term volatility in crude-oil commodity prices.

In response to market conditions in 2020, the Company implemented cost reduction initiatives, which included (i) corporate and operating cost reductions; (ii) reduction in annual capital expenditures, and (iii) eliminating all non-essential costs. The corporate and operating cost reductions included reductions in workforce and reduction of senior executive and employee

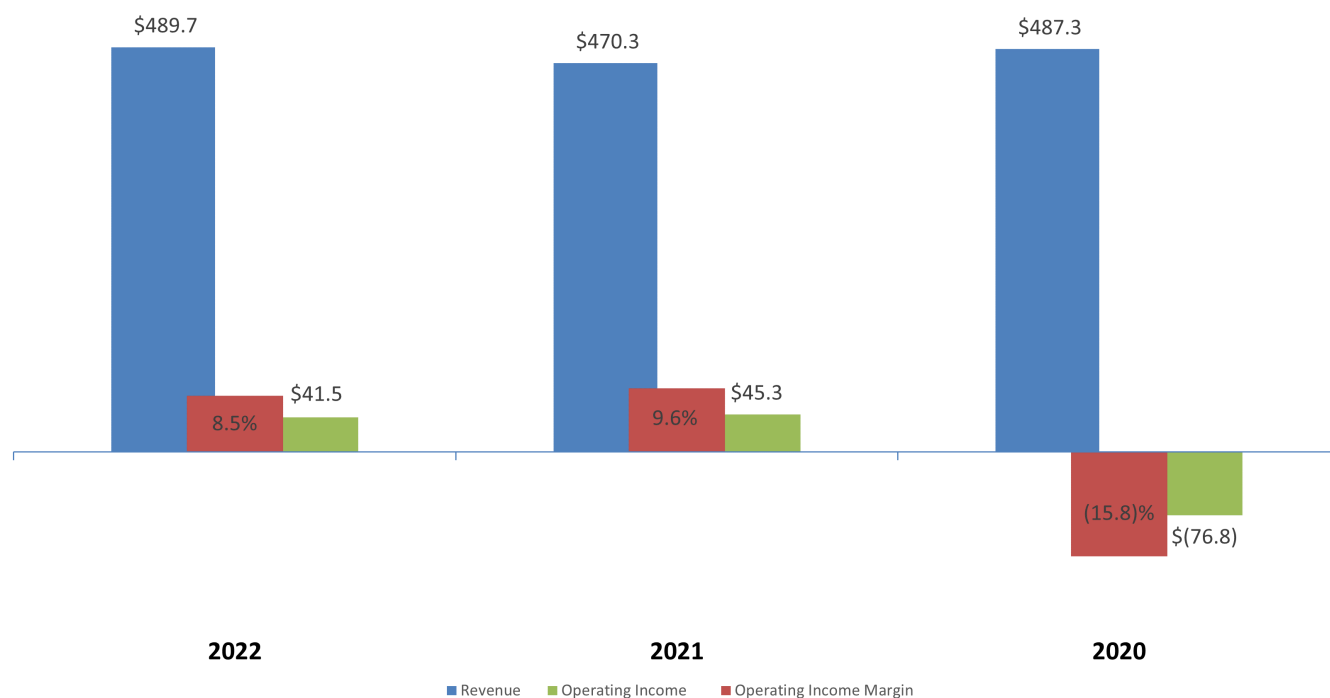
compensation. These initiatives continued in 2021. Following increased activity levels during the second half of 2021, the Company progressively reinstated certain employee costs, and in January 2022, temporary salary reduction measures were fully reinstated. Certain employee benefit plans have been partially reinstated beginning April 2022, and the Company will continue to evaluate the reinstatement of those benefits as the market for oilfield service companies continues to more fully recover and stabilize. The Company has also maintained its annual capital expenditures between \$10 million and \$13.5 million during the years 2020, 2021 and 2022, which is significantly reduced from average annual capital expenditures in years prior to 2020.

Results of Operations

Operating Results for the Year Ended December 31, 2022 Compared to the Years Ended December 31, 2021 and 2020

We evaluate our operating results by analyzing revenue, operating income and operating income margin (defined as operating income divided by total revenue). Since we have a relatively fixed cost structure, decreases in revenue generally translate into lower operating income results. Results for the years ended December 31, 2022, 2021 and 2020 are summarized in the following chart. The year ended December 31, 2020, operating loss includes approximately \$132.6 million of charges associated with impairment of goodwill, intangible assets and inventory write-downs.

Revenue, Operating Income and Operating Income Margin (in millions)



Results of operations as a percentage of applicable revenue for the years ended December 31, 2022, 2021 and 2020 are as follows (in thousands, except for per share information):

	2022		2021		2020		2022 / 2021	2021 / 2020
							% Change	
REVENUE:								
Services	\$ 346,974	70.8%	\$ 344,342	73.2%	\$ 376,421	77.3%	0.8%	(8.5)%
Product sales	142,761	29.2%	125,910	26.8%	110,846	22.7%	13.4%	13.6%
Total revenue	489,735	100.0%	470,252	100.0%	487,267	100.0%	4.1%	(3.5)%
OPERATING EXPENSES:								
Cost of services* ⁽¹⁾	274,297	79.1%	267,641	77.7%	279,281	74.2%	2.5%	(4.2)%
Cost of product sales* ⁽¹⁾	119,358	83.6%	100,255	79.6%	95,486	86.1%	19.1%	5.0%
Total cost of services and product sales	393,655	80.4%	367,896	78.2%	374,767	76.9%	7.0%	(1.8)%
General and administrative expense ⁽¹⁾	38,117	7.8%	44,173	9.4%	34,033	7.0%	(13.7)%	29.8%
Depreciation and amortization	17,161	3.5%	18,516	3.9%	20,867	4.3%	(7.3)%	(11.3)%
Impairments and other charges	—	—	—	—	122,204	25.1%	NM	NM
Inventory write-down	—	—	—	—	10,375	2.1%	NM	NM
Other (income) expense, net	(722)	(0.1)%	(5,595)	(1.2)%	1,826	0.4%	NM	NM
OPERATING INCOME (LOSS)	41,524	8.5%	45,262	9.6%	(76,805)	(15.8)%	(8.3)%	NM
Interest expense	11,570	2.4%	9,152	1.9%	14,372	2.9%	26.4%	(36.3)%
Income (loss) from continuing operations before income taxes	29,954	6.1%	36,110	7.7%	(91,177)	(18.7)%	(17.0)%	NM
Income tax expense (benefit)	10,296	2.1%	15,891	3.4%	5,896	1.2%	(35.2)%	169.5%
Income (loss) from continuing operations	19,658	4.0%	20,219	4.3%	(97,073)	(19.9)%	(2.8)%	NM
Income (loss) from discontinued operations, net of income taxes	—	—	—	—	(424)	(0.1)%	NM	NM
Net income (loss)	19,658	4.0%	20,219	4.3%	(97,497)	(20.0)%	(2.8)%	NM
Net income (loss) attributable to non-controlling interest	205	—	492	0.1%	140	—	NM	NM
Net income (loss) attributable to Core Laboratories N.V.	<u>\$ 19,453</u>	4.0%	<u>\$ 19,727</u>	4.2%	<u>\$ (97,637)</u>	(20.0)%	(1.4)%	NM
Diluted earnings (loss) per share from continuing operations	<u>\$ 0.42</u>		<u>\$ 0.43</u>		<u>\$ (2.18)</u>		(2.3)%	NM
Diluted earnings (loss) per share attributable to Core Laboratories N.V.	<u>\$ 0.42</u>		<u>\$ 0.42</u>		<u>\$ (2.20)</u>		0.0%	NM
Diluted weighted average common shares outstanding	<u>46,813</u>		<u>46,690</u>		<u>44,477</u>			
Other Data:								
Current ratio ⁽²⁾	2.05:1		2.08:1		1.85:1			
Debt to EBITDA ratio ⁽³⁾	2.68:1		2.70:1		NM			
Debt to Adjusted EBITDA ratio ⁽⁴⁾	2.29:1		2.08:1		2.82:1			

* Percentage based on applicable revenue rather than total revenue.

"NM" means not meaningful.

(1) Excludes depreciation.

(2) Current ratio is calculated as follows: current assets divided by current liabilities.

(3) Debt to EBITDA ratio is calculated as follows: debt less cash divided by the sum of consolidated net income plus interest, taxes, depreciation, and amortization.

(4) Debt to Adjusted EBITDA ratio is calculated as follows: debt less cash divided by the sum of consolidated net income plus interest, taxes, depreciation, amortization, severance, and certain non-cash adjustments.

Service Revenue

Service revenue is primarily tied to activities associated with the exploration, production, movement and refinement of oil, gas and derived products outside the U.S. Service revenue for the year ended December 31, 2022 of \$347.0 million was relatively flat compared to 2021. Disruptions resulting from the COVID-19 pandemic started to ease, and demand for crude oil progressively increased during 2022, however, the growth was offset by the disruptions to the movement and trading patterns of crude oil exported out of Russia and into various European ports caused by the Russia-Ukraine geopolitical conflict. New logistical patterns associated with the supply lines of crude oil and derived products, coming out of Russia and primarily coming into Europe, continue to realign. Additionally, as over 70% of service revenue is generated from international markets, though our customer contracts substantially are denominated in U.S. Dollars, there are certain customer contracts denominated in foreign currencies. Therefore, the devaluation of most major currencies against the U.S. Dollar, primarily the Euro and British Pound, adversely impacted the growth of service revenue during the year ended December 31, 2022. Service revenue

for the year ended December 31, 2021 was \$344.3 million down from \$376.4 million in 2020, primarily due to the impact of the COVID-19 pandemic beginning in March 2020 and continuing throughout most of 2021, resulting in delays of exploration and production projects in both the offshore and international markets, as well as the U.S. market.

We continue to focus on large-scale core analyses and reservoir fluids characterization studies in the Eagle Ford, the Permian Basin and the Gulf of Mexico, along with Guyana, Surinam, Malaysia and other international locations such as offshore South America, Australia, and the Middle East, including Kuwait and the United Arab Emirates. Analysis of crude oil and crude oil-derived products also occurs in every major producing region of the world.

Product Sales Revenue

Product sales revenue, which is equally tied to the completion of onshore wells in the U.S. and international activities, for the year ended December 31, 2022 was \$142.8 million, an increase of 13% compared to 2021. The increase in product sales, which primarily include differentiated well completion products and specialized laboratory instrumentation, was attributable to growth in both the U.S. and international markets. Supply chain and logistical challenges continued throughout 2022 which have caused some delays in delivery of our products to certain international locations. Product sales revenue for the year ended December 31, 2021 was \$125.9 million, an increase of 14% compared to 2020.

Cost of Services, excluding depreciation

Cost of services for the year ended December 31, 2022 was \$274.3 million, or an increase of 2% compared to 2021, which corresponded with the change in revenue. The restoration of substantially all employee compensation and benefit costs during 2022 resulted in a higher employee compensation cost, however operating expenses outside the U.S., and paid in local currencies, were lower when translated into U.S. Dollars, as the U.S. Dollar strengthened against most foreign currencies during 2022. Cost of services for the year ended December 31, 2021 was \$267.6 million, or a decrease of 4% compared to 2020, corresponding to the changes in revenue and the full benefit derived from the implementation of various employee compensation and cost reduction initiatives that began after April 2020. Cost of services expressed as a percentage of services revenue increased to approximately 79% in 2022 primarily due to the effect of restoration of employee compensation costs as discussed above. Cost of services expressed as a percentage of service revenue increased to approximately 78% in 2021 from 74% in 2020, due to the subsequent restoration of certain cost reduction initiatives in the second half of 2021, and how our fixed cost structure is absorbed by revenue.

Cost of Product Sales, excluding depreciation

Cost of product sales for the year ended December 31, 2022 was \$119.4 million, increased 19% compared to 2021, which increased slightly higher than the change in revenue. The restoration of substantially all employee compensation and benefit costs during 2022 resulted in a higher employee compensation costs as discussed above. In addition, inflation and global supply chain challenges impacted our raw materials and shipping costs also resulted in increased costs of product sales. Cost of product sales for the year ended December 31, 2021 was \$100.3 million, increased 5% compared to 2020, corresponding to the changes in revenue, offset by improved manufacturing productivity and the full year benefit derived from the implementation of various employee compensation and cost reduction initiatives that began after April 2020. Cost of product sales expressed as a percentage of product sales revenue increased to approximately 84% in 2022 as a result of elevated inflation and increased employee compensation as discussed above. Cost of product sales expressed as a percentage of product sales revenue decreased to 80% in 2021 from 86% in 2020 was primarily due to improved manufacturing productivity and absorption of fixed costs on a higher revenue base.

General and Administrative Expense, excluding depreciation

General and administrative ("G&A") expense includes corporate management and centralized administrative services that benefit our operations. G&A expense was \$38.1 million in 2022, decreased 14% compared to 2021. The decrease is primarily due to changes in compensation expense during the period and include accelerated stock compensation expense recorded for retirement eligible employees of \$3.9 million in 2022 compared to \$7.2 million in 2021. Additionally, in 2022, \$5.0 million of previously recognized compensation expense associated with performance share awards was reversed, to align the compensation expense with the vesting level of those performance share awards and revalue the awards. However, the adjustments to reduce stock compensation expense in 2022 were partially offset by the restoration of employee compensation and benefit costs during 2022. G&A expenses were \$44.2 million in 2021, an increase of approximately \$10.1 million, compared to 2020. The variance is primarily due to changes in compensation expense during the period. In 2020, as a result of a modification in the methodology of measuring performance conditions associated with certain long-term employee stock-based compensation awards, these awards were revalued, and \$11.3 million of previously recognized stock compensation

expense was reversed in 2020. See Note 17 - *Stock-Based Compensation* of the Notes to the Consolidated Financial Statements for further details.

Depreciation and Amortization

Depreciation and amortization expense for the year ended December 31, 2022 was \$17.2 million decreased from \$18.5 million and \$20.9 million in 2021 and 2020, respectively, as capital expenditures have also decreased over the same period as a result of our cost reduction initiatives.

Impairments, Inventory Write-down and Other Charges

The geopolitical conflict between Russia and Ukraine, which began in February 2022 and continued through December 31, 2022, has resulted in disruptions to our operations in Russia and Ukraine. The Company's operations and assets in Ukraine are immaterial. As of December 31, 2022, all laboratory facilities, offices, and locations in Russia continued to operate and remained profitable and no specific asset losses were identified.

For the years ended December 31, 2022 and 2021, there were no triggering events during the year, and, based on our assessment, we determined there was no impairment for any of our reporting units or asset groups, which included long-lived assets in Russia and Ukraine, and no impairment has been recorded in 2022 or 2021.

We completed our annual impairment assessment of goodwill for our reporting units as of December 31, 2022 and 2021, by performing a qualitative assessment, which indicated it was not more likely than not that there was an impairment and therefore no quantitative test was required.

In 2020, the events associated with the COVID-19 pandemic and the resulting sharp decrease in the consumption and demand for crude oil, which caused a sharp decrease in the price of crude oil, was identified as a triggering event in March 2020. In response to the triggering event, the Company updated its analysis associated with future cash flows and the valuation of assets and potential impairment of goodwill and intangible assets. Our updated analysis resulted in the Company recording a total charge of \$122.2 million for impairment of goodwill and intangible assets in March 2020 in our Production Enhancement operating segment. In addition, the Company recorded a charge of \$10.4 million associated with the devaluation and obsolescence of inventory, primarily in our Production Enhancement operating segment. See Note 18 - *Impairments and Other Charges* and Note 19 - *Inventory Write-down* of the Notes to the Consolidated Financial Statements for further details.

Other (Income) Expense, net

The components of other (income) expense, net are as follows (in thousands):

	For the Years Ended December 31,		
	2022	2021	2020
Gain on sale of assets	\$ (1,068)	\$ (427)	\$ (1,254)
Results of non-consolidated subsidiaries	(294)	(62)	(125)
Foreign exchange (gain) loss, net	229	(228)	1,160
Rents and royalties	(709)	(571)	(466)
Return on pension assets and other pension costs	(545)	(306)	(1,502)
Gain on sale of business	—	(1,012)	—
Insurance and other settlements	(669)	(2,236)	—
Loss on lease abandonment	—	—	504
Severance and other charges	3,332	—	3,943
Other, net	(998)	(753)	(434)
Total other (income) expense, net	\$ (722)	\$ (5,595)	\$ 1,826

In 2022, the Company sold its ownership interest of mineral rights in certain properties for a net gain of \$0.7 million which is included in gain on sale of assets. We incurred property and other losses in a fire incident in 2020 that we received full and final insurance settlement of \$0.6 million in 2021. The North America mid-continent winter storm in February 2021 caused business interruptions and property losses to certain facilities, and we received insurance settlements of \$0.7 million and \$1.6 million in 2022 and 2021, respectively.

Foreign exchange (gain) loss, net is summarized in the following table (in thousands):

	For the Years Ended December 31,		
	2022	2021	2020
British Pound	\$ 212	\$ 86	\$ 653
Canadian Dollar	238	77	590
Colombian Peso	(430)	(281)	(331)
Euro	(382)	(450)	458
Indonesian rupiah	379	123	(96)
Other currencies, net	212	217	(114)
Foreign exchange (gain) loss, net	<u>\$ 229</u>	<u>\$ (228)</u>	<u>\$ 1,160</u>

Interest Expense

Interest expense for the year ended December 31, 2022 was \$11.6 million compared to \$9.2 million in 2021. Interest expense in 2021, was lower by \$1.4 million, associated with a net gain recognized upon the settlement and restructuring of our interest rate swap agreements, as described in Note 15 - *Derivative Instruments and Hedging Activities* of the Notes to the Consolidated Financial Statements. In 2022, the Company reduced its average outstanding debt by approximately 12%, when compared to 2021, however the decrease in debt outstanding was offset by a substantial increase in interest rates. Interest expense for the year ended December 31, 2021 was \$9.2 million compared to \$14.4 million in 2020. Interest expense in 2021 was lower than 2020 due to the following: 1) 2021 interest expense includes a \$1.4 million net gain recorded for the settlement and restructuring of our interest rate swap agreements as discussed above, 2) the outstanding balance of our aggregated variable rate debt was reduced by \$56.0 million, and 3) the balance of our long-term fixed rate debt was reduced by \$15.0 million. See Note 11 - *Long-term Debt, net* of the Notes to the Consolidated Financial Statements for further detail.

Income Tax Expense

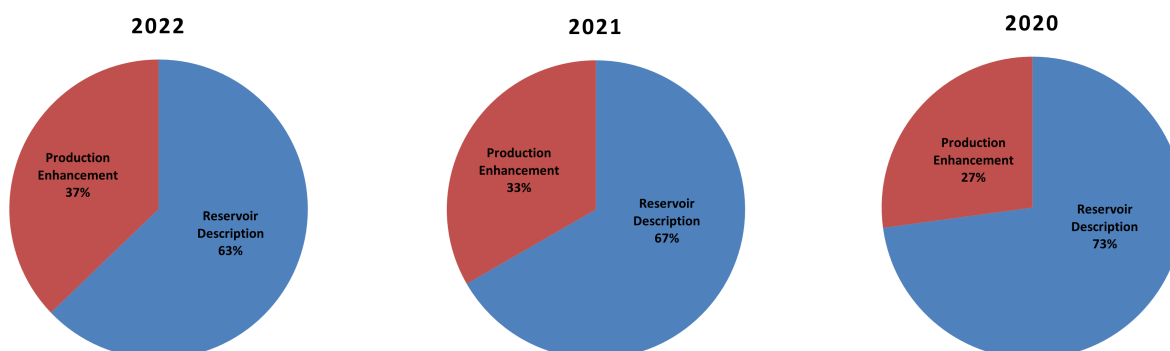
Income tax expense was \$10.3 million in 2022 and resulted in an effective tax rate of 34.4%. The 2022 tax expense was primarily impacted by taxable gains in local jurisdictions associated with foreign currency revaluation of U.S. denominated receivables, primarily in the U.K. and Turkey as well as certain non-deductible stock compensation expense in the United States. Income tax expense was \$15.9 million in 2021 and resulted in an effective tax rate of 44.0%. The 2021 tax expense was primarily impacted by taxable gains in local jurisdictions associated with foreign currency revaluation of U.S. dollar denominated receivables, primarily in Turkey, and certain non-deductible stock compensation expense in the United States. The financial results for 2020 include a goodwill impairment of \$114.0 million and resulted in a loss before income taxes. However, the goodwill impairment was mostly non-deductible for income tax purposes, and as a result income tax expense was \$5.9 million in 2020.

See Note 10 - *Income Taxes* of the Notes to the Consolidated Financial Statements for further detail of income tax expense.

Segment Analysis

The following charts and tables summarize the annual revenue and operating results as a percentage of applicable revenue for our two complementary operating segments.

Segment Revenue



	2022		2021		2020		2022 / 2021	2021 / 2020
		%		%		%	% Change	% Change
REVENUE:								
Reservoir Description	\$ 307,691	62.8%	\$ 313,609	66.7%	\$ 355,041	72.9%	(1.9)%	(11.7)%
Production Enhancement	182,044	37.2%	156,643	33.3%	132,226	27.1%	16.2%	18.5%
Total revenue	<u>\$ 489,735</u>	100.0%	<u>\$ 470,252</u>	100.0%	<u>\$ 487,267</u>	100.0%	4.1%	(3.5)%
OPERATING INCOME (LOSS):								
Reservoir Description*	\$ 22,902	7.4%	\$ 28,958	9.2%	\$ 55,044	15.5%	(20.9)%	(47.4)%
Production Enhancement*	16,351	9.0%	15,163	9.7%	(133,449)	(100.9)%	7.8%	NM
Corporate and other ⁽¹⁾	2,271	0.5%	1,141	0.2%	1,600	0.3%	NM	NM
OPERATING INCOME (LOSS)	<u>\$ 41,524</u>	8.5%	<u>\$ 45,262</u>	9.6%	<u>\$ (76,805)</u>	(15.8)%	(8.3)%	NM

* Percentage, which represents operating margin, is based on operating income (loss) divided by applicable revenue rather than total revenue.

"NM" means not meaningful.

(1) "Corporate and other" represents those items that are not directly relating to a particular operating segment.

Reservoir Description

Reservoir Description's operations are heavily exposed to international and offshore project activity levels, with approximately 80% of its revenue sourced from producing fields, development projects and movement of crude oil products outside the U.S. The Company continues to see improvement in international projects across several international regions; however, increases in project activity were offset by disruptions caused by the Russia-Ukraine geopolitical conflict, the COVID-19 pandemic and the devaluation of most currencies against the U.S. Dollar, primarily the Euro and British Pound, in 2022 as previously discussed.

Revenue from the Reservoir Description operating segment was \$307.7 million in 2022 and down slightly when compared to \$313.6 million in 2021 primarily due to the factors discussed above. Revenue from the Reservoir Description operating segment in 2021 of \$313.6 million compared to \$355.0 million in 2020, decreased approximately 12% primarily due to the impact of the COVID-19 pandemic, which began March 2020 and continued throughout 2021. The COVID-19 pandemic resulted in reduced activity associated with the exploration and production of oil and gas, as well as delays and disruptions to project workflows that slowed the progress on long term international and offshore projects. In addition, various weather events, such as the North America mid-continent winter storm and major named storms in the Gulf of Mexico caused a significant disruption to crude oil production and supply activities during 2021.

We continue to focus on large-scale core analysis and reservoir fluids characterization studies in the Asia-Pacific region, offshore Europe and Africa, offshore South America, North America, and the Middle East. We are also engaged on both newly developed fields and brownfield extensions in offshore areas such as Australia, Brazil, Guyana, the Gulf of Mexico, the Middle East and the North Sea. Analysis of crude oil derived products also occurs in every major producing region of the world. In particular, we anticipate increased demand for our proprietary laboratory technological services in the Middle East as a result of several factors, including Core Lab's completion of a comprehensive reservoir fluid laboratory in Doha, Qatar, resumption of production from the Wafra oilfield located within the onshore Partitioned Neutral Zone in the southern part of Kuwait, as well as expansion of the North Gas Field in Qatar. Additionally, in 2022, Core Lab, under the direction of The CarbonNet Project commenced the second phase of advanced rock property analysis of conventional core extracted from the Gular-1 appraisal well, which is associated with the assessment of a large prospective geologic subsurface structure located in the Gippsland Basin offshore the southeast coast of Australia which could be used for carbon capture and sequestration.

Operating income of \$22.9 million in 2022 decreased from \$29.0 million in 2021. Operating margins decreased to 7.4% in 2022 compared to 9.2% in 2021. The decrease in operating income and operating margin in 2022, correlates to the decrease in revenue and the decrease in operating margins reflect the increase in costs during 2022, associated with the Company restoring employee compensation costs and benefits. Operating income of \$29.0 million in 2021 significantly decreased compared to \$55.0 million in 2020. Operating margins decreased to 9.2% in 2021 compared to 15.5% in 2020. The decrease in operating income and operating margin in 2021 correlates to the decrease in revenue and reflects additional costs associated with disruptions and damage to facilities caused by weather events during 2021 as discussed above. In addition, 2020 includes and adjustment of \$7.6 million to reverse previously recognized stock compensation expense for certain employees' performance share awards. See Note 17 - *Stock-Based Compensation* of the Notes to the Consolidated Financial Statements for further detail.

Production Enhancement

Production Enhancement's operations are largely focused on complex completions in unconventional, tight-oil reservoirs in the U.S. as well as conventional projects across the globe. Drilling and completion activity levels in the U.S. onshore market began to significantly decrease starting in March of 2020 due to the global pandemic and bottomed out at a historically low level in May of 2020. Activity levels in the U.S. onshore market began to recover in the second half of 2020, and activity levels for both the U.S. onshore and international markets continued to strengthen in 2021 and 2022. However, the pace of growth in the U.S. onshore market was slower in 2022 compared to 2021.

Revenue from the Production Enhancement operating segment of \$182.0 million in 2022 increased 16% compared to 2021. The increase was driven by both an increase in the drilling and completion of onshore wells in the U.S. and improved activity in international markets. International sales continue to be impacted by the challenges in the global supply chains and logistical challenges that caused delays in delivery of our products to certain international locations. Revenue from the Production Enhancement operating segment of \$156.6 million in 2021 increased approximately 19% compared to 2020 primarily driven by a significant increase in the drilling and completion of wells in the U.S. onshore market. The U.S. average onshore rig count increased approximately 53% in 2022 and 10% in 2021 compared to 2021 and 2020, respectively.

Operating income of \$16.4 million in 2022 compared to \$15.2 million in 2021. The increase in operating income correlates to the increase in revenue, however, operating costs in 2022 increased due to the restoration of employee compensation and benefit costs and the inflationary impact on our raw materials and shipping costs. Operating margin of 9.0% in 2022 decreased from 9.7% in 2021 primarily due to the increase in costs as discussed above. Operating income of \$15.2 million in 2021 compared to an operating loss of \$133.4 million in 2020. In 2020, we recorded non-cash charges of \$132.6 million for impairment of goodwill, intangible assets and inventory write-down and other charges. See Note 18 - *Impairments and Other Charges* and Note 19 - *Inventory Write-down* of the Notes to the Consolidated Financial Statements for further details. This was partially offset by the benefit of cost reduction initiatives implemented during 2020 and reversal of previously recognized stock compensation expense associated with certain employees' long-term stock-based performance awards of \$3.6 million. Operating income (loss) in 2020, after excluding these net non-cash charges was a loss of \$0.8 million. The increase in operating income in 2021 compared to 2020, correlates to the increase in revenue. Operating margin was 9.7% in 2021, compared to a negative margin of 100.9% in 2020. The increased operating margin in 2021 compared to 2020 was primarily driven by the effect of non-cash charges recorded in 2020, as well as improved operating efficiencies associated with increased activity levels in 2021, as discussed above. The operating margin for 2020 was breakeven, when excluding the non-cash charges associated with the goodwill impairment, intangible assets and inventory write down.

Liquidity and Capital Resources

General

We have historically financed our activities through cash on hand, cash flows from operations, bank credit facilities, equity financing and the issuance of debt. Cash flows from operating activities provide the primary source of funds to finance operating needs, capital expenditures and our dividend and share repurchase programs. We believe our future cash flows from operations, supplemented by our borrowing capacity under our Amended Credit Facility and the ability to issue additional equity and debt, should be sufficient to fund our debt requirements, capital expenditures, working capital, dividend payments and future acquisitions. The Company will continue to monitor and evaluate the availability of debt and equity markets.

In response to market conditions, Core Lab's Supervisory Board approved a plan to reduce the Company's quarterly dividends to \$0.01 per share beginning with the second quarter of 2020 and to focus excess free cash flow on debt reduction. In 2020, the Company implemented cost reduction initiatives, which included: (i) corporate and operating cost reductions; (ii) reduction in annual capital expenditures, and (iii) eliminating all non-essential costs. The corporate and operating cost reductions included reductions in workforce and reduction of senior executive and employee compensation. These initiatives continued in 2021.

Following increased activity levels during the second half of 2021, the Company progressively reinstated certain employee costs, and in January 2022, employee salaries were fully reinstated. Certain employee benefit plans have been partially reinstated beginning April 2022, and the Company will continue to evaluate the reinstatement of those benefits in 2023. Additionally, the Company has maintained its reduced dividend plan that was approved and implemented from second quarter of 2020, and excess free cash flow continues to primarily be used towards reducing debt.

On July 25, 2022, we, along with our wholly owned subsidiary Core Laboratories (U.S.) Interests Holdings, Inc. entered into an Eighth Amended and Restated Credit Agreement (as amended, the "Amended Credit Facility") modifying and extending the existing credit facility for an aggregate borrowing commitment of \$135 million with a \$50 million "accordion" feature. The Amended Credit Facility provided, among other things, a temporary increase to the maximum leverage ratio permitted under the Amended Credit Facility through September 30, 2022. See Note 11 - *Long-term Debt, net* of the Notes to the Consolidated Financial Statements for additional information.

On December 17, 2020, we entered into an Equity Distribution Agreement with Wells Fargo Securities, LLC for the issuance and sale of up to \$60.0 million of our common shares. Under terms of the Equity Distribution Agreement, sales of our common shares could be made by any method deemed to be an "at-the-market offering" as defined in Rule 415 under the Securities Act of 1933, as amended (the "2020 ATM program"). In March 2021, we completed the sale of 1,658,012 common shares under the agreement at an average price of \$36.19 per share, which generated aggregate proceeds of \$59.1 million, net of commission and other associated costs. Proceeds were used to reduce debt on the Company's credit facility in 2021.

On June 9, 2022, we entered into an Equity Distribution Agreement with certain banks (the "2022 Equity Distribution Agreement") for the issuance and sale of up to \$60.0 million of our common shares. Under the terms of the 2022 Equity Distribution Agreement, sales of our common shares may be made by any method deemed to be an "at-the-market offering" as defined in Rule 415 under the Securities Act of 1933 (the "2022 ATM program"). For the year ended December 31, 2022 and through February 9, 2023, the Company has not sold any shares under the 2022 Equity Distribution Agreement. See Note 14 - *Equity* of the Notes to the Consolidated Financial Statements for additional information.

On January 12, 2021, the Company issued the 2021 Senior Notes with aggregate principal amount of \$60 million in a private placement. The net proceeds from the 2021 Senior Notes were used exclusively to reduce outstanding debt under the Company's Credit Facility, which increased the available borrowing capacity and liquidity for the Company. See Note 11 - *Long-term Debt, net* of the Notes to the Consolidated Financial Statements for additional information.

On September 30, 2021, the Company retired \$75 million in Series A of the 2011 Senior Notes. Series A of the 2011 Senior Notes were retired using a combination of cash on hand and \$55 million in proceeds drawn from our Credit Facility. We intend to maintain sufficient borrowing capacity under the Credit Facility to both retire maturing debt obligations and provide additional liquidity, should the company require it for other purposes.

As we are a Netherlands holding company, we conduct substantially all of our operations through subsidiaries. Our cash availability is largely dependent upon the ability of our subsidiaries to pay cash dividends or otherwise distribute or advance funds to us and on the terms and conditions of our existing and future credit arrangements. There are no restrictions preventing any of our subsidiaries from repatriating earnings, and there are no restrictions or income taxes associated with distributing cash to the parent company through loans or advances. As of December 31, 2022, \$9.4 million of our \$15.4 million of cash was held by our foreign subsidiaries, including the U.S.

Cash Flows

The following table summarizes cash flows (in thousands):

	For the Years Ended December 31,		
	2022	2021	2020
Cash provided by (used in):			
Operating activities	\$ 24,956	\$ 36,579	\$ 57,868
Investing activities	(3,856)	(10,223)	7,851
Financing activities	(23,375)	(22,459)	(63,005)
Net change in cash and cash equivalents	<u>\$ (2,275)</u>	<u>\$ 3,897</u>	<u>\$ 2,714</u>

Cash provided by operating activities in 2022, decreased approximately \$11.6 million compared to 2021 due to a small decrease net income in 2022 compared to 2021, however, cash operating expenses and cash taxes paid increased in 2022, and these cash operating expenses and cash taxes paid were offset by a significant reduction in non-cash stock compensation expense during 2022. The increase in cash operating expenses during 2022 is primarily related to inflation and restoration of employee benefits in 2022. Cash provided by operating activities in 2021, decreased \$21.3 million primarily due to increased working capital requirements of \$21.0 million as market conditions and activity levels improved in the second half of 2021.

Cash used by investing activities was \$3.9 million in 2022 compared to \$10.2 million in 2021. The decrease was primarily due to lower capital expenditure of \$3.3 million and higher proceeds from sale of assets and net proceeds from company-owned life insurance policies of \$1.2 million and \$2.3 million, respectively, in 2022. Cash used by investing activities was \$10.2 million in 2021 compared to cash provided by investing activities of \$7.9 million in 2020. The variance was primarily due to higher capital expenditures of \$13.5 million in 2021 compared to \$11.9 million in 2020 and additional distribution received from company-owned life insurance policies of \$20.4 million in 2020, partially offset by total proceeds of approximately \$1.6 million from sale of business and insurance recovery in 2021.

Cash used in financing activities in 2022 of \$23.4 million compared to \$22.5 million in 2021, increased \$0.9 million primarily due to higher debt issuance costs in 2022 associated with renewing the Amended Credit Facility in 2022 as discussed above. Cash used in financing activities in 2021 decreased \$40.5 million compared to 2020 as a result of: 1) a reduction of \$10.6 million in dividends paid, and 2) net proceeds of \$59.1 million raised in 2021 by issuing common shares through the 2020 ATM program. These decreases in cash used were offset by 1) \$71.0 million of net reduction in long-term debt during 2021 compared to \$46.0 million in 2020, and 2) the repurchase of our common shares of \$8.3 million in 2021 compared to \$2.8 million in 2020.

During 2022, we repurchased 174,348 shares of our common stock for an aggregate amount of \$3.9 million, or an average price of \$22.39 per share, including rights to 102,067 shares valued at \$2.1 million surrendered to us pursuant to the terms of a stock-based compensation plan in consideration of the participants' tax burdens resulting from the issuance of common shares under that plan. See Note 14 - *Equity* of the Notes to the Consolidated Financial Statements for additional information. We believe our share repurchase program has been beneficial to our shareholders over the longer term. Our share price has increased from \$4.03 per share in 2002, when we began to repurchase shares, to \$20.27 per share on December 31, 2022, an increase exceeding 400%.

We utilize the non-GAAP financial measure of free cash flow to evaluate our cash flows and results of operations. Free cash flow is defined as net cash provided by operating activities (which is the most directly comparable U.S. GAAP measure) less cash paid for capital expenditures. Management believes that free cash flow provides useful information to investors regarding the cash that was available in the period that was in excess of our needs to fund our capital expenditures and operating activities. Free cash flow is not a measure of operating performance under U.S. GAAP, and should not be considered in isolation nor construed as an alternative to operating profit, net income (loss) or cash flows from operating, investing or financing activities, each as determined in accordance with U.S. GAAP. Free cash flow does not represent residual cash available for distribution because we may have other non-discretionary expenditures that are not deducted from the measure. Moreover, since free cash flow is not a measure determined in accordance with U.S. GAAP and thus is susceptible to varying interpretations and calculations, free cash flow, as presented, may not be comparable to similarly titled measures presented by other companies. The following table reconciles this non-GAAP financial measure to the most directly comparable measure calculated and presented in accordance with U.S. GAAP (in thousands):

Free Cash Flow Calculation	For the Years Ended December 31,		
	2022	2021	2020
Net cash provided by operating activities	\$ 24,956	\$ 36,579	\$ 57,868
Less: cash paid for capital expenditures	(10,216)	(13,539)	(11,880)
Free cash flow	<u>\$ 14,740</u>	<u>\$ 23,040</u>	<u>\$ 45,988</u>

The decrease in free cash flow in 2022 compared to 2021 was primarily due to decreased cash provided by operating activities as discussed above, partially offset by a decrease of \$3.3 million in capital spending in 2022. The decrease in free cash flow in 2021 compared to 2020 was primarily due to decreased cash provided by operating activities as discussed above, additionally, increased capital spending of \$1.6 million in 2021, which were elevated by facility repair costs for damages caused by the 2021 winter storm in North America.

Senior Notes, Credit Facility and Available Future Liquidity

We have three series of senior notes outstanding with an aggregate principal amount of \$135 million that were issued through private placement transactions. Series B of the senior notes issued in 2011 ("2011 Senior Notes") consists of \$75 million in aggregate principal amount and bears interest at a fixed rate of 4.11% and is due in full on September 30, 2023. Interest on Series B of the 2011 Senior Notes is payable semi-annually on March 30 and September 30. We intend to repay the 2011 Senior Notes Series B with borrowings under our existing long-term Amended Credit Facility; therefore, we continue to classify them as long-term debt.

Series A and Series B of the 2021 Senior Notes were issued and funded on January 12, 2021 (the "2021 Senior Notes" and together with the 2011 Senior Notes, the "Senior Notes"). Series A of the 2021 Senior Notes consists of \$45 million in aggregate principal amount that bear interest at a fixed rate of 4.09% and is due in full on January 12, 2026. Series B of the 2021 Senior Notes consists of \$15 million in aggregate principal amount that bears interest at a fixed rate of 4.38% and is due in full on January 12, 2028. Interest on each series of the 2021 Senior Notes is payable semi-annually on June 30 and December 30.

On July 25, 2022, we, along with our wholly owned subsidiary Core Laboratories (U.S.) Interests Holdings, Inc. ("CLIH") entered into an Eighth Amended and Restated Credit Agreement (as amended, the "Amended Credit Facility") modifying and extending the existing credit facility for an aggregate borrowing commitment of \$135 million with a \$50 million "accordion" feature. The Amended Credit Facility is secured by first priority interests in (1) substantially all of the tangible and intangible personal property, and equity interest of CLIH and certain of the Company's U.S. and foreign subsidiary companies; and (2) instruments evidencing intercompany indebtedness owing to the Company, CLIH and certain of the Company's U.S. and foreign subsidiary companies. Under the Amended Credit Facility, the Secured Overnight Financing Rate ("SOFR") plus 2.00% to SOFR plus 3.00% will be applied to outstanding borrowings. Any outstanding balance under the Amended Credit Facility is due at maturity on July 25, 2026, subject to springing maturity on July 12, 2025, if the Company's liquidity does not equal or exceed the principal amount of the 2021 Senior Notes Series A outstanding on such date. The available capacity at any point in time is reduced by outstanding borrowings and outstanding letters of credit which totaled approximately \$9 million at December 31, 2022, resulting in an available borrowing capacity under the Amended Credit Facility of approximately \$86 million. In addition to indebtedness under the Amended Credit Facility, we had approximately \$6 million of outstanding letters of credit and performance guarantees and bonds from other sources as of December 31, 2022. The Amended Credit Facility does not substantially alter the calculation of the net leverage or interest coverage ratios. Pursuant to the terms of the Amended Credit Facility, the maximum leverage ratio permitted is as follows:

Quarter ending	Maximum leverage ratio permitted
June 30, 2022 and September 30, 2022	2.75
December 31, 2022 and thereafter	2.50

The terms of the Amended Credit Facility and Senior Notes require us to meet certain covenants, including, but not limited to, an interest coverage ratio (calculated as consolidated EBITDA divided by interest expense) and a leverage ratio (calculated as consolidated net indebtedness divided by consolidated EBITDA), where consolidated EBITDA (as defined in each agreement) and interest expense are calculated using the most recent four fiscal quarters. The Amended Credit Facility and Senior Notes include a cross-default provision, whereby a default under one agreement may trigger a default in the other agreements. The Amended Credit Facility has more restrictive covenants with a minimum interest coverage ratio of 3.00 to 1.00 and permits a maximum leverage ratio as described above. The Amended Credit Facility allows non-cash charges such as impairment of assets, stock compensation and other non-cash charges to be added back in the calculation of consolidated EBITDA. The terms of our Amended Credit Facility also allow us to negotiate in good faith to amend any ratio or requirement

to preserve the original intent of the agreement if any change in accounting principles would affect the computation of any financial ratio or covenant of the Amended Credit Facility. In accordance with the terms of the Amended Credit Facility, our leverage ratio is 2.29, and our interest coverage ratio is 6.03, each for the year ended December 31, 2022. We believe that we are in compliance with all covenants contained in our Amended Credit Facility and Senior Notes. Certain of our material, wholly-owned subsidiaries, are guarantors or co-borrowers under the Amended Credit Facility and Senior Notes.

In March 2021, we entered into a new forward interest rate swap agreement for a notional amount of \$60 million and carried the fair value of the terminated 2014 and 2020 Variable-to-Fixed Swaps into the new agreement in a "blend and extend" structured transaction. The purpose of this forward interest rate swap agreement is to fix the underlying risk-free rate, that would be associated with the anticipated issuance of new long-term debt by the Company in future periods. On April 8, 2022, the forward interest rate swap agreement was terminated and settled for a net gain of \$0.6 million which is included in accumulated other comprehensive income (loss). See Note 15 - *Derivative Instruments and Hedging Activities* for additional information.

In addition to our repayment commitments under our Amended Credit facility and our Senior Notes, we have non-cancellable operating lease arrangements under which we lease office and lab space, machinery, equipment and vehicles. We also have employer contribution commitments related to our Dutch pension plan with amounts payable in the future based upon workforce factors that cannot be estimated beyond one year. These material future contractual obligations are discussed in Note 7 - *Leases*, Note 11 - *Long-term Debt, net* and Note 12 - *Pension and Other Postretirement Benefit Plans* of the Notes to the Consolidated Financial Statements.

We have no significant purchase commitments or similar obligations outstanding at December 31, 2022. We also have uncertain tax positions of \$3.5 million that we have accrued for at December 31, 2022; the amounts and timing of payment, if any, are uncertain. See Note 10 - *Income Taxes* of the Notes to the Consolidated Financial Statements for further detail of this amount.

At December 31, 2022, we had tax net operating loss carry-forwards in various jurisdictions of \$55.6 million. Although we cannot be certain that these net operating loss carry-forwards will be utilized, we anticipate that we will have sufficient taxable income in future years to allow us to fully utilize the carry-forwards that are not subject to a valuation allowance as of December 31, 2022. If unused, those carry-forwards which are subject to expiration may expire during the years 2023 through 2036. During 2022, no material net operating loss carry-forwards, which carried a full valuation allowance, expired unused.

We expect our investment in capital expenditures to track with client demand for our services and products. Given the uncertain trend in industry activity levels, we have not determined, at this time, the level of investment that will be made in 2022. We will, however, continue to invest in the purchase or replacement of obsolete or worn-out instrumentation, tools and equipment, to consolidate certain facilities to gain operational efficiencies, and to increase our presence where requested by our clients.

Outlook

The events associated with the COVID-19 pandemic that began in 2020 continued in 2021 and 2022. Certain international countries continued mandated shut-downs, home sheltering and social distancing policies that initially caused uncertainty in the demand for crude oil and associated products; however demand for these products has recovered more quickly than global production causing crude-oil commodity prices to increase significantly. Although U.S. onshore drilling and completion activities improved during 2021 and strengthened in 2022, activity still remains well below pre-pandemic levels. Additionally, international activity continued to be adversely impacted by increasing infection rates associated with new variant strains of the COVID-19 virus during 2021 and 2022, which has continued to cause business disruptions associated with government mandated shut-downs, travel restrictions, quarantine protocols and worksite closures in various international regions. These disruptions started to ease during the second half of 2022.

The geopolitical conflict between Russia and Ukraine that erupted in February 2022, has also resulted in disruptions to traditional supply chains associated with the movement of crude oil, primarily impacting crude oil sourced from Russia and imported into various European ports. However, the supply chains associated with the movement of crude oil continue realigning to new logistical patterns, as we expect Europe will find new suppliers of crude oil to import into the region. These events have caused energy prices to increase throughout the world but even more so in Europe, as the current global demand for crude oil and natural gas has remained at a high level. Core Lab expects supply lines to realign, and the Company's volume of associated laboratory services to increase commensurate with the trading and movement of crude-oil into Europe and across the globe. Additionally, European countries have begun elevating the level of LNG imports to offset the loss of natural gas sourced from Russia. The Company provides some laboratory analytical services associated with the movement of LNG products, which may offer some additional opportunities for the Company in this region. In March 2022, completion product

sales delivered through our Production Enhancement operating segment into Ukraine were temporarily suspended and continue to be impacted by disruptions in freight transport services.

The situation continues to evolve and the United States, the European Union, the United Kingdom and other countries may implement additional sanctions, export controls or other measures against Russia, Belarus and other countries, regions, officials, individuals or industries in the respective territories. We have no way to predict the progress or outcome of the conflict in Ukraine or its impacts in Ukraine, Russia or Belarus as the conflict, and any resulting government responses, are fluid and beyond our control.

Crude-oil commodity prices remain volatile and increased significantly throughout most of 2022. It is anticipated that crude-oil commodity prices for the near-to-mid-term will remain elevated and supported by increasing demand with only moderate growth in production levels. As such, activities associated with the production of oil and gas continued to increase in 2022, are expected to continue increasing moderately in 2023. The oil and gas industry continues to face limitations in personnel, equipment, and supply chain disruptions, which may moderate future growth, as well as the allocation of capital resources by oil and gas producing companies. Our clients' activities associated with the energy markets are also expected to increase in 2023, but may be impacted by the outlook for the global economy, decisions by OPEC nations associated with the production and supply of crude oil to the market, the pace of China's recovery from the COVID-19, and considerations associated with the Russia-Ukraine geopolitical conflict.

Our major clients continue to focus on capital management, return on invested capital ("ROIC"), free cash flow, and returning capital to their shareholders, as opposed to a focus on production growth. The companies adopting value versus volume metrics tend to be the more technologically sophisticated operators and form the foundation of Core Lab's worldwide client base. As oil and gas commodity prices are expected to remain elevated in the near to mid-term, the Company expects our clients' activities associated with increasing oil and gas reserves and production levels will continue to increase in the coming years. Additionally, some of our major clients have begun investing and developing other sources of energy, including renewables, and focusing on emission reduction initiatives. Some of these initiatives include deployment of technologies associated with hydrogen or lithium-based batteries, and carbon capturing and sequestration. Considering a longer-term strategy, we expect to be well positioned as our clients continue their focus on employing higher technological solutions in their efforts to optimize production and estimated ultimate recovery in the most cost efficient and environmentally responsible manner.

We believe oil and gas operators will continue to manage their capital spending within free cash flow and maintain their focus on improving and maintaining a stronger balance sheet, which could constrain future growth in activities associated with the production of oil and gas.

Core Laboratories expects that 2023 capital and operating budgets of oil and gas operators will expand over 2022 levels but also include a higher allocation of capital towards energy transition activities. Some of our major clients have begun actively investing and developing other renewable sources of energy and focusing on emission reduction initiatives. Core Laboratories is participating in some of these initiatives, which include deployment of technologies and new projects associated with hydrogen or lithium-based batteries, and CCS. In 2022, there has been moderate improvement in international activity levels, as the international rig count increased to 1,055 as we exited the year and is up approximately 7% from the end of 2021. We continue to work with clients and discuss the progression of longer-term international projects. Additionally, the reservoir fluids analysis performed on projects associated with current producing fields continues to be critical and has been less affected by lower commodity prices for crude oil.

As part of our long-term growth strategy, we continue to expand our market presence by opening or expanding facilities in strategic areas and realizing synergies within our business lines consistent with client demand and market conditions. More recently, we have expanded our laboratory capabilities in Qatar, Saudi Arabia and Brazil. We believe our market presence in strategic areas provides us a unique opportunity to serve our clients who have global operations, whether they are international oil companies, national oil companies, or independent oil companies.

Core Lab believes continued assessment of market conditions, will allow Core Lab, as it has for over 85 years, to navigate through these challenging times. Core Lab remains focused on preserving the quality of service for its clients and producing returns for its shareholders.

Critical Accounting Estimates

The preparation of financial statements in accordance with U.S. GAAP requires us to make certain estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. We evaluate our estimates on an

ongoing basis and determine the adequacy of our estimates based on our historical experience and various other assumptions that we believe are reasonable under the circumstances. By nature, these judgments are subject to an inherent degree of uncertainty. We consider an accounting estimate to be critical if it is highly subjective and if changes in the estimate under different assumptions would result in a material impact on our financial condition and results of operations. The following transaction types require significant judgment and, therefore, are considered critical accounting policies as of December 31, 2022.

Income Taxes

Our income tax expense includes income taxes of the Netherlands, the U.S. and other foreign countries as well as local, state and provincial income taxes. We recognize deferred tax assets or liabilities for the differences between the financial statement carrying amount and tax basis of assets and liabilities using enacted tax rates in effect for the years in which the asset is expected to be recovered or the liability is expected to be settled. We estimate the likelihood of the recoverability of our deferred tax assets (particularly, net operating loss carry-forwards). Any valuation allowance recorded is based on estimates and assumptions of taxable income into the future and a determination is made of the magnitude of deferred tax assets which are more likely than not to be realized. Valuation allowances of our net deferred tax assets aggregated to \$9.3 million and \$7.4 million at December 31, 2022 and 2021, respectively. If these estimates and related assumptions change in the future, we may be required to record additional valuation allowance against our deferred tax assets and our effective tax rate may increase which could result in a material adverse impact on our financial position, results of operations and cash flows. We record a liability for unrecognized tax benefits resulting from uncertain tax positions taken or expected to be taken in our tax return. We also recognize interest and penalties, if any, related to unrecognized tax benefits in income tax expense.

Long-Lived Assets, Intangibles and Goodwill

Property, plant and equipment are carried at cost less accumulated depreciation. Major renewals and improvements are capitalized while maintenance and repair costs are charged to expense as incurred. They are depreciated using the straight-line method based on their individual estimated useful lives, except for leasehold improvements, which are depreciated over the remaining lease term, if shorter. We estimate the useful lives and salvage values of our assets based on historical data of similar assets. When long-lived assets are sold or retired, the remaining costs and related accumulated depreciation are removed from the accounts and any resulting gain or loss is included in income. These capitalized long-lived assets could become impaired if our operating plans or business environment changes.

Intangible assets, including patents, trademarks and technology, are carried at cost less accumulated amortization. Intangibles with determinable lives are amortized using the straight-line method based on the estimated useful life of the intangible. Intangibles with indeterminable lives, which consist primarily of corporate trade names, are not amortized, but are tested for impairment whenever events or changes in circumstances indicate that impairment is possible.

We review our long-lived assets ("LLA"), including definite-lived intangible and right-of-use assets, for impairment when events or changes in circumstances indicate that their net book value may not be recovered over their remaining service lives. Indicators of possible impairment may include significant declines in activity levels in regions where specific assets or groups of assets are located, extended periods of idle use, declining revenue or cash flow or overall changes in general market conditions.

Whenever possible impairment is indicated, we compare the carrying value of the assets or asset group to the sum of the estimated undiscounted future cash flows expected from use, plus salvage value, less the costs of the subsequent disposition of the assets. If impairment is still indicated, we compare the fair value of the assets to the carrying amount and recognize an impairment loss for the amount by which the carrying value exceeds the fair value.

We did not record impairment charges relating to our long-lived assets and intangible assets during the years ended December 31, 2022 and 2021. We recorded an impairment charge of \$8.2 million for certain intangible assets during the year ended December 31, 2020.

The geopolitical conflict between Russia and Ukraine, which began in February 2022 and has continued through December 31, 2022, has resulted in disruptions to our operations in Russia and Ukraine. The Company evaluated LLA in Russia and Ukraine as part of our assessment of our assets group and did not identify triggering events as of December 31, 2022. The Company's operation, assets and facilities in Ukraine are immaterial. As of December 31, 2022, all laboratory facilities, offices, and locations in Russia continued to operate and remained profitable and no specific asset losses were identified.

We record goodwill as the excess of the purchase price over the fair value of the net assets acquired in acquisitions accounted for under the purchase method of accounting. Goodwill is not subject to amortization and is tested for impairment annually or

more frequently if events or changes in circumstances indicate goodwill is more likely than not impaired. We assess goodwill for impairment either by performing a qualitative assessment or a quantitative test. The qualitative assessment is to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, including goodwill. If it is concluded that it is more-likely-than not that an impairment exists, a quantitative test is required which compares the estimated fair value of a reporting unit to its carrying value. If the estimated fair value of a reporting unit is less than its carrying value, then there is an impairment loss limited to the amount of goodwill allocated to that reporting unit. Our reporting units are the same as our two operating segments. Significant judgments and assumptions are inherent in our estimate of future cash flows used to determine the estimate of the reporting unit's fair value which include assumptions regarding future revenue growth rates, discount rates and expected margins.

We completed our annual impairment assessment of goodwill for our reporting units as of December 31, 2022 and 2021, by performing a qualitative assessment, which indicated it was not more likely than not that there was an impairment and therefore no quantitative test was required. We performed detailed quantitative test and recorded an impairment charge of \$114.0 million for goodwill of our Production Enhancement reporting units during the year ended December 31, 2020.

Any subsequent impairment loss could result in a material adverse effect upon our financial position and results of operations.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet financing arrangements such as securitization agreements, liquidity trust vehicles or special purpose entities. As such, we are not materially exposed to any financing, liquidity, market or credit risk that could arise if we had engaged in such financing arrangements.

Forward-Looking Statements

This Form 10-K and the documents incorporated in this Form 10-K by reference contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Exchange Act. These "forward-looking statements" are based on an analysis of currently available competitive, financial and economic data and our operating plans. They are inherently uncertain and investors should recognize that events and actual results could turn out to be significantly different from our expectations. By way of illustration, when used in this document, words such as "anticipate", "believe", "expect", "intend", "estimate", "project", "will", "should", "could", "may", "predict" and similar expressions are intended to identify forward-looking statements. You are cautioned that actual results could differ materially from those anticipated in forward-looking statements. Any forward-looking statements, including statements regarding the intent, belief or current expectations of us or our management, are not guarantees of future performance and involve risks, uncertainties and assumptions about us and the industry in which we operate, including, among other things:

- our ability to continue to develop or acquire new and useful technology;
- the realization of anticipated synergies from acquired businesses and future acquisitions;
- our dependence on one industry, oil and gas, and the impact of commodity prices on the expenditure levels of our clients;
- competition in the markets we serve;
- the risks and uncertainties attendant to adverse industry, political, economic and financial market conditions, including stock prices, government regulations, interest rates and credit availability;
- unsettled political conditions, war, civil unrest, currency controls and governmental actions in the numerous countries in which we operate;
- changes in the price of oil and natural gas;
- major outbreak of global pandemic and restricting mobilization of field personnel;
- weather and seasonal factors;
- integration of acquired businesses; and
- the effects of industry consolidation.

Our business depends, to a large degree, on the level of spending by oil and gas companies for exploration, development and production activities. Therefore, a sustained increase or decrease in the price of natural gas or oil, which could have a material

impact on exploration, development and production activities, could also materially affect our financial position, results of operations and cash flows.

The above description of risks and uncertainties is by no means all-inclusive, but is designed to highlight what we believe are important factors to consider. For a more detailed description of risk factors, please see "Item 1A. Risk Factors" in this Form 10-K and our reports and registration statements filed from time to time with the SEC.

All forward-looking statements in this Form 10-K are based on information available to us on the date of this Form 10-K. We do not intend to update or revise any forward-looking statements that we may make in this Form 10-K or other documents, reports, filings or press releases, whether as a result of new information, future events or otherwise, unless required by law.

Recent Accounting Pronouncements

Pronouncements Adopted

In December 2019, the FASB issued ASU 2019-12 ("Simplifying the Accounting for Income Taxes") which affects general principles within Topic 740, Income Taxes. The amendment removes exceptions related to the incremental approach for intraperiod tax allocation, the recognition of a deferred tax liability for equity method investments in a foreign subsidiary, and the methodology for calculating income taxes in an interim period. The standard also simplifies the accounting for franchise taxes, transactions that result in a step-up in the tax basis of goodwill, the effect of an enacted change in tax laws on the tax rate computation in interim periods, and specifying that an entity is not required to allocate consolidated tax expense to a legal entity not subject to tax in its separate financial statements. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020. We adopted this standard on January 1, 2021, and there has been no significant impact on our consolidated financial statements or on our accounting policies and processes.

In March 2020, the FASB issued ASU 2020-04 ("Facilitation of the Effects of Reference Rate Reform on Financial Reporting") which provides temporary optional guidance to ease the potential burden in accounting for reference rate reform. The new guidance provides optional expedients and exceptions for applying generally accepted accounting principles to contract modifications and hedging relationships, subject to meeting certain criteria, that reference LIBOR or another reference rate expected to be discontinued. The ASU is intended to help stakeholders during the global market-wide reference rate transition period. During the year ended December 31, 2022, we elected to apply the optional expedient for hedging relationships affected by reference rate reform upon the Company's amending its existing credit facility that included a change in the reference rate. Accordingly, no outstanding balance on the Amended Credit Facility will preclude cash flow hedging with existing hedging instruments. See Note 11 - *Long-term Debt, net* and Note 15 - *Derivative Instruments and Hedging Activities*.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market Risk

We are exposed to market risk, which is the potential loss arising from adverse changes in market prices and rates. We do not believe that our exposure to market risks, which are primarily related to interest rate changes, is material.

Interest Rate Risk

We maintain certain debt instruments at a fixed rate whose fair value will fluctuate based on changes in interest rates and market perception of our credit risk. The fair value of our debt at December 31, 2022 and 2021 approximated the book value.

Under the Amended Credit Facility, the Secured Overnight Financing Rate ("SOFR") plus 2.00% to SOFR plus 3.00% will be applied to outstanding borrowings. At December 31, 2022, we had an outstanding borrowings of \$40 million. A 10% change in interest rates would not have a material impact on our results of operations or cash flows.

Foreign Currency Risk

We operate in a number of international areas which exposes us to foreign currency exchange rate risk. We do not currently hold or issue forward exchange contracts or other derivative instruments for hedging or speculative purposes. Foreign exchange gains and losses are the result of fluctuations in the U.S. dollar ("USD") against foreign currencies and are included in other (income) expense, net in the consolidated statements of operations. We recognize foreign exchange losses in countries where the USD weakens against the local currency and we have net monetary liabilities denominated in the local currency, as well as in countries where the USD strengthens against the local currency and we have net monetary assets denominated in the local currency. We recognize foreign exchange gains in countries where the USD strengthens against the local currency and we have

net monetary liabilities denominated in the local currency, as well as in countries where the USD weakens against the local currency and we have net monetary assets denominated in the local currency.

Credit Risk

Our financial instruments that potentially subject us to concentrations of credit risk consist primarily of cash and cash equivalents and accounts receivable. Substantially all cash and cash equivalents are on deposit at commercial banks or investment firms. Our trade receivables are with a variety of domestic, international and national oil and gas companies. Management considers this credit risk to be limited due to the creditworthiness and financial resources of these financial institutions and companies.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

For the financial statements and supplementary data required by this Item 8, see Part IV "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

Disclosure Controls and Procedures

Our management, under the supervision of and with the participation of our Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures, as such term is 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 us in our reports filed or submitted under the Exchange Act is accumulated and communicated to management, including our Chief Executive Officer and Chief 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. Based on such evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures were effective as of December 31, 2022 at the reasonable assurance level.

Our management does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent all errors and all fraud. Further, the design of disclosure controls and internal control over financial reporting must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within a company have been detected.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as that term is defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act. Our 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 U.S. GAAP.

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.

Our management, under the supervision of and with the participation of our Chief Executive Officer and Chief Financial Officer, conducted an evaluation of our internal control over financial reporting as of December 31, 2022. In making this assessment, management used the criteria set forth in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this assessment using these criteria, our management determined that our 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 KPMG LLP, an independent registered public accounting firm, as stated in their report which appears herein.

Changes in Internal Control over Financial Reporting

There was no change in our system of internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act, during our fiscal quarter ended December 31, 2022 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

None.

PART III

The information required by Part III (Items 10 through 14) is incorporated by reference from our definitive proxy statement (the "2023 Proxy Statement") to be filed in connection with our 2023 annual meeting of shareholders pursuant to Regulation 14A under the Exchange Act. We expect to file our definitive proxy statement with the SEC within 120 days after the close of the year ended December 31, 2022. The 2023 Proxy Statement will be filed either by Core Laboratories N.V. or Core Laboratories Inc. as the successor registrant depending on the completion of the Redomestication.

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

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

Core Lab has a Code of Ethics and Corporate Responsibility that applies to all of its directors, officers and employees, including its principal executive, financial and accounting officers, or persons performing similar functions. Core Lab's Code of Ethics and Corporate Responsibility is posted on its website at www.corelab.com/cr/cms/docs/CodeofBusinessConduct.pdf.

ITEM 11. EXECUTIVE COMPENSATION

The information set forth under the captions "Compensation Discussion and Analysis," "Information About our Named Executive Officers and Executive Compensation" in Core Lab's 2023 Proxy Statement is incorporated herein by reference.

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

The information under the captions "Ownership of Securities—Security Ownership by Certain Beneficial Owners and Management" and "Compensation Discussion and Analysis—2022 Compensation Program Details" in Core Lab's 2023 Proxy Statement is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

The information under the captions "Information About our Supervisory Directors and Director Compensation—Supervisory Director Independence" and "Information About our Supervisory Directors and Director Compensation—Related Person Transactions" in Core Lab's 2023 Proxy Statement is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Our independent registered public accounting firm is KPMG LLP, Houston, TX, Auditor Firm ID: 185.

The information under the caption "Information About our Independent Registered Public Accounting Firm" in Core Lab's 2023 Proxy Statement is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) Financial Statements

1. The following reports, financial statements and schedules are filed herewith on the pages indicated:

	<u>Page</u>
<u>Reports of Independent Registered Public Accounting Firm-KPMG LLP</u>	F-1
<u>Consolidated Balance Sheets as of December 31, 2022 and 2021</u>	F-4
<u>Consolidated Statements of Operations for the Years Ended December 31, 2022, 2021 and 2020</u>	F-5
<u>Consolidated Statements of Comprehensive Income (Loss) for the Years Ended December 31, 2022, 2021 and 2020</u>	F-6
<u>Consolidated Statements of Changes in Equity for the Years Ended December 31, 2022, 2021 and 2020</u>	F-7
<u>Consolidated Statements of Cash Flows for the Years Ended December 31, 2022, 2021 and 2020</u>	F-9
<u>Notes to the Consolidated Financial Statements</u>	F-11

2. Financial Statement Schedule

Schedule II - Valuation and Qualifying Account

(b) Exhibits

The exhibits listed in the accompanying "Index to Exhibits" are incorporated by reference to the filing indicated or are filed herewith.

ITEM 16. FORM 10-K SUMMARY

Not applicable.

INDEX TO EXHIBITS

Exhibit No.	Exhibit Title	Incorporated by Reference from the Following Documents
3.1	Articles of Association of the Company, as amended on May 18, 2017 (including English translation)	Form 10-K, February 12, 2018 (File No. 001-14273)
4.1	Description of Share Capital	Filed Herewith
10.1	Core Laboratories N.V. 2020 Long-Term Incentive Plan (1)	Appendix A to Definitive Proxy Statement dated March 20, 2020 for Annual Meeting of Shareholders (File No. 001-14273)
10.2	Core Laboratories N.V. 2014 Nonemployee Director Stock Incentive Plan (as amended and restated effective as of May 12, 2014) (1)	Proxy Statement dated March 19, 2014 for Annual Meeting of Shareholders (File No. 001-14273)
10.3	Core Laboratories Supplemental Executive Retirement Plan effective as of January 1, 1998 (1)	Form 10-K, March 31, 1998 (File No. 000-26710)
10.4	Amendment to Core Laboratories Supplemental Executive Retirement Plan, effective July 29, 1999 (1)	Form 10-Q, August 16, 1999 (File No. 001-14273)
10.5	Amendment to Core Laboratories Supplemental Executive Retirement Plan, effective February 28, 2003 (1)	Form 10-Q, May 15, 2003 (File No. 001-14273)
10.6	Amendment to Core Laboratories Supplemental Executive Retirement Plan dated as of March 5, 2008 (1)	Form 10-Q, May 12, 2008 (File No. 001-14273)
10.7	Form of Restricted Share Award Program Agreement (1)	Form 10-K, February 20, 2007 (File No. 001-14273)
10.8	Form of Core Laboratories 2011 Non-Employee Director Restricted Share Award Program Agreement (1)	Form 10-Q, April 22, 2011 (File No. 001-14273)
10.9	Form of Core Laboratories 2017 Performance Share Award Program Agreement (ROIC Based) (1)	Form 10-K, February 11, 2019 (File No. 001-14273)
10.10	Eighth Amended and Restated Credit Agreement, dated as of July 25, 2022, among Core Laboratories, N.V., and Core Laboratories (U.S.) Interests Holdings, Inc., and the lenders party thereto and Bank of America, N.A., as administrative agent and Wells Fargo Bank, N.A., as syndication agent and Comerica Bank, as documentation agent.	Form 8-K, July 27, 2022 (File No. 001-14273)
10.11	Master Note Purchase Agreement, dated as of September 30, 2011	Form 8-K, September 30, 2011 (File No. 001-14273)
10.12	Employment Agreement between Core Laboratories N.V. and Lawrence V. Bruno, dated March 1, 2019 (1)	Form 8-K, March 6, 2019 (File No. 001-14273)
10.13	Employment Agreement between Core Laboratories N.V. and Christopher S. Hill, dated March 1, 2019 (1)	Form 8-K, March 6, 2019 (File No. 001-14273)
10.14	Employment Agreement between Core Laboratories N.V. and Gwendolyn Y. Schreffler, Dated March 1, 2019 (1)	Form 10-K, February 8, 2021 (File No. 001-14273)
10.15	Note Purchase Agreement, dated as of October 16, 2020.	Form 8-K, October 16, 2020 (File No. 001-14273)
10.16	Amendment No. 1 to Credit Agreement, by and among Core Laboratories N.V., Core Laboratories (U.S.) Interests Holding, Inc., and the lenders party thereto and Bank of America, N.A., as administrative agent, dated June 22, 2020.	Form 8-K, June 23, 2020 (File No. 001-14273)

10.17	<u>Amendment to Employment Agreement, by and between Core Laboratories N.V. and Lawrence V. Bruno, dated March 1, 2020 (1).</u>	Form 8-K, March 5, 2020 (File No. 001-14273)
10.18	<u>Amendment and Restated Employment Agreement, by and between Core Laboratories N.V. and Lawrence V. Bruno, dated October 18, 2021 (1)</u>	Form 8-K, October 19, 2021 (File No. 001-14273)
10.19	<u>Amendment and Restated Employment Agreement, by and between Core Laboratories N.V. and Christopher S. Hill, dated October 18, 2021 (1)</u>	Form 8-K, October 19, 2021 (File No. 001-14273)
10.20	<u>Amendment and Restated Employment Agreement, by and between Core Laboratories N.V. and Gwendolyn Y. Schreffler, dated October 18, 2021 (1)</u>	Form 8-K, October 19, 2021 (File No. 001-14273)
10.21	<u>Employment Agreement, by and between Core Laboratories N.V. and Mark D. Tattoli, dated October 18, 2021 (1)</u>	Form 8-K, October 19, 2021 (File No. 001-14273)
21.1	<u>Significant Subsidiaries of the Registrant</u>	Filed Herewith
23.1	<u>Consent of KPMG LLP</u>	Filed Herewith
31.1	<u>Certification of Chief Executive Officer Pursuant to Rule 13a-14 of the Securities Exchange Act of 1934, As Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</u>	Filed Herewith
31.2	<u>Certification of Chief Financial Officer Pursuant to Rule 13a-14 of the Securities Exchange Act of 1934, As Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</u>	Filed Herewith
32.1	<u>Certification of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, As Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002</u>	Filed Herewith
32.2	<u>Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, As Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002</u>	Filed Herewith
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.	Filed Herewith
101.SCH	Inline XBRL Schema Document	Filed Herewith
101.CAL	Inline XBRL Calculation Linkbase Document	Filed Herewith
101.LAB	Inline XBRL Label Linkbase Document	Filed Herewith
101.PRE	Inline XBRL Presentation Linkbase Document	Filed Herewith
101.DEF	Inline XBRL Definition Linkbase Document	Filed Herewith
104	Cover Page Interactive Data File (embedded within the Inline XBRL document).	Filed Herewith

(1) Management contracts or compensatory plans or arrangements.

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.

**CORE LABORATORIES N.V.
By its sole managing director, Core Laboratories
International B.V.**

Date: February 9, 2023

By: /s/ JACOBUS SCHOUTEN
**Jacobus Schouten
Managing Director of Core Laboratories
International B.V.**

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 indicated, on the 9th day of February 2023.

<u>Signature</u>	<u>Title</u>
<u> /s/ LAWRENCE BRUNO </u> Lawrence Bruno Chief Executive Officer, Chairman, President and Supervisory Director	<u> /s/ CHRISTOPHER S. HILL </u> Christopher S. Hill Senior Vice President and Chief Financial Officer
<u> /s/ KEVIN G. DANIELS </u> Kevin G. Daniels Vice President, Treasurer and Chief Accounting Officer	<u> /s/ KATHERINE A. MURRAY </u> Katherine A. Murray Supervisory Director
<u> /s/ MARTHA Z. CARNES </u> Martha Z. Carnes Supervisory Director	<u> /s/ MONIQUE VAN DIJKEN EEUWIJK </u> Monique van Dijken Eeuwijk Supervisory Director
<u> /s/ HARVEY KLINGENSMITH </u> Harvey Klingensmith Supervisory Director	<u> /s/ MICHAEL STRAUGHEN </u> Michael Straughen Supervisory Director
<u> /s/ KWAKU TEMENG </u> Kwaku Temeng Supervisory Director	

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors
Core Laboratories N.V.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Core Laboratories N.V. and subsidiaries (the Company) as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive income (loss), changes in equity, and cash flows for each of the years in the three-year period ended December 31, 2022, and the related notes and financial statement schedule II (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the years in the three-year 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 (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 9, 2023 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated 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 consolidated 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 consolidated 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 consolidated 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 consolidated 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 consolidated 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 consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of a 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.

The impact of the Company's organizational structure on its income tax provision

As discussed in note 1 and note 10 to the consolidated financial statements, the Company is domiciled in the Netherlands and has international operations requiring the evaluation of income taxes across many tax jurisdictions. The Company recorded deferred tax assets of \$86.3 million and deferred tax liabilities of \$31.3 million as of December 31, 2022, and income tax expense of \$10.3 million for the year then ended.

We identified the evaluation of the impact of the Company's organizational structure on its income tax provision as a critical audit matter. Specifically, the evaluation of the identification, interpretation, and application of tax laws in certain jurisdictions, which can be complex and subject to change, and their impact on the Company's income tax provision required a high degree of auditor judgment and specialized skills and knowledge.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls related to the (i) identification, interpretation and application of tax laws and (ii) impact of the organizational structure in certain jurisdictions. We inspected the Company's legal entity

organization chart to identify changes in structure. We evaluated the application of tax laws in certain jurisdictions and assessed current applicability by inspecting the Company's correspondence and agreements with certain tax authorities and intercompany agreements. We involved income tax professionals with specialized skills and knowledge who assisted, for certain jurisdictions, in (i) assessing the Company's application of tax laws, including statutes, regulations, and case law and (ii) evaluating the impact on the tax provision.

/s/ KPMG LLP

We have served as the Company's auditor since 2015.

Houston, Texas
February 9, 2023

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors
Core Laboratories N.V.:

Opinion on Internal Control Over Financial Reporting

We have audited Core Laboratories N.V. and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2022 and December 31, 2021, the related consolidated statements of operations, comprehensive income (loss), changes in equity, and cash flows for each of the years in the three-year period ended December 31, 2022, and the related notes and financial statement schedule II (collectively, the consolidated financial statements), and our report dated February 9, 2023 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

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

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included 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/ KPMG LLP

Houston, Texas
February 9, 2023

CORE LABORATORIES N.V.
CONSOLIDATED BALANCE SHEETS
December 31, 2022 and 2021
(In thousands, except share and per share data)

	2022	2021
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	\$ 15,428	\$ 17,703
Accounts receivable, net of allowance for credit losses of \$2,214 and \$3,225 at 2022 and 2021, respectively	106,913	96,830
Inventories	60,445	45,443
Prepaid expenses	15,665	14,059
Income taxes receivable	8,190	9,911
Other current assets	5,061	5,109
TOTAL CURRENT ASSETS	211,702	189,055
PROPERTY, PLANT AND EQUIPMENT, net of accumulated depreciation of \$314,737 and \$306,461 at 2022 and 2021, respectively	105,028	110,952
RIGHT OF USE ASSETS	52,379	61,387
INTANGIBLES, net of accumulated amortization and impairment of \$17,475 and \$17,540 at 2022 and 2021, respectively	7,483	8,139
GOODWILL	99,445	99,445
DEFERRED TAX ASSETS, net	68,570	70,462
OTHER ASSETS	33,747	41,413
TOTAL ASSETS	\$ 578,354	\$ 580,853
LIABILITIES AND EQUITY		
CURRENT LIABILITIES:		
Accounts payable	\$ 45,847	\$ 29,726
Accrued payroll and related costs	23,431	20,833
Taxes other than payroll and income	4,822	5,931
Unearned revenues	5,942	7,765
Operating lease liabilities	11,699	12,342
Income taxes payable	3,034	6,502
Other current liabilities	8,360	7,683
TOTAL CURRENT LIABILITIES	103,135	90,782
LONG-TERM DEBT, net	172,386	188,636
LONG-TERM OPERATING LEASE LIABILITIES	38,305	49,286
DEFERRED COMPENSATION	31,814	39,101
DEFERRED TAX LIABILITIES, net	22,877	24,336
OTHER LONG-TERM LIABILITIES	20,883	27,711
COMMITMENTS AND CONTINGENCIES		
EQUITY:		
Preference shares, EUR 0.02 par value; 6,000,000 shares authorized, none issued or outstanding	—	—
Common shares, EUR 0.02 par value; 200,000,000 shares authorized, 46,699,102 issued and 46,631,934 outstanding at 2022 and 46,454,264 issued and 46,349,397 outstanding at 2021	1,194	1,188
Additional paid-in capital	102,254	101,120
Retained earnings	85,949	68,349
Accumulated other comprehensive income (loss)	(3,777)	(10,133)
Treasury shares (at cost), 67,168 at 2022 and 104,867 at 2021	(1,362)	(4,075)
Total Core Laboratories N.V. shareholders' equity	184,258	156,449
Non-controlling interest	4,696	4,552
TOTAL EQUITY	188,954	161,001
TOTAL LIABILITIES AND EQUITY	\$ 578,354	\$ 580,853

The accompanying notes are an integral part of these Consolidated Financial Statements.

CORE LABORATORIES N.V.
CONSOLIDATED STATEMENTS OF OPERATIONS
For the Years Ended December 31, 2022, 2021 and 2020
(In thousands, except per share data)

	2022	2021	2020
REVENUE:			
Services	\$ 346,974	\$ 344,342	\$ 376,421
Product sales	142,761	125,910	110,846
Total revenue	489,735	470,252	487,267
OPERATING EXPENSES:			
Cost of services, exclusive of depreciation expense shown below	274,297	267,641	279,281
Cost of product sales, exclusive of depreciation expense, impairment and other charges and inventory write-down shown below	119,358	100,255	95,486
General and administrative expense, exclusive of depreciation expense shown below	38,117	44,173	34,033
Depreciation	16,476	17,754	19,727
Amortization	685	762	1,140
Impairments and other charges	—	—	122,204
Inventory write-down	—	—	10,375
Other (income) expense, net	(722)	(5,595)	1,826
OPERATING INCOME (LOSS)	41,524	45,262	(76,805)
Interest expense	11,570	9,152	14,372
Income (loss) from continuing operations before income taxes	29,954	36,110	(91,177)
Income tax expense (benefit)	10,296	15,891	5,896
Income (loss) from continuing operations	19,658	20,219	(97,073)
Income (loss) from discontinued operations, net of income taxes	—	—	(424)
Net income (loss)	19,658	20,219	(97,497)
Net income (loss) attributable to non-controlling interest	205	492	140
Net income (loss) attributable to Core Laboratories N.V.	\$ 19,453	\$ 19,727	\$ (97,637)
EARNINGS (LOSS) PER SHARE INFORMATION:			
Basic earnings (loss) per share from continuing operations	\$ 0.42	\$ 0.44	\$ (2.18)
Basic earnings (loss) per share from discontinued operations	\$ —	\$ —	\$ (0.01)
Basic earnings (loss) per share attributable to Core Laboratories N.V.	\$ 0.42	\$ 0.43	\$ (2.20)
Diluted earnings (loss) per share from continuing operations	\$ 0.42	\$ 0.43	\$ (2.18)
Diluted earnings (loss) per share from discontinued operations	\$ —	\$ —	\$ (0.01)
Diluted earnings (loss) per share attributable to Core Laboratories N.V.	\$ 0.42	\$ 0.42	\$ (2.20)
WEIGHTED AVERAGE COMMON SHARES OUTSTANDING:			
Basic	46,334	46,009	44,477
Diluted	46,813	46,690	44,477

The accompanying notes are an integral part of these Consolidated Financial Statements.

CORE LABORATORIES N.V.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
For the Years Ended December 31, 2022, 2021 and 2020
(In thousands)

	2022	2021	2020
Net income (loss)	\$ 19,658	\$ 20,219	\$ (97,497)
Other comprehensive income (loss):			
Interest rate swaps:			
Gain (loss) on fair value of interest rate swaps	6,015	(3,252)	(2,106)
Interest rate swap amount reclassified to net income (loss)	998	(82)	669
Income tax expense (benefit) on interest rate swaps reclassified to net income (loss)	(1,144)	621	302
Total interest rate swaps	5,869	(2,713)	(1,135)
Pension and other postretirement benefit plans:			
Adjustment of unrecognized pension actuarial gain (loss)	603	(293)	351
Income tax expense (benefit) on pension and other postretirement benefit plans reclassified to net income (loss)	(116)	73	(86)
Total pension and other postretirement benefit plans	487	(220)	265
Total other comprehensive income (loss)	6,356	(2,933)	(870)
Comprehensive income (loss)	26,014	17,286	(98,367)
Comprehensive income (loss) attributable to non-controlling interests	205	492	140
Comprehensive income (loss) attributable to Core Laboratories N.V.	<u>\$ 25,809</u>	<u>\$ 16,794</u>	<u>\$ (98,507)</u>

The accompanying notes are an integral part of these Consolidated Financial Statements.

CORE LABORATORIES N.V.
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
For the Years Ended December 31, 2022, 2021 and 2020
(In thousands, except share and per share data)

	2022	2021	2020
Common Shares			
Balance at Beginning of Period	\$ 1,188	\$ 1,148	\$ 1,148
New share issuance	6	40	—
Balance at End of Period	\$ 1,194	\$ 1,188	\$ 1,148
Additional Paid-In Capital			
Balance at Beginning of Period	\$ 101,120	\$ 41,184	\$ 51,872
Stock-based compensation	1,140	837	(10,688)
New share issuance	(6)	59,099	—
Balance at End of Period	\$ 102,254	\$ 101,120	\$ 41,184
Retained Earnings			
Balance at Beginning of Period	\$ 68,349	\$ 50,456	\$ 160,539
Dividends paid	(1,853)	(1,834)	(12,446)
Net income (loss) attributable to Core Laboratories N.V.	19,453	19,727	(97,637)
Balance at End of Period	\$ 85,949	\$ 68,349	\$ 50,456
Accumulated Other Comprehensive Income (Loss)			
Balance at Beginning of Period	\$ (10,133)	\$ (7,200)	\$ (6,330)
Pension and other postretirement benefit plans, net of income taxes	487	(220)	265
Interest rate swaps, net of income taxes	5,869	(2,713)	(1,135)
Balance at End of Period	\$ (3,777)	\$ (10,133)	\$ (7,200)
Treasury Shares			
Balance at Beginning of Period	\$ (4,075)	\$ (14,075)	\$ (29,364)
Stock-based compensation	6,616	18,256	18,082
Repurchase of common shares	(3,903)	(8,256)	(2,793)
Balance at End of Period	\$ (1,362)	\$ (4,075)	\$ (14,075)
Non-Controlling Interest			
Balance at Beginning of Period	\$ 4,552	\$ 4,060	\$ 4,275
Non-controlling interest dividends	(61)	—	(355)
Net income (loss) attributable to non-controlling interest	205	492	140
Balance at End of Period	\$ 4,696	\$ 4,552	\$ 4,060
Total Equity			
Balance at Beginning of Period	\$ 161,001	\$ 75,573	\$ 182,140
Stock-based compensation	7,756	19,093	7,394
Repurchase of common shares	(3,903)	(8,256)	(2,793)
Dividends paid	(1,853)	(1,834)	(12,446)
Non-controlling interest dividends	(61)	—	(355)
New share issuance	—	59,139	—
Pension and other postretirement benefit plans, net of income taxes	487	(220)	265
Interest rate swaps, net of income taxes	5,869	(2,713)	(1,135)
Net income (loss)	19,658	20,219	(97,497)
Balance at End of Period	\$ 188,954	\$ 161,001	\$ 75,573
Cash Dividends per Share	\$ 0.04	\$ 0.04	\$ 0.28

The accompanying notes are an integral part of these Consolidated Financial Statements.

CORE LABORATORIES N.V.
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY (Continued)
For the Years Ended December 31, 2022, 2021 and 2020
(In thousands, except share and per share data)

	2022	2021	2020
Common Shares - Number of shares issued			
Balance at Beginning of Period	46,454,264	44,796,252	44,796,252
New share issuance	244,838	1,658,012	—
Balance at End of Period	<u>46,699,102</u>	<u>46,454,264</u>	<u>44,796,252</u>
Treasury Shares - Number of shares			
Balance at Beginning of Period	(104,867)	(223,451)	(330,690)
Stock-based compensation	212,047	419,152	208,168
Repurchase of common shares	(174,348)	(300,568)	(100,929)
Balance at End of Period	<u>(67,168)</u>	<u>(104,867)</u>	<u>(223,451)</u>
Common Shares - Number of shares outstanding			
Balance at Beginning of Period	46,349,397	44,572,801	44,465,562
New share issuance	244,838	1,658,012	—
Stock-based compensation	212,047	419,152	208,168
Repurchases of common shares	(174,348)	(300,568)	(100,929)
Balance at End of Period	<u>46,631,934</u>	<u>46,349,397</u>	<u>44,572,801</u>

The accompanying notes are an integral part of these Consolidated Financial Statements.

CORE LABORATORIES N.V.
CONSOLIDATED STATEMENTS OF CASH FLOWS
For the Years Ended December 31, 2022, 2021 and 2020
(In thousands)

	2022	2021	2020
CASH FLOWS FROM OPERATING ACTIVITIES:			
Income (loss) from continuing operations	\$ 19,658	\$ 20,219	\$ (97,073)
Income (loss) from discontinued operations, net of income taxes	—	—	(424)
Net income (loss)	19,658	20,219	(97,497)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Stock-based compensation	7,756	19,093	7,394
Depreciation and amortization	17,161	18,516	20,867
Impairments, inventory write-down and other charges	—	—	132,579
Changes in value of life insurance policies	5,069	(2,672)	(894)
Deferred income taxes	433	6,012	(12,216)
Realization of pension obligation	451	(234)	188
Net provision for credit losses	(6)	(256)	1,618
Gain on sale of business	—	(1,012)	—
(Gain) loss on sale of discontinued operations	—	—	573
Other non-cash items	(547)	(2,524)	(683)
Changes in assets and liabilities, net of effects of acquisitions and divestitures:			
Accounts receivable	(10,078)	(13,522)	46,421
Inventories	(14,860)	(4,547)	1,471
Prepaid expenses and other current assets	(76)	1,845	(2,296)
Other assets	(1,369)	(523)	(1,905)
Accounts payable	15,374	6,568	(12,838)
Accrued expenses	(1,302)	(8,759)	602
Unearned revenue	(1,823)	2,308	(7,924)
Other liabilities	(10,885)	(3,933)	(17,592)
Net cash provided by operating activities	24,956	36,579	57,868
CASH FLOWS FROM INVESTING ACTIVITIES:			
Capital expenditures	(10,216)	(13,539)	(11,880)
Patents and other intangibles	(29)	(318)	(498)
Distribution received from life insurance policies	—	—	20,443
Proceeds from sale of assets	1,889	678	1,734
Proceeds from sale of business, net of cash sold	240	873	—
Proceeds from insurance recovery	583	726	—
Proceeds (payment) from sale of discontinued operations	—	—	(225)
Net proceeds (premiums) on life insurance policies	3,677	1,357	(1,723)
Net cash provided by (used in) investing activities	(3,856)	(10,223)	7,851
CASH FLOWS FROM FINANCING ACTIVITIES:			
Repayment of long-term debt	(131,000)	(226,000)	(102,000)
Proceeds from long-term debt	116,000	155,000	56,000
Proceeds from issuance of common shares	—	60,000	—
Transaction costs on equity distribution program	(411)	(861)	—
Debt issuance costs	(2,206)	—	(1,536)
Dividends paid	(1,853)	(1,834)	(12,446)
Repurchase of common shares	(3,903)	(8,256)	(2,793)
Other financing activities	(2)	(508)	(230)
Net cash used in financing activities	(23,375)	(22,459)	(63,005)
NET CHANGE IN CASH AND CASH EQUIVALENTS	(2,275)	3,897	2,714
CASH AND CASH EQUIVALENTS, beginning of year	17,703	13,806	11,092
CASH AND CASH EQUIVALENTS, end of year	\$ 15,428	\$ 17,703	\$ 13,806

The accompanying notes are an integral part of these Consolidated Financial Statements.

CORE LABORATORIES N.V.
CONSOLIDATED STATEMENTS OF CASH FLOWS (Continued)
For the Years Ended December 31, 2022, 2021 and 2020
(In thousands)

	<u>2022</u>	<u>2021</u>	<u>2020</u>
Supplemental disclosures of cash flow information:			
Cash payments for interest	\$ 9,300	\$ 10,477	\$ 11,669
Cash payments for income taxes	\$ 14,078	\$ 9,066	\$ 21,325
Non-cash investing and financing activities:			
Capital expenditures incurred but not paid for as of the end of the year	\$ 1,157	\$ 1,361	\$ 1,064

The accompanying notes are an integral part of these Consolidated Financial Statements.

CORE LABORATORIES N.V.
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
DECEMBER 31, 2022

1. DESCRIPTION OF BUSINESS

Core Laboratories N.V. ("Core Laboratories", "Core Lab", "the Company", "we", "our" or "us") is a Netherlands limited liability company. We were established in 1936 and are one of the world's leading providers of proprietary and patented reservoir description and production enhancement services and products to the oil and gas industry. These services and products can enable our clients to evaluate and improve reservoir performance and increase oil and gas recovery from their new and existing fields. We have over 70 offices in more than 50 countries and have approximately 3,600 employees.

Subsequent to the year end, on January 17, 2023, the Company announced its intention to reorganize the Company's corporate structure, which will include redomestication of the parent company from the Netherlands to the United States as Core Laboratories Inc., a Delaware corporation. See Note 23 - *Subsequent Events*.

We operate our business in two segments: (1) Reservoir Description and (2) Production Enhancement. These complementary operating segments provide different services and products and utilize different technologies for evaluating and improving reservoir performance and increasing oil and gas recovery from new and existing fields. For a description of the types of services and products offered by these operating segments, see Note 22 - *Segment Reporting and Other Disaggregated Information*.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation and Principles of Consolidation

The accompanying consolidated financial statements include the accounts of Core Laboratories and its subsidiaries for which we have a controlling voting interest and/or a controlling financial interest. These financials have been prepared in accordance with United States generally accepted accounting principles ("U.S. GAAP"). We use the equity method of accounting for investments in which we have less than a majority interest and do not exercise control but do exert significant influence. Non-controlling interest have been recorded to reflect outside ownership attributable to consolidated subsidiaries that are less than 100% owned. All inter-company transactions and balances have been eliminated in consolidation.

Certain reclassifications were made to prior period amounts in order to conform to the current period presentation. These reclassifications had no impact on the reported net income or cash flows for the year ended December 31, 2021 and 2020.

Recent Accounting Pronouncements

Pronouncements Adopted

In December 2019, the FASB issued ASU 2019-12 ("Simplifying the Accounting for Income Taxes") which affects general principles within Topic 740, Income Taxes. The amendment removes exceptions related to the incremental approach for intraperiod tax allocation, the recognition of a deferred tax liability for equity method investments in a foreign subsidiary, and the methodology for calculating income taxes in an interim period. The standard also simplifies the accounting for franchise taxes, transactions that result in a step-up in the tax basis of goodwill, the effect of an enacted change in tax laws on the tax rate computation in interim periods, and specifying that an entity is not required to allocate consolidated tax expense to a legal entity not subject to tax in its separate financial statements. This standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020. We adopted this standard on January 1, 2021, and there has been no significant impact on our consolidated financial statements or on our accounting policies and processes.

In March 2020, the FASB issued ASU 2020-04 ("Facilitation of the Effects of Reference Rate Reform on Financial Reporting") which provides temporary optional guidance to ease the potential burden in accounting for reference rate reform. The new guidance provides optional expedients and exceptions for applying generally accepted accounting principles to contract modifications and hedging relationships, subject to meeting certain criteria, that reference LIBOR or another reference rate expected to be discontinued. The ASU is intended to help stakeholders during the global market-wide reference rate transition period. During the year ended December 31, 2022, we elected to apply the optional expedient for hedging relationships affected by reference rate reform upon the Company's amending its existing credit facility that included a change

in the reference rate. Accordingly, no outstanding balance on the Amended Credit Facility will preclude cash flow hedging with existing hedging instruments. See Note 11 - *Long-term Debt, net* and Note 15 - *Derivative Instruments and Hedging Activities*.

Use of Estimates

The preparation of financial statements in accordance with U.S. GAAP requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. We evaluate our estimates on an ongoing basis and utilize our historical experience, as well as various other assumptions that we believe are reasonable in a given circumstance, in order to make these estimates. Actual results could differ from our estimates, as assumptions and conditions change.

The following accounts, among others, require us to use estimates and assumptions:

- allowance for credit losses;
- obsolete inventory;
- depreciation and amortization;
- long-lived assets, intangibles and goodwill;
- income taxes;
- pensions and other postretirement benefits;
- stock-based compensation; and
- leases.

Accounting policies relating to these accounts and the nature of these estimates are further discussed under the applicable caption. For each of these critical estimates it is at least reasonably possible that changes in these estimates will occur in the short term which may impact our financial position or results of operations.

Foreign Currencies

Our functional currency is the U.S. Dollar ("USD"). All inter-company financing, transactions and cash flows with our subsidiaries are transacted in USD. Revenue and expenses denominated in other currencies are measured at the applicable month-end exchange rate which approximates the average exchange rate. We remeasure monetary assets and liabilities denominated in other currencies to USD at year-end exchange rates. Non-monetary items, depreciation, amortization and certain components of cost of sales are measured at historical rates. Remeasurement and settlement difference are included in other (income) expense, net in the accompanying consolidated statements of operations. See Note 20 - *Other (Income) Expense, net*.

Concentration of Credit Risk

Our financial instruments that potentially subject us to concentrations of credit risk relate primarily to cash and cash equivalents and trade accounts receivable. All cash and cash equivalents are on deposit at commercial banks or investment firms with significant financial resources. Our trade receivables are with a variety of domestic, international and national oil and gas companies. We had no clients who provided more than 10% of our revenue for the years ended December 31, 2022, 2021 and 2020. We consider our credit risk related to trade accounts receivable to be limited due to the creditworthiness and financial resources of our clients. We apply the expected credit losses methodology for measurement of credit losses on financial assets measured at amortized cost basis. We evaluate our estimate for credit losses on an on-going basis throughout the year.

Concentration of Interest Rate Risk

We are exposed to interest rate risk on our revolving credit facility debt, which carries a variable interest rate. We are exposed to interest rate risk on our Senior Notes which carry a fixed interest rate, but whose fair value will fluctuate based on changes in interest rates and market perception of our credit risk. See Note 11 - *Long-term Debt, net*.

Cash and Cash Equivalents

Cash and cash equivalents include all short-term, highly liquid instruments purchased with an original maturity of three months or less. These items are carried at cost, which approximates fair value.

Accounts Receivable

Trade accounts receivable are recorded at their invoiced amounts and do not bear interest. We perform ongoing credit evaluations of our clients, monitor collections and payments, consider our historical collection experience and our current aging of client receivables outstanding, in addition to client's representations and our understanding of the economic environment in which our clients operate. Based on our review we establish or adjust allowances for credit losses for specific clients and the accounts receivable, as a whole, and recognize expense. When an account is determined to be uncollectible, we charge the receivable to our allowance for credit losses. The net carrying value of accounts receivable approximates fair value.

Contract Assets and Liabilities

Contract assets and liabilities arise from differences in timing of revenue recognition, billings and cash collections.

Contract assets include our right to payment for goods and services already transferred to a customer when the right to payment is conditional on something other than the passage of time. For example, we have contracts where we recognize revenue over time but do not have a contractual right to payment until we complete the performance obligations.

Contract liabilities consist of advance payments received and billings in excess of revenue recognized. We generally receive up-front payments relating to our consortia studies. We recognize revenue over the life of the study as the testing and analysis results are made available to our consortia members. We record billings in excess of revenue recognized for contracts with a duration less than twelve months as unearned revenue. We classify contract liabilities for contracts with a duration greater than twelve months as current or non-current based on the timing of revenue recognition.

Inventories

Inventories consist of manufactured goods, materials and supplies used for sales or services to clients. Inventories are stated at the lower of cost or estimated net realizable value. Inventory costs are recorded at standard cost which approximates the first-in, first-out method.

Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets are comprised primarily of prepaid insurance, value added taxes and prepaid rents.

Property, Plant and Equipment

Property, plant and equipment are carried at cost less accumulated depreciation. Major renewals and improvements are capitalized while maintenance and repair costs are charged to expense as incurred. They are depreciated using the straight-line method based on their individual estimated useful lives, except for leasehold improvements, which are depreciated over the remaining lease term, if shorter. We estimate the useful lives and salvage values of our assets based on historical data as follows:

Buildings and leasehold improvements	3 - 40 years
Machinery and equipment	3 - 10 years

When long-lived assets are sold or retired, the remaining costs and related accumulated depreciation are removed from the accounts and any resulting gain or loss is recognized.

We review our long-lived assets for impairment when events or changes in circumstances indicate that their net book value may not be recovered over their remaining service lives. Indicators of possible impairment may include significant declines in activity levels in regions where specific assets or groups of assets are located, extended periods of idle use, declining revenue or cash flow or overall changes in general market conditions.

The geopolitical conflict between Russia and Ukraine, which began in February 2022 and has continued through December 31, 2022, has resulted in disruptions to our operations in Russia and Ukraine. The Company evaluated long-lived assets in Russia and Ukraine as part of our assessment of our assets group and did not identify triggering events as of December 31,

2022. Based on our assessments, we determined there was no impairment for long-lived assets in Russia and Ukraine as of December 31, 2022. See Note 18 - *Impairments and Other Charges*.

Whenever possible impairment is indicated, we compare the carrying value of the assets to the sum of the estimated undiscounted future cash flows expected from use, plus salvage value, less the costs of the subsequent disposition of the assets. If impairment is still indicated, we compare the fair value of the assets to the carrying amount and recognize an impairment loss for the amount by which the carrying value exceeds the fair value. We did not record any material impairment charges relating to our long-lived assets held for use during the years ended December 31, 2022, 2021 and 2020.

Leases

We have operating leases primarily consisting of offices and lab space, machinery and equipment and vehicles. We determine if an arrangement is an operating or finance lease at inception. Lease assets and lease liabilities are recognized based on the present value of the future minimum lease payments over the lease term at commencement date. Where our lease does not provide an implicit rate, we estimate the discount rate used to discount the future minimum lease payments using our incremental borrowing rate and other information available at the commencement date. Operating leased assets also include all initial direct costs incurred. The lease term may include options to extend or terminate the lease when it is reasonably certain that we will exercise that option.

Operating leased assets are included in right of use ("ROU") assets and, along with current and long-term operating lease liabilities, are separately presented in our consolidated balance sheet. Financing leased assets are included in property, plant and equipment, net and the related liabilities are included in other current and other long-term liabilities in our consolidated balance sheet.

ROU assets are subsequently depreciated over the estimated useful life of the asset and lease liabilities are carried at amortized cost using the effective interest rate method.

The Company has elected to apply the short-term lease exemption to all classes of underlying ROU assets. Accordingly, no ROU asset or lease liability is recognized for leases with a term of twelve months or less.

The Company has elected to apply the practical expedient for combining lease and non-lease components for vehicle leases and elected not to apply the practical expedient for combining lease and non-lease components to all other classes of underlying ROU assets.

Intangibles and Goodwill

Intangible assets, which include trade secrets, patents, technology, agreements not to compete, trade names, and trademarks, are carried at cost less accumulated amortization, for intangibles with a definite life, and any accumulated impairment. Intangibles with definite lives are amortized using the straight-line method based on the estimated useful life of the intangible. Intangibles with indefinite lives, which consist primarily of corporate trade names, are not amortized, but are tested for impairment whenever events or changes in circumstances indicate that impairment is possible. See Note 18 - *Impairments and Other Charges*.

We record goodwill as the excess of the purchase price over the fair value of the net assets acquired in acquisitions accounted for under the purchase method of accounting. Goodwill is not subject to amortization and is tested for impairment annually or more frequently if events or changes in circumstances indicate goodwill is more likely than not impaired. We assess goodwill for impairment either by performing a qualitative assessment or a quantitative test. The qualitative assessment is to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, including goodwill. If the estimated fair value of a reporting unit is less than its carrying value, then there is an impairment loss limited to the amount of goodwill allocated to that reporting unit. Our reporting units are the same as our two operating segments. Significant judgments and assumptions are inherent in our estimate of future cash flows used to determine the estimate of the reporting unit's fair value which include assumptions regarding future revenue growth rates, discount rates and expected margins. See Note 18 - *Impairments and Other Charges*.

Accounts Payable

Trade accounts payable are recorded at their invoiced amounts and do not bear interest. The carrying value of accounts payable approximates fair value.

Income Taxes

We recognize deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the consolidated financial statements or tax returns. Deferred tax assets and liabilities are determined based on the difference between the financial statement and the tax basis of assets and liabilities using enacted tax rates in effect for the year in which the asset is expected to be recovered or the liability is expected to be settled. We include interest and penalties from tax judgments in income tax expense.

We record a liability for unrecognized tax benefits resulting from uncertain tax positions taken or expected to be taken in our tax return. We also recognize interest and penalties, if any, related to unrecognized tax benefits in income tax expense. See Note 10 - *Income Taxes*.

Pension and Other Postretirement Benefit Plans

We provide a non-contributory defined benefit pension plan covering substantially all of our Dutch employees ("Dutch Plan") who were hired prior to 2000. We recognize net periodic pension costs associated with the Dutch plan in income and recognize the unfunded status of the plan, if any, as an other long-term liability. We recognize the actuarial gains or losses and prior service costs or credits that arise during the period as a component of other comprehensive income. The projection of benefit obligation and fair value of plan assets requires the use of assumptions and estimates. Actual results could differ from those estimates. See Note 12 - *Pension and Other Postretirement Benefit Plans*.

We maintain defined contribution plans for the benefit of eligible employees primarily in Canada, the Netherlands, the United Kingdom and the United States. We expense contributions in the period the contribution is made.

Derivative Instruments

We may enter into a variety of derivative instruments in connection with the management of our exposure to fluctuations in interest rates or currency exchange rates. See Note 15 - *Derivative Instruments and Hedging Activities*.

We do not enter into derivatives for speculative purposes.

Comprehensive Income (Loss)

Comprehensive income is comprised of net income and other charges or credits to equity that are not the result of transactions with owners. Accumulated other comprehensive income (loss) consists of prior service costs and unrecognized net actuarial gain or loss from the Dutch pension plan and changes in the fair value of our interest rate swaps. See Note 12 - *Pension and Other Postretirement Benefit Plans* and Note 15 - *Derivative Instruments and Hedging Activities*.

Revenue Recognition

All of our revenue is derived from contracts with clients. Our contracts include standard commercial payment terms generally acceptable in each region, and do not include financing with extended payment terms. We have no significant obligations for refunds, warranties, or similar obligations. Our revenue does not include taxes collected from our clients. In certain circumstances we apply the guidance in Accounting Standards Codification Topic 606 - *Revenue from Contracts with Customers* ("Topic 606") to a portfolio of contracts with similar characteristics. We use estimates and assumptions when accounting for a portfolio that reflect the size and composition of the portfolio of contracts.

We recognize revenue at an amount that reflects the consideration expected to be received in exchange for such services or goods as described below by applying the five-step method to: (1) identify the contract(s) with clients; (2) identify the performance obligation(s) in the contract; (3) determine the transaction price; (4) allocate the transaction price to the performance obligation(s) in the contract; and (5) recognize revenue when (or as) we satisfy the performance obligation(s). A performance obligation is a promise in a contract to transfer a distinct service or good to a client and is the unit of account under Topic 606. We have contracts with two general groups of performance obligations: those that require us to perform analysis and/or diagnostic tests in our laboratory or at the client's wellsite and those from the sale of tools, diagnostic and equipment products and related services.

Service Revenue: We provide a variety of services to clients in the oil and gas industry. Where services are provided related to the testing and analysis of rock and fluids, we recognize revenue upon the provision of the test results or analysis to the client. For our design, field engineering and completion diagnostic services, we recognize revenue upon the delivery of those services at the well site or delivery of diagnostic data. In the case of our consortia studies, we have multiple performance obligations and revenue is recognized at the point in time when the testing and analysis results on each contributed core are

made available to our consortia members. For arrangements that include multiple performance obligations, we allocate revenue to each performance obligation based on estimates of the price that we would charge the client for each promised service or product if it were sold on a standalone basis.

To a lesser extent, we enter into other types of contracts including service arrangements and non-subscription software and licensing agreements. We recognize revenue for these arrangements over time or at a point in time depending on our evaluation of when the client obtains control of the promised services or products.

Product Sales Revenue: We manufacture equipment that we sell to our clients in the oil and gas industry. We recognize revenue when control of the promised product is transferred to the client. Control of the product usually passes to the client at the time shipment is made or picked up by the client at our facilities, as defined within the contract.

Disaggregation of Revenue

We contract with clients for service revenue and/or product sales revenue. We present revenue disaggregated by services and product sales in our consolidated statements of operations. For revenue disaggregated by operating segment, see Note 22 - *Segment Reporting and Other Disaggregated Information*.

Stock-Based Compensation

For new awards issued and awards modified, repurchased or canceled, we record compensation expense in the consolidated statements of operations equal to the fair value of the award at the date of the grant, modification, repurchase or cancellation over the requisite service period of the award. The fair value is generally determined by the quoted market price of the Company's common shares on the date of grant less the discounted value of the expected dividends to be paid over the vesting period.

Non-controlling Interests

We maintain non-controlling interests in several investment ventures. Non-controlling interest have been recorded to reflect outside ownership attributable to consolidated subsidiaries that are less than 100% owned and presented as a separate component of equity in the consolidated balance sheets and income in the consolidated statements of operations and other comprehensive income (loss), respectively. In addition, when a subsidiary is deconsolidated, any retained non-controlling equity investment in the former subsidiary will be initially measured at fair value and recorded as a gain or loss.

3. ACQUISITIONS AND DIVESTURES

We had no significant acquisitions or divestitures during the years ended December 31, 2022, 2021 and 2020. We completed the divestment of our business of permanent downhole monitoring systems and related services in 2019 and concluded the final adjustment of \$0.6 million to the purchase agreement in 2020. There are no other activities recorded in the consolidated statements of operations for the years ended December 31, 2022, 2021 and 2020, and no balances recorded in the consolidated balance sheets for the discontinued operations as of December 31, 2022 and 2021.

4. CONTRACT ASSETS AND LIABILITIES

The balance of contract assets and contract liabilities consist of the following (in thousands):

	December 31,	
	2022	2021
Contract assets:		
Current	\$ 1,148	\$ 2,072
	<u>\$ 1,148</u>	<u>\$ 2,072</u>
Contract liabilities:		
Current	\$ 907	\$ 1,300
Non-current	24	435
	<u>\$ 931</u>	<u>\$ 1,735</u>

	December 31, 2022
Estimate of when contract liabilities will be recognized	
Within 12 months	\$ 907
Within 12 to 24 months	\$ 24

The current portion of contract assets are included in our accounts receivable as of December 31, 2022 and 2021.

The current portion of contract liabilities is included in unearned revenue and the non-current portion of contract liabilities is included in other long-term liabilities. We did not recognize any impairment losses on our contract assets for the years ended December 31, 2022, 2021 and 2020.

5. INVENTORIES

Inventories consist of the following (in thousands):

	December 31,	
	2022	2021
Finished goods	\$ 26,534	\$ 21,527
Parts and materials	31,323	20,965
Work in progress	2,588	2,951
Total inventories	<u>\$ 60,445</u>	<u>\$ 45,443</u>

We include freight costs incurred for shipping inventory to our clients in the cost of product sales caption in the accompanying consolidated statements of operations. See Note 19 - *Inventory Write-down* for further detail.

6. PROPERTY, PLANT AND EQUIPMENT, NET

The components of property, plant and equipment, net are as follows (in thousands):

	December 31,	
	2022	2021
Land	\$ 10,652	\$ 11,395
Building and leasehold improvements	120,994	120,066
Machinery and equipment	288,119	285,952
Total property, plant and equipment	419,765	417,413
Less: Accumulated depreciation	(314,737)	(306,461)
Property, plant and equipment, net	<u>\$ 105,028</u>	<u>\$ 110,952</u>

7. LEASES

Our operating leases primarily consist of offices and lab space, machinery and equipment and vehicles. The components of lease expense are as follows (in thousands):

	For the Years Ended December 31,		
	2022	2021	2020
Operating lease expense	\$ 16,595	\$ 17,253	\$ 17,848
Short-term lease expense	1,784	1,990	1,801
Variable lease expense	1,414	1,462	1,442
Total lease expense	<u>\$ 19,793</u>	<u>\$ 20,705</u>	<u>\$ 21,091</u>
Other information:			
Operating cash flows for operating leases	\$ 16,598	\$ 16,367	\$ 17,049
Right of use assets obtained in exchange for new operating lease obligations	\$ 5,520	\$ 5,736	\$ 5,654
Weighted-average remaining lease term - operating leases	6.88 years	7.62 years	8.69 years
Weighted-average discount rate - operating leases	4.62%	4.61%	4.70%

Scheduled undiscounted lease payments for non-cancellable leases consist of the following (in thousands):

	December 31, 2022
2023	\$ 13,584
2024	10,294
2025	8,247
2026	6,472
2027	5,168
Thereafter	15,387
Total undiscounted lease payments	59,152
Less: Imputed interest	(9,148)
Total operating lease liabilities	<u>\$ 50,004</u>

During the year ended December 31, 2020, the Company recorded \$0.5 million on lease abandonment for certain properties that ceased in use and are expected to provide no future economic benefits. There is no lease abandonment cost recorded during the years ended December 31, 2022 and 2021.

8. INTANGIBLES AND GOODWILL

The components of intangibles, net are as follows (in thousands):

	Useful life in years	December 31,			
		2022		2021	
		Gross Carrying Value	Accumulated Amortization and Impairment	Gross Carrying Value	Accumulated Amortization and Impairment
Acquired trade secrets	2-20	\$ 4,278	\$ 3,545	\$ 4,278	\$ 3,334
Acquired patents and technology	4-15	14,907	12,883	15,628	13,159
Agreements not to compete	2-5	1,149	1,036	1,149	1,036
Acquired trade names and trademarks	Indefinite	4,624	11	4,624	11
Total intangibles, net		<u>\$ 24,958</u>	<u>\$ 17,475</u>	<u>\$ 25,679</u>	<u>\$ 17,540</u>

Our estimated amortization expense relating to these intangibles for the next five years is summarized in the following table (in thousands):

	December 31, 2022
2023	\$ 419
2024	\$ 409
2025	\$ 323
2026	\$ 231
2027	\$ 193

The carrying amount of goodwill for each operating segment is as follows (in thousands):

	Reservoir Description	Production Enhancement	Total
Balance at December 31, 2021	<u>\$ 99,445</u>	<u>\$ —</u>	<u>\$ 99,445</u>
Balance at December 31, 2022	<u>\$ 99,445</u>	<u>\$ —</u>	<u>\$ 99,445</u>

9. OTHER ASSETS

Other assets consist of the following (in thousands):

	December 31,	
	2022	2021
Cash surrender value of life insurance policies	\$ 23,787	\$ 32,511
Investments in unconsolidated affiliates	4,450	4,156
Other	5,510	4,746
Total other assets	<u>\$ 33,747</u>	<u>\$ 41,413</u>

Cash surrender value of life insurance policies relates to postretirement benefit plans. See Note 12 - *Pension and Other Postretirement Benefit Plans*. Investments include unconsolidated affiliates accounted for under the equity method where the operations of these entities are in-line with those of our core business. These entities are not considered special purpose entities, nor do we have special off-balance sheet arrangements through these entities.

10. INCOME TAXES

The components of income (loss) before income taxes are as follows (in thousands):

	For the Years Ended December 31,		
	2022	2021	2020
United States	\$ (4,099)	\$ 10,028	\$ (45,167)
Other countries	34,053	26,082	(46,010)
Income (loss) before income taxes	<u>\$ 29,954</u>	<u>\$ 36,110</u>	<u>\$ (91,177)</u>

The components of income tax expense (benefit) are as follows (in thousands):

	For the Years Ended December 31,		
	2022	2021	2020
Current:			
United States	\$ 1,269	\$ 1,983	\$ 5,181
Other countries	9,784	6,500	11,926
State and provincial	(100)	699	618
Total current	<u>10,953</u>	<u>9,182</u>	<u>17,725</u>
Deferred:			
United States	(908)	905	(69)
Other countries	(162)	5,630	(11,144)
State and provincial	413	174	(616)
Total deferred	<u>(657)</u>	<u>6,709</u>	<u>(11,829)</u>
Income tax expense (benefit)	<u>\$ 10,296</u>	<u>\$ 15,891</u>	<u>\$ 5,896</u>

The differences in income tax expense (benefit) computed using the Netherlands statutory income tax rate of 25% and our income tax expense (benefit) as reported in the accompanying consolidated statements of operations are as follows (in thousands):

	For the Years Ended December 31,		
	2022	2021	2020
Tax at the Netherlands income tax rate	\$ 7,368	\$ 8,981	\$ (23,005)
International earnings taxed at rates other than the Netherlands statutory rate	5,923	9,403	14,986
Non-deductible expenses	3,096	1,875	2,977
Change in valuation allowance	1,943	1,113	23
State and provincial taxes	662	462	(227)
Tax credits	(6,872)	(7,992)	(5,975)
Unremitted earnings of subsidiaries	(27)	1,236	418
Adjustments of prior year taxes	(3,488)	1,320	545
Adjustments of income tax reserves	(184)	(1,345)	(1,965)
Non-deductible goodwill impairment	—	—	15,547
Foreign exchange	(576)	(1,168)	226
UK tax rate change	676	(905)	—
Netherlands audit settlement	—	1,522	—
Accrued withholding taxes	1,883	1,648	2,092
Other	(108)	(259)	254
Income tax expense (benefit)	<u>\$ 10,296</u>	<u>\$ 15,891</u>	<u>\$ 5,896</u>

Deferred tax assets and liabilities result from various temporary differences between the financial statement carrying amount and their tax basis. Deferred tax assets and liabilities are summarized as follows (in thousands):

	December 31,	
	2022	2021
Deferred tax assets:		
Net operating loss carry-forwards	\$ 13,097	\$ 10,622
Tax credit carry-forwards	4,653	4,658
Accruals for compensation	7,517	7,440
Accruals for inventory capitalization	992	3,192
Unrealized benefit from corporate restructuring	44,888	49,313
Intangibles	1,026	582
Unrealized benefit plan loss	2,070	1,974
Unrealized foreign exchange	2,881	2,853
UK tax rate change	318	905
Unearned revenue	882	1,024
Interest carry-forward	7,700	2,677
Other	322	1,183
Total deferred tax assets	86,346	86,423
Valuation allowance	(9,318)	(7,377)
Net deferred tax assets	<u>77,028</u>	<u>79,046</u>
Deferred tax liabilities:		
Property, plant and equipment	(3,246)	(4,139)
Accrued withholding taxes	(26,489)	(27,544)
Unrealized foreign exchange	(1,415)	(1,070)
Other	(185)	(167)
Total deferred tax liabilities	(31,335)	(32,920)
Net deferred income taxes	<u>\$ 45,693</u>	<u>\$ 46,126</u>

The table below summarizes the net deferred tax assets and net deferred tax liabilities by legal jurisdiction (in thousands):

	December 31,	
	2022	2021
Long-term deferred tax assets, net	\$ 68,570	\$ 70,462
Long-term deferred tax liabilities, net	(22,877)	(24,336)
Net deferred income taxes	<u>\$ 45,693</u>	<u>\$ 46,126</u>

At December 31, 2022, we had tax net operating loss carry-forwards in various tax jurisdictions of \$55.6 million. Although we cannot be certain that these operating loss carry-forwards will be utilized, we anticipate that we will have sufficient taxable income in future years to allow us to fully utilize the carry-forwards that are not subject to a valuation allowance. As of December 31, 2022, if unused, \$0.8 million will expire between 2023 and 2024, \$3.0 million will expire between 2025 and 2027, \$9.8 million will expire between 2028 and 2031 and \$7.7 million will expire beyond 2031. The remaining balance of \$34.3 million is not subject to expiration. During 2022, no material net operating loss carry-forwards, which carried a full valuation allowance, expired unused.

We file income tax returns in the U.S. federal jurisdiction, various states and foreign jurisdictions. We are currently undergoing multiple examinations in various jurisdictions, and the years 2011 through 2021 remain open for examination in various tax jurisdictions in which we operate. The ultimate settlement and timing of these additional tax assessments is uncertain but the Company will continue to vigorously defend its return filing position and does not view the assessments as probable at this time.

During 2022, adjustments were made to estimates for uncertain tax positions in certain tax jurisdictions based upon changes in facts and circumstances, resulting in a reduction to the unrecognized tax benefits. A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows (in thousands):

	For the Years Ended December 31,		
	2022	2021	2020
Unrecognized tax benefits at January 1,	\$ 4,327	\$ 6,255	\$ 7,301
Tax positions, current period	230	204	1,650
Tax positions, prior period	(867)	(197)	(491)
Settlements with taxing authorities	(19)	(1,395)	(2,159)
Lapse of applicable statute of limitations	(162)	(540)	(46)
Unrecognized tax benefits at December 31,	<u>\$ 3,509</u>	<u>\$ 4,327</u>	<u>\$ 6,255</u>

Our policy is to record accrued interest and penalties on uncertain tax positions, net of any tax effect, as part of total tax expense for the period. The corresponding liability is carried along with the tax exposure as a non-current payable in other long-term liabilities. For the years ended December 31, 2022, 2021 and 2020, we recognized \$(0.2) million, \$0.3 million and \$(0.9) million, respectively, in interest and penalties. As of December 31, 2022 and 2021, we had \$4.3 million and \$4.5 million, respectively, accrued for the payment of interest and penalties. Changes in our estimate of unrecognized tax benefits would affect our effective tax rate. As of December 31, 2022, there are \$0.2 million of unrecognized tax benefits that could be resolved within the next twelve months which could have a positive effect on the annual effective tax rate.

11. LONG-TERM DEBT, NET

We have no finance lease obligations. Debt is summarized in the following table (in thousands):

	Interest Rate	Maturity Date	December 31,	
			2022	2021
2011 Senior Notes Series B ⁽¹⁾	4.11%	September 30, 2023	\$ 75,000	\$ 75,000
2021 Senior Notes Series A ⁽²⁾	4.09%	January 12, 2026	45,000	45,000
2021 Senior Notes Series B ⁽²⁾	4.38%	January 12, 2028	15,000	15,000
Credit Facility			40,000	55,000
Total long-term debt			<u>175,000</u>	<u>190,000</u>
Less: Debt issuance costs			(2,614)	(1,364)
Long-term debt, net			<u>\$ 172,386</u>	<u>\$ 188,636</u>

(1) Interest is payable semi-annually on March 30 and September 30.

(2) Interest is payable semi-annually on June 30 and December 30.

We, along with our wholly owned subsidiary Core Laboratories (U.S.) Interests Holdings, Inc. ("CLIH") as issuer, have three series of senior notes outstanding with an aggregate principal amount of \$135 million that were issued through private placement transactions. Series B of the 2011 Senior Notes was issued in 2011 (the "2011 Senior Notes"). Series A and Series B of the 2021 Senior Notes were issued and funded on January 12, 2021 (the "2021 Senior Notes"). The 2021 Senior Notes and the 2011 Senior Notes are collectively the "Senior Notes". We intend to repay the 2011 Senior Notes Series B at maturity in September 2023 using borrowings under our existing long-term amended credit facility; therefore, we continue to classify them as long-term debt.

On July 25, 2022, we, along with CLIH, entered into an Eighth Amended and Restated Credit Agreement (as amended, the "Amended Credit Facility") modifying and extending the existing credit facility for an aggregate borrowing commitment of \$135 million with a \$50 million "accordion" feature. The Amended Credit Facility is secured by first priority interests in (1) substantially all of the tangible and intangible personal property, and equity interest of CLIH and certain of the Company's U.S. and foreign subsidiary companies; and (2) instruments evidencing intercompany indebtedness owing to the Company, CLIH and certain of the Company's U.S. and foreign subsidiary companies. Under the Amended Credit Facility, the Secured Overnight Financing Rate ("SOFR") plus 2.00% to SOFR plus 3.00% will be applied to outstanding borrowings. Any outstanding balance under the Amended Credit Facility is due at maturity on July 25, 2026, subject to springing maturity on July 12, 2025, if the Company's liquidity does not equal or exceed the principal amount of the 2021 Senior Notes Series A outstanding on such date. The available capacity at any point in time is reduced by outstanding borrowings and outstanding letters of credit which totaled approximately \$9 million at December 31, 2022, resulting in an available borrowing capacity under the Amended Credit Facility of approximately \$86 million. In addition to indebtedness under the Amended Credit Facility, we had approximately \$6 million of outstanding letters of credit and performance guarantees and bonds from other sources as of December 31, 2022. The Amended Credit Facility does not substantially alter the calculation of the net leverage or interest coverage ratios. Pursuant to the terms of the Amended Credit Facility, the maximum leverage ratio permitted is as follows:

Quarter ending	Maximum leverage ratio permitted
June 30, 2022 and September 30, 2022	2.75
December 31, 2022 and thereafter	2.50

The terms of the Amended Credit Facility and Senior Notes require us to meet certain covenants, including, but not limited to, an interest coverage ratio (calculated as consolidated EBITDA divided by interest expense) and a leverage ratio (calculated as consolidated net indebtedness divided by consolidated EBITDA), where consolidated EBITDA (as defined in each agreement) and interest expense are calculated using the most recent four fiscal quarters. The Amended Credit Facility and Senior Notes include a cross-default provision, whereby a default under one agreement may trigger a default in the other agreements. The Amended Credit Facility has more restrictive covenants with a minimum interest coverage ratio of 3.00 to 1.00 and permits a maximum leverage ratio as described above. The Amended Credit Facility allows non-cash charges such as impairment of assets, stock compensation and other non-cash charges to be added back in the calculation of consolidated EBITDA. The terms of our Amended Credit Facility also allow us to negotiate in good faith to amend any ratio or requirement to preserve the original intent of the agreement if any change in accounting principles would affect the computation of any financial ratio or covenant of the Amended Credit Facility. In accordance with the terms of the Amended Credit Facility, our leverage ratio is 2.29, and our interest coverage ratio is 6.03, each for the period ended December 31, 2022. We believe that we are in compliance with all covenants contained in our Amended Credit Facility and Senior Notes.

See Note 15 - *Derivative Instruments and Hedging Activities* for additional information regarding interest rate swap agreements we have entered to fix the underlying risk-free rate on our Amended Credit Facility and Senior Notes.

The estimated fair value of total debt at December 31, 2022 and 2021 approximated the book value of total debt. The fair value was estimated using Level 2 inputs by calculating the sum of the discounted future interest and principal payments through the maturity date.

12. PENSION AND OTHER POSTRETIREMENT BENEFIT PLANS

Defined Benefit Plan

Prior to January 2020, we provided a noncontributory defined benefit pension plan covering substantially all of our Dutch employees ("Dutch Plan") who were hired prior to 2000. This pension benefit was based on years of service and final pay or career average pay depending on when the employee began participating. Additionally, prior to January 2020, there was a curtailment of the Dutch Plan for our Dutch employees and these employees have been moved into the Dutch defined contribution plan. However, the unconditional indexation for this group of participants continues for so long as they remain in active service with the Company. There have been no further contributions to fund the Dutch Plan.

The following table summarizes the change in the projected benefit obligation and the fair value of plan assets for the Dutch Plan (in thousands):

	December 31,	
	2022	2021
Projected Benefit Obligation:		
Projected benefit obligation at beginning of year	\$ 63,129	\$ 74,683
Interest cost	581	323
Benefits paid and administrative expenses	(1,398)	(1,426)
Actuarial (gain) loss, net	(18,361)	(5,281)
Unrealized (gain) loss on foreign exchange	(3,892)	(5,170)
Projected benefit obligation at end of year	<u>\$ 40,059</u>	<u>\$ 63,129</u>
Fair Value of Plan Assets:		
Fair value of plan assets at beginning of year	\$ 59,039	\$ 70,319
Increase (decrease) in plan asset value	(17,213)	(5,268)
Employer contributions	603	261
Benefits paid and administrative expenses	(1,398)	(1,426)
Unrealized gain (loss) on foreign exchange	(3,655)	(4,847)
Fair value of plan assets at end of year	<u>\$ 37,376</u>	<u>\$ 59,039</u>
Under-funded status of the plan at end of the year	<u>\$ (2,683)</u>	<u>\$ (4,090)</u>
Accumulated Benefit Obligation	<u>\$ 37,391</u>	<u>\$ 63,129</u>

The following actuarial assumptions were used to determine the actuarial present value of our projected benefit obligation and the net periodic pension cost for the Dutch Plan:

	December 31,	
	2022	2021
Weighted average assumed discount rate	3.72%	1.00%
Expected long-term rate of return on plan assets	3.72%	1.00%
Weighted average rate of compensation increase	2.60%	1.90%

The discount rate used to determine our projected benefit obligation at December 31, 2022 was increased from 1.00% to 3.72%, consistent with a general increase in interest rates in Europe for AAA-rated long-term Euro government bonds.

Amounts recognized for the Dutch Plan in the consolidated balance sheets consist of (in thousands):

	December 31,	
	2022	2021
Deferred tax asset	\$ 700	\$ 1,023
Other long-term liabilities	2,683	4,090
Accumulated other comprehensive loss	(5,108)	(5,595)

The components of net periodic pension cost for the Dutch Plan include (in thousands):

	For the Years Ended December 31,		
	2022	2021	2020
Interest cost	\$ 581	\$ 323	\$ 679
Expected return on plan assets	(545)	(306)	(634)
Curtailment	—	—	(1,049)
Net periodic pension cost	<u>\$ 36</u>	<u>\$ 17</u>	<u>\$ (1,004)</u>

We funded the future obligations of the Dutch Plan by purchasing an insurance contract from a large multi-national insurance company with a five-year maturity. Each year we made annual premium payments to the insurance company (1) to provide for the benefit obligation of the current year of service based on each employee's age, gender and current salary, and (2) for the changes in the benefit obligation for prior years of service due to changes in participants' salary. Plan assets returns equal the

contractual rate, which are comparable with governmental debt securities. We determine the fair value of these plan assets with the assistance of an actuary using observable inputs (Level 2), which approximates the contract value of the investments. Our expected long-term rate of return assumptions are based on the weighted-average contractual rates for each contract. Dutch law dictates the minimum requirements for pension funding. Our goal is to meet these minimum funding requirements, while our insurance carrier invests to minimize risks associated with future benefit payments.

In 2023, our minimum funding requirements are expected to be \$0.4 million. Our estimate of future annual contributions is based on current funding and the unconditional indexation requirements, and we believe these contributions will be sufficient to fund the plan.

Expected benefit payments to eligible participants under this plan for the next five years are as follows (in thousands):

2023	\$	1,461
2024	\$	1,571
2025	\$	1,648
2026	\$	1,795
2027	\$	1,962
Succeeding five years	\$	11,313

Defined Contribution Plans

We maintain defined contribution plans for the benefit of eligible employees primarily in Canada, the Netherlands, the United Kingdom, and the United States. In accordance with the terms of each plan, we and our participating employees contribute up to specified limits and under certain plans, we may make discretionary contributions in accordance with the defined contribution plans. Our primary obligation under these defined contribution plans is limited to paying the annual contributions. For the years ended December 31, 2022, 2021 and 2020, we paid \$3.5 million, \$2.3 million and \$3.6 million, respectively, for our contributions and our additional discretionary contributions to the defined contribution plans.

Vesting in all employer contributions is accelerated upon the death of the participant or a change in control. Employer contributions under the plans are forfeited upon a participant's termination of employment to the extent they are not vested at that time.

Deferred Compensation Arrangements

We have entered into deferred compensation contracts for certain key employees to provide additional retirement income to the participants. The benefit is determined by the contract for either a fixed amount or by a calculation using years of service or age at retirement along with the average of their base salary for the five years prior to retirement. We are not required to fund this arrangement; however, we have purchased life insurance policies with cash surrender values to assist us in providing the benefits pursuant to these deferred compensation contracts with the actual benefit payments made by Core Laboratories. The charge to expense for these deferred compensation contracts for the years ended December 31, 2022, 2021 and 2020 was \$1.4 million, \$1.7 million and \$1.0 million, respectively.

We provide severance compensation to certain key employees if employment is terminated under certain circumstances, such as following a change in control or for any reason other than upon their death or disability, for "cause" or upon a material breach of a material provision of their employment agreement, as defined in their employment agreements. In addition, there are certain countries where we are legally required to make severance payments to employees when they leave our service. We have accrued for all of these severance payments, but they are not funded.

We have also adopted a non-qualified deferred compensation plan ("Deferred Compensation Plan") that allows certain highly compensated employees to defer a portion of their salary, commission and bonus, as well as the amount of any reductions in their deferrals under the Deferred Compensation Plan for employees in the United States, due to certain limitations imposed by the U.S. Internal Revenue Code of 1986, as amended (the "Code"). Contributions to the plan are invested in equity and other investment fund assets and carried on the balance sheet at fair value. The benefits under these contracts are fully vested. Our primary obligation for the Deferred Compensation Plan is limited to our annual contributions. Employer contributions to the Deferred Compensation Plan for the years ended December 31, 2022, 2021 and 2020 were \$0.3 million, \$0.0 million and \$0.03 million, respectively. Vesting in all employer contributions is accelerated upon the death of the participant or a change in control. Employer contributions under the plans are forfeited upon a participant's termination of employment to the extent they are not vested at that time.

13. COMMITMENTS AND CONTINGENCIES

We have been and may from time to time be named as a defendant in legal actions that arise in the ordinary course of business. These include, but are not limited to, employment-related claims and contractual disputes or claims for personal injury or property damage which occur in connection with the provision of our services and products. A liability is accrued when a loss is both probable and can be reasonably estimated.

We do not maintain any off-balance sheet debt or other similar financing arrangements, nor have we formed any special purpose entities for the purpose of maintaining off-balance sheet debt.

See Note 11 - *Long-term Debt, net* for amounts committed under letters of credits and performance guarantees and bonds.

14. EQUITY

Common Shares

On December 17, 2020, we entered into an Equity Distribution Agreement with Wells Fargo Securities, LLC (the “2020 Equity Distribution Agreement”) for the issuance of up to \$60.0 million of our common shares. In 2021, we completed the sale of 1,658,012 common shares through an at-the-market offering program pursuant to the 2020 Equity Distribution Agreement for the issuance and sale of \$60.0 million of our common shares, which generated aggregate proceeds of \$59.1 million, net of commissions and other associated costs. Proceeds were used to reduce outstanding debt on the Company’s credit facility in 2021.

On June 9, 2022, we entered into an Equity Distribution Agreement with certain banks (the “2022 Equity Distribution Agreement”) for the issuance and sale of up to \$60.0 million of our common shares. Under terms of the 2022 Equity Distribution Agreement, sales of our common shares may be made by any method deemed to be an “at-the-market offering” as defined in Rule 415 under the Securities Act of 1933. The Company elects when to issue a placement notice which may, among other sales parameters, specify the number of shares to be sold, the minimum price per share to be accepted, the daily volume of shares that may be sold and the range of dates when shares may be sold. The Company intends to use the net proceeds from any offerings for general corporate purposes. Pending these uses, Core Lab intends to invest the net proceeds in investment-grade interest-bearing obligations, highly liquid cash equivalents, certificates of deposit or direct or guaranteed obligations of the United States of America. As of the date of this report, the Company has not sold any shares under the 2022 Equity Distribution Agreement.

Treasury Shares

In connection with our initial public offering in September 1995, our shareholders authorized our Management Board to repurchase up to 10% of our issued share capital, the maximum allowed under Dutch law at the time, for a period of 18 months. This authorization was renewed at subsequent annual or special shareholder meetings. At our annual shareholders' meeting on May 19, 2022, our shareholders authorized an extension to repurchase up to 10% of our issued share capital through November 19, 2023. The repurchase of shares in the open market is at the discretion of management pursuant to this shareholder authorization. Such common shares, unless canceled, may be reissued for a variety of purposes such as future acquisitions, non-employee director stock awards or employee stock awards. From the activation of the share repurchase program on October 29, 2002 through December 31, 2022, pursuant to shareholder approvals, we have repurchased 40,265,843 shares for an aggregate purchase price of approximately \$1.7 billion, or an average price of \$41.35 per share and have canceled 33,475,406 shares with an historical cost of \$1.2 billion. At December 31, 2022, we held 67,168 shares in treasury with the authority to repurchase 4,602,742 additional shares under our stock repurchase program. During the year ended December 31, 2022, we repurchased 174,348 of our common shares for \$3.9 million, including rights to 102,067 shares valued at \$2.1 million surrendered to us pursuant to the terms of a stock-based compensation plan in consideration of the participants' tax burdens resulting from the issuance of common shares under that plan. Subsequent to year-end, we have repurchased 57 of our common shares for less than \$0.1 million.

Dividend Policy

In 2008, Core Laboratories announced the initiation of a cash dividend program. In 2020, cash dividends of \$0.25 per share were paid in the first quarter and \$0.01 per share were paid in each subsequent quarter in 2020. In 2022 and 2021, cash dividends of \$0.01 per share were paid in each quarter. The declaration and payment of future dividends will be at the discretion of the Board of Supervisory Directors and will depend upon, among other things, future earnings, general financial condition, liquidity, capital requirements, and general business conditions. On February 1, 2023, the Company declared a quarterly cash dividend of \$0.01 per common share for shareholders of record on February 13, 2023 payable on March 6, 2023.

Accumulated Other Comprehensive Income (Loss)

Amounts recognized, net of income taxes, in accumulated other comprehensive income (loss) consist of the following (in thousands):

	December 31,	
	2022	2021
Pension and other postretirement benefit plans - unrecognized prior service costs and net actuarial loss	\$ (5,108)	\$ (5,595)
Interest rate swaps - net fair value gain (loss)	1,331	(4,538)
Total accumulated other comprehensive income (loss)	<u>\$ (3,777)</u>	<u>\$ (10,133)</u>

15. DERIVATIVE INSTRUMENTS AND HEDGING ACTIVITIES

We are exposed to market risks related to fluctuations in interest rates. To mitigate these risks, we utilize derivative instruments in the form of interest rate swaps. We do not enter into derivative transactions for speculative purposes.

Interest rate swaps that are designated and qualify as cash flow hedging instruments are carried at fair value and recorded in our consolidated balance sheets as an asset or liability. The full fair value of a hedging derivative is classified as a non-current asset or liability if the remaining maturity of the hedged item is more than 12 months, and as a current asset or liability if the remaining maturity of the hedged item is less than 12 months.

Unrealized gains (losses) are deferred in shareholders' equity as a component of accumulated other comprehensive income (loss). Interest rate swaps that are highly effective are recognized in income as an increase or decrease to interest expense in the period in which the related cash flows being hedged are recognized in expense.

Our credit facility previously bore interest at variable rates from LIBOR plus 1.500% to a maximum of LIBOR plus 2.875% and included a LIBOR floor of 0.500%. On July 25, 2022, the Company entered into the Amended Credit Facility, and under the Amended Credit Facility, the SOFR plus 2.00% to SOFR plus 3.00% will be applied to outstanding borrowings. See Note 11 - *Long-term Debt, net* for additional information. The Company has elected to apply the optional expedient for hedging relationships affected by reference rate reform. Accordingly, no outstanding balance on the Amended Credit Facility with a SOFR rate will preclude cash flow hedging with existing LIBOR hedging instruments.

In August 2014, we entered into a swap agreement with a notional amount of \$25 million ("2014 Variable-to-Fixed Swap"), and the LIBOR portion of the interest rate was fixed at 2.5% through August 29, 2024. In February 2020, we entered into a second swap agreement with a notional amount of \$25 million ("2020 Variable-to-Fixed Swap"), and the LIBOR portion of the interest rate was fixed at 1.3% through February 28, 2025. These interest rate swap agreements were terminated, dedesignated and settled in March 2021. At December 31, 2022, the outstanding balance on the Amended Credit Facility was \$40 million. The hedging relationship is highly effective; therefore, gains and losses on these swaps will be reclassified into interest expense in accordance with the forecasted transactions or the scheduled interest payments on the Amended Credit Facility. Approximately \$0.7 million of net losses included in accumulated other comprehensive income (loss) at December 31, 2022 is expected to be reclassified into earnings within the next 12 months as interest payments are made on the Company's Amended Credit Facility.

In March 2020, we entered into two forward interest rate swap agreements for a total notional amount of \$35 million to be effective beginning in September 2021. The purpose of these forward interest rate swap agreements was to fix the underlying risk-free rate that would be associated with the anticipated issuance of new long-term debt by the Company. These two forward interest rate swap agreements were terminated and settled in March 2021 and together with the settlement of the 2020 Variable-to-Fixed Swap resulted in a net gain of \$1.4 million that was recognized directly in the consolidated statement of operations.

In March 2021, we entered into a new forward interest rate swap agreement for a notional amount of \$60 million and carried the fair value of the terminated 2014 and 2020 Variable-to-Fixed Swaps into the new agreement in a "blend and extend" structured transaction. The purpose of this forward interest rate swap agreement is to fix the underlying risk-free rate, that would be associated with the anticipated issuance of new long-term debt by the Company in future periods. The forward interest rate swap would hedge the risk-free rate on forecasted long-term debt for a maximum of 11 years through March 2033. Risk associated with future changes in the 10-year LIBOR interest rates have been fixed up to a notional amount of \$60 million with this instrument. The interest rate swap qualifies as a cash flow hedging instrument. On April 8, 2022, the forward interest rate swap agreement was terminated and settled for a gain of \$0.6 million. The gain on the termination of the forward interest rate swap is included in accumulated other comprehensive income (loss). Upon issuing new long-term debt in future periods, the Company expects the hedging relationship on the forecasted transactions to be highly effective and amounts included in

accumulated other comprehensive income (loss) will be reclassified into interest expense in accordance with the forecasted transactions or the scheduled interest payments on future long-term fixed rate debt.

At December 31, 2022, we had fixed rate long-term debt aggregating \$135 million and variable rate long-term debt aggregating \$40 million.

The fair values of outstanding derivative instruments are as follows (in thousands):

	Fair Value of Derivatives at December 31,		Balance Sheet Classification
	2022	2021	
Derivatives designated as hedges:			
10 year forward interest rate swap	\$ —	\$ (5,446)	Other long-term (liabilities)
	<u>\$ —</u>	<u>\$ (5,446)</u>	

The fair value of all outstanding derivatives was determined using a model with inputs that are observable in the market or can be derived from or corroborated by observable data (Level 2).

The effect of the interest rate swaps on the consolidated statements of operations was as follows (in thousands):

	For the years ended December 31,			Income Statement Classification
	2022	2021	2020	
Derivatives designated as hedges:				
5 year interest rate swap				Increase (decrease) to interest
	\$ 343	\$ (740)	\$ 191	expense
10 year interest rate swap				Increase (decrease) to interest
	655	658	478	expense
	<u>\$ 998</u>	<u>\$ (82)</u>	<u>\$ 669</u>	

16. FINANCIAL INSTRUMENTS

The Company's only financial assets and liabilities which are measured at fair value on a recurring basis relate to certain aspects of the Company's benefit plans and our derivative instruments. We use the market approach to determine the fair value of these assets and liabilities using significant other observable inputs (Level 2) with the assistance of a third-party specialist. We do not have any assets or liabilities measured at fair value on a recurring basis using quoted prices in an active market (Level 1) or significant unobservable inputs (Level 3). Gains and losses related to the fair value changes in the deferred compensation assets and liabilities are recorded in general and administrative expense in the consolidated statements of operations. Gains and losses related to the fair value of the interest rate swaps are recorded in other comprehensive income (loss).

The following table summarizes the fair value balances (in thousands):

	Fair Value Measurement at December 31, 2022			
	Total	Level 1	Level 2	Level 3
Assets:				
Company owned life insurance policies ⁽¹⁾	\$ 23,787	\$ —	\$ 23,787	\$ —
	<u>\$ 23,787</u>	<u>\$ —</u>	<u>\$ 23,787</u>	<u>\$ —</u>
Liabilities:				
Deferred compensation liabilities	\$ 16,284	\$ —	\$ 16,284	\$ —
	<u>\$ 16,284</u>	<u>\$ —</u>	<u>\$ 16,284</u>	<u>\$ —</u>

	Fair Value Measurement at December 31, 2021			
	Total	Level 1	Level 2	Level 3
Assets:				
Company owned life insurance policies ⁽¹⁾	\$ 32,299	\$ —	\$ 32,299	\$ —
	<u>\$ 32,299</u>	<u>\$ —</u>	<u>\$ 32,299</u>	<u>\$ —</u>
Liabilities:				
Deferred compensation liabilities	\$ 22,114	\$ —	\$ 22,114	\$ —
10 year interest rate swap	5,446	—	5,446	—
	<u>\$ 27,560</u>	<u>\$ —</u>	<u>\$ 27,560</u>	<u>\$ —</u>

(1) Company owned life insurance policies have cash surrender value and are intended to assist in the funding of the deferred compensation liabilities.

17. STOCK-BASED COMPENSATION

We have granted restricted stock awards under two stock incentive plans: the 2020 Long-Term Incentive Plan and the 2014 Nonemployee Director Stock Incentive Plan. Awards under the following three compensation programs have been granted pursuant to both plans: (1) the Performance Share Award Program ("PSAP"); (2) the Restricted Share Award Program ("RSAP") and (3) the Restricted Share Award Program for Nonemployee Directors (the "Program").

We issue shares from either treasury stock or authorized common shares for these compensation programs. In 2022, we issued 212,047 shares out of treasury stock and 244,838 shares out of authorized common shares. We do not use cash to settle equity instruments issued under stock-based compensation awards.

2020 Long-Term Incentive Plan

Under the 2020 Long-Term Incentive Plan (the "Plan"), (a) awards may be granted under the Plan until May 20, 2025, and (b) the number of common shares that may be granted to eligible employees is a maximum of 13,000,000 common shares. At December 31, 2022, approximately 633,195 shares remained available for the grant of new awards under the Plan. Specifically, we issue long-term equity incentive awards under the Plan, consisting of the PSAP and RSAP. We believe that widespread common share ownership by key employees is an important means of encouraging superior performance and employee retention by providing additional incentives for executives to further our growth, development and financial success over a longer time horizon by personally benefiting through the ownership of our common shares and/or rights.

Performance Share Award Program

The PSAP allows us to compensate our executive and senior management teams as we meet or exceed our business objectives. The PSAP shares are unvested and may not be sold, assigned, pledged, hedged, margined or otherwise transferred by an award recipient until such time as, and then only to the extent that, the restricted performance shares have vested. In the event of a change in control (as defined in the Plan) prior to the last day of the Performance Period, as defined, all of the award recipient's restricted performance shares will vest as of the effective date of such change in control. Subject to continued employment with us, or upon death or disability, PSAP shares vest if we meet or exceed our business objectives.

The Company recorded \$3.9 million, \$7.3 million and \$6.8 million of additional non-cash stock compensation expense in the years ended December 31, 2022, 2021 and 2020, respectively, associated with the 2022, 2021 and 2020 PSAP awards for certain members of our executive management team who became retirement eligible during those years. The additional stock compensation expense has been recorded in accordance with FASB ASC Topic 718, "Compensation - Stock Compensation", which states that the period over which stock compensation expense is recognized should not extend beyond the eligible retirement age as defined in each executive's PSAP award agreement. The PSAP awards continue to remain unvested until the end of the performance period, and it can be determined whether the performance criteria have been achieved. The executive will not forfeit the right to vest in the awarded shares if they voluntarily retire from the Company after attaining the retirement age as defined in each agreement. These amounts are reflected in the totals below.

On February 11, 2020, certain members of our executive and senior management teams were awarded rights to receive PSAP awards if our calculated ROIC, as defined in the PSAP, achieved certain performance criteria as compared to the Bloomberg Peer Group, as defined in the Performance Share Award Restricted Share Agreement, at the end of the performance period, which ended on the last trading day of 2022. The Compensation Committee had added a modifier for shares awarded above the target level based upon absolute total shareholder return ("TSR"), measured over the same 3-year performance period. The 3-

year measurement period began on January 1, 2020 and ended on December 31, 2022. An aggregate of up to 473,259 common shares could be earned based on the two criteria. This arrangement was recorded as an equity award that required us to recognize compensation expense estimated at \$14.1 million over the shorter of the 3-year performance period or requisite service period, as determined for each participant individually, of which \$3.7 million and \$9.5 million was recognized in 2021 and 2020, respectively. In the second quarter of 2022, the stock compensation associated with these awards was aligned to expected vesting level of the performance share awards, which resulted in an adjustment of \$(3.3) million to reverse previously recognized compensation expense. Additionally, an adjustment of \$(1.9) million, further reducing stock compensation expense, was recorded in 2022, to revalue the awards to their fair value, upon final determination of the performance criteria in December 2022. A total of 318,506 shares vested at end of the performance period in 2022. As a result of these adjustments associated with the vesting of the 2020 PSAP awards, stock compensation expense in the Company's general and administrative expenses was reduced by \$5.2 million in 2022. The participants surrendered 67,168 common shares to settle any personal tax liabilities which may result from the award, as permitted by the agreement. We recorded these surrendered shares as treasury stock with an aggregate cost of \$1.4 million at \$20.27 per share.

On February 11, 2021, certain members of our executive and senior management teams were awarded rights to receive an aggregate of up to 268,298 common shares if our calculated ROIC, as defined in the PSAP, achieves certain performance criteria as compared to the Bloomberg Peer Group, as defined in the Performance Share Award Restricted Share Agreement, at the end of the performance period, which ends on the last trading day of 2023 and shares awarded above the target level, are also subject to certain TSR performance criteria, as defined in the PSAP. This arrangement is recorded as an equity award that requires us to recognize compensation expense estimated at \$9.4 million over the shorter of the 3-year performance period or requisite service period, as determined for each participant individually, of which \$1.1 million and \$6.6 million has been recognized in 2022 and 2021, respectively. The unrecognized compensation expense is expected to be recognized over an estimated amortization period of 12 months.

On February 17, 2022, certain members of our executive and senior management teams were awarded rights to receive an aggregate of up to 362,254 common shares if our calculated ROIC, as defined in the PSAP, achieves certain performance criteria as compared to the Bloomberg Peer Group, as defined in the Performance Share Award Restricted Share Agreement, at the end of the performance period, which ends on the last trading day of 2024 and shares awarded above the target level, are also subject to certain TSR performance criteria, as defined in the PSAP. This arrangement is recorded as an equity award that requires us to recognize compensation expense estimated at \$9.3 million over the shorter of the 3-year performance period or requisite service period, as determined for each participant individually, of which \$6.4 million has been recognized in 2022. The unrecognized compensation expense is expected to be recognized over an estimated amortization period of 24 months.

Restricted Share Award Program

In 2004, the Compensation Committee of our Board of Supervisory Directors approved the RSAP to attract and retain key employees, and to better align employee interests with those of our shareholders. Under this arrangement we awarded grants totaling 25,500 shares, 83,866 shares and 321,084 shares in 2022, 2021 and 2020, respectively. Each of these grants has a vesting period of principally either five or six years, and vests ratably on an annual basis. There are no performance accelerators for early vesting for these awards. Awards under the RSAP are classified as equity awards and recorded at the grant-date fair value with the compensation expense recognized over the expected life of the award. As of December 31, 2022, there was \$9.5 million of unrecognized total stock-based compensation expense relating to non-vested RSAP awards. The unrecognized compensation expense is expected to be recognized over an estimated weighted-average amortization period of 35 months. The grant-date fair value of shares granted was \$0.5 million, \$2.8 million and \$4.8 million in 2022, 2021 and 2020, respectively. We recognized compensation expense of \$4.5 million, \$6.1 million and \$6.4 million in 2022, 2021 and 2020, respectively. The total grant-date fair value, which is the intrinsic value, of the shares vested was \$5.3 million, \$6.5 million and \$7.7 million in 2022, 2021 and 2020, respectively.

2014 Nonemployee Director Stock Incentive Plan

Under the 2014 Nonemployee Director Stock Incentive Plan (the "Director Plan") awards may be granted until May 12, 2024. The Director Plan provides common shares for grant to our eligible Supervisory Directors. The maximum number of shares available for award under this plan is 1,400,000 common shares. As of December 31, 2022, approximately 525,215 shares remained available for issuance under the Director Plan. Only non-employee Supervisory Directors are eligible for these equity-based awards under the Director Plan.

In 2011, the Compensation Committee of our Board of Supervisory Directors approved the Program to compensate our non-employee Supervisory Directors. Under this arrangement we awarded grants totaling 32,910 shares, 25,842 shares, 87,042 shares in 2022, 2021 and 2020, respectively. The shares awarded in 2022, 2021 and 2020 have a vesting period of one year for each grant. There are no performance accelerators for early vesting for these awards. Awards under the Program are classified

as equity awards and recorded at the grant-date fair value with compensation expense recognized over the expected life of the award. As of December 31, 2022, there was \$0.3 million of unrecognized stock-based compensation relating to non-vested Program awards. The unrecognized compensation expense is expected to be recognized over an estimated weighted-average amortization period of 3 months. The grant-date fair value of shares granted was \$1.0 million, \$0.8 million and \$1.1 million in 2022, 2021 and 2020, respectively, and we have recognized compensation expense of \$1.0 million, \$1.1 million and \$0.8 million in 2022, 2021 and 2020, respectively.

Equity Compensation Plan Information

Information about our equity compensation plans as of December 31, 2022 is as follows:

	December 31, 2022		
	Number of Common Shares to be Issued Upon Exercise of Outstanding Options, Warrants and Rights	Weighted Average Exercise Price of Outstanding Options, Warrants and Rights	Number of Common Shares Remaining Available for Future Issuance Under Equity Compensation Plans
Equity compensation plans approved by our shareholders:			
2020 Long-Term Incentive Plan	981,445	—	633,195
2014 Nonemployee Director Stock Incentive Plan	32,910	—	525,215
Total	1,014,355		1,158,410

Stock-based Compensation

Non-vested restricted share awards outstanding as of December 31, 2022 and changes during the year under both the Plan and the Director Plan are as follows:

	December 31, 2022	
	Number of Shares	Weighted Average Grant Date Fair Value per Share
Non-vested at December 31, 2021	1,035,671	\$ 34.30
Granted	491,630	\$ 26.42
Vested	(456,884)	\$ 35.11
Forfeited	(56,062)	\$ 31.03
Non-vested at December 31, 2022	1,014,355	\$ 30.29

Stock-based compensation expense under both the Plan and the Director Plan recognized in the consolidated statement of operations is as follows (in thousands):

	For the Years Ended December 31,		
	2022	2021	2020
Cost of services and product sales	\$ 4,572	\$ 5,704	\$ 5,170
General and administrative expense	3,184	13,389	2,224
Total stock-based compensation expense	\$ 7,756	\$ 19,093	\$ 7,394

18. IMPAIRMENTS AND OTHER CHARGES

The geopolitical conflict between Russia and Ukraine, which began in February 2022 and has continued through December 31, 2022, has resulted in disruptions to our operations in Russia and Ukraine. The Company evaluated long-lived assets in Russia and Ukraine as part of our assessment of our assets group and did not identify triggering events as of December 31, 2022. As of December 31, 2022, all laboratory facilities, offices, and locations in Russia continued to operate and remained

profitable and no specific asset losses were identified. The Company's operations and associated fixed assets in Ukraine are immaterial.

For the year ended December 31, 2022 and 2021, there were no triggering events during the year and, based on our assessment, we determined there was no impairment for any of our reporting units or asset groups, and no impairment has been recorded in 2022 or 2021.

We completed our annual impairment assessment of goodwill for our reporting units as of December 31, 2022 and 2021, by performing a qualitative assessment, which indicated it was not more likely than not that there was an impairment and therefore no quantitative test was required.

In 2020, the COVID-19 global pandemic resulted in government mandated shut-downs, cross-border travel restrictions, home sheltering and social distancing efforts to contain the virus and mitigate the incidence of infection. The COVID-19 mitigation efforts globally resulted in a sharp decline in the consumption of crude-oil and refined petroleum products, which in turn led to a significant decrease in spot and forward commodity prices. These events resulted in substantial declines in the valuation of companies operating in the oil and gas services industry, including Core Laboratories. As a result, we determined that it was more likely than not that the fair value of our reporting units was less than their carrying value, which triggered an updated impairment assessment by the Company as of March 31, 2020. We performed a detailed quantitative test in accordance with ASC Topic 360 Impairment or Disposal of Long-Lived Assets and ASC Topic 350 Intangibles-Goodwill and Other as updated by ASU 2017-04 Simplifying the Test for Goodwill Impairment on our indefinite-lived and long-lived assets related to asset groups, and our reporting units.

We have two reporting units that are the same as our two operating segments, with goodwill balances aggregating \$213.4 million as of March 31, 2020. We performed a detailed quantitative impairment assessment of our reporting units. We determined that the fair value of one of the reporting units, our Production Enhancement operating segment representing approximately \$114.0 million of the goodwill, was less than the carrying value. As a result, we concluded that the goodwill associated with our Production Enhancement operating segment was fully impaired, resulting in a \$114.0 million goodwill impairment charge in March 2020. We determined that the Reservoir Description reporting unit's fair value is above the carrying value, which represented the remaining balance of \$99.4 million of goodwill.

In 2020, we identified a triggering event for one of the asset groups under the Production Enhancement reporting unit. The estimated fair value, based on applying the income approach model, of one of the asset groups was determined to be below its carrying value. As of March 31, 2020, we recorded a charge of \$8.2 million to impair the intangible assets relating to the business acquisition of Guardian Technology in 2018.

19. INVENTORY WRITE-DOWN

During the year ended December 31, 2020 as a result of the continuing adverse impact of COVID-19 and significant reduction in rig count and completions that affected the consumption and anticipated demand for certain of our products, we

recorded an additional inventory obsolescence and write-down of \$10.4 million primarily in our Production Enhancement operating segment.

There were no inventory write-downs for the years ended December 31, 2022 and 2021.

20. OTHER (INCOME) EXPENSE, NET

The components of other (income) expense, net are as follows (in thousands):

	For the Years Ended December 31,		
	2022	2021	2020
Gain on sale of assets	\$ (1,068)	\$ (427)	\$ (1,254)
Results of non-consolidated subsidiaries	(294)	(62)	(125)
Foreign exchange (gain) loss, net	229	(228)	1,160
Rents and royalties	(709)	(571)	(466)
Return on pension assets and other pension costs	(545)	(306)	(1,502)
Gain on sale of business	—	(1,012)	—
Insurance and other settlements	(669)	(2,236)	—
Loss on lease abandonment	—	—	504
Severance and other charges	3,332	—	3,943
Other, net	(998)	(753)	(434)
Total other (income) expense, net	<u>\$ (722)</u>	<u>\$ (5,595)</u>	<u>\$ 1,826</u>

In 2022, we sold our ownership interest in mineral rights of certain properties for a net gain of \$0.7 million which is included in gain on sale of assets. We incurred property and other losses in a fire incident that occurred in 2020 that we received full and final insurance settlement of \$0.6 million in 2021. The North America mid-continent winter storm in February 2021 caused business interruptions and property losses to certain facilities, and we received insurance settlements of \$0.7 million and \$1.6 million in 2022 and 2021, respectively.

Foreign Currency Risk

We operate in a number of international areas which exposes us to foreign currency exchange rate risk. We do not currently hold or issue forward exchange contracts or other derivative instruments for hedging or speculative purposes. Foreign exchange gains and losses result from fluctuations in the USD against foreign currencies and are included in other (income) expense, net in the consolidated statements of operations. We recognized foreign exchange losses in countries where the USD weakened against the local currency and we had net monetary liabilities denominated in the local currency; as well as countries where the USD strengthened against the local currency and we had net monetary assets denominated in the local currency. We recognized foreign exchange gains in countries where the USD strengthened against the local currency and we had net monetary liabilities denominated in the local currency and in countries where the USD weakened against the local currency and we had net monetary assets denominated in the local currency.

Foreign exchange (gains) losses by currency are summarized in the following table (in thousands):

	For the Years Ended		
	December 31,		
	2022	2021	2020
British Pound	\$ 212	\$ 86	\$ 653
Canadian Dollar	238	77	590
Colombian Peso	(430)	(281)	(331)
Euro	(382)	(450)	458
Indonesian rupiah	379	123	(96)
Other currencies, net	212	217	(114)
Foreign exchange (gain) loss, net	<u>\$ 229</u>	<u>\$ (228)</u>	<u>\$ 1,160</u>

21. EARNINGS PER SHARE

We compute basic earnings per share by dividing net income attributable to Core Laboratories N.V. by the number of weighted average common shares outstanding during the period. Diluted earnings per share includes the incremental effect of

contingently issuable shares from performance and restricted stock awards, as determined using the treasury stock method. The following table summarizes the calculation of weighted average common shares outstanding used in the computation of basic and diluted earnings per share (in thousands):

	For the Years Ended December 31,		
	2022	2021	2020
Weighted average common shares outstanding - basic	46,334	46,009	44,477
Effect of dilutive securities:			
Restricted shares	71	139	—
Performance shares	408	542	—
Weighted average common shares outstanding - assuming dilution	<u>46,813</u>	<u>46,690</u>	<u>44,477</u>

For the year ended December 31, 2020, the number of outstanding performance shares and restricted shares of Core Laboratories N.V. common stock that were excluded from diluted earnings per share calculation, as their impact would be antidilutive, were as follows (in thousands):

	December 31, 2020
Performance shares	308
Restricted shares	189

22. SEGMENT REPORTING AND OTHER DISAGGREGATED INFORMATION

Segment Reporting

We operate our business in two segments. These complementary operating segments provide different services and products and utilize different technologies for evaluating and improving reservoir performance and increasing oil and gas recovery from new and existing fields:

- *Reservoir Description:* Encompasses the characterization of petroleum reservoir rock and reservoir fluids samples to increase production and improve recovery of crude oil and natural gas from our clients' reservoirs. We provide laboratory-based analytical and field services to characterize properties of crude oil and crude oil-derived products to the oil and gas industry. We also provide proprietary and joint industry studies based on these types of analyses and manufacture associated laboratory equipment. In addition, we provide reservoir description capabilities that support various activities associated with energy transition projects, including services that support carbon capture, utilization and storage, hydrogen storage, geothermal projects, and the evaluation and appraisal of mining activities around lithium and other elements necessary for energy storage.
- *Production Enhancement:* Includes services and manufactured products associated with reservoir well completions, perforations, stimulation, production and well abandonment. We provide integrated diagnostic services to evaluate and monitor the effectiveness of well completions and to develop solutions aimed at increasing the effectiveness of enhanced oil recovery projects.

We use the same accounting policies to prepare our operating segment results as are used to prepare our consolidated financial statements. All interest and other non-operating income (expense) is attributable to Corporate & Other and is not allocated to specific operating segments. Summarized financial information of our operating segments is shown in the following table (in thousands):

As at and for the years ended:	Reservoir Description	Production Enhancement	Corporate & Other (1)	Consolidated
December 31, 2022				
Revenue from unaffiliated clients	\$ 307,691	\$ 182,044	\$ —	\$ 489,735
Inter-segment revenue	523	315	(838)	—
Segment operating income (loss)	22,902	16,351	2,271	41,524
Total assets (at end of period)	307,108	159,628	111,618	578,354
Capital expenditures	7,458	2,181	577	10,216
Depreciation and amortization	11,630	4,643	888	17,161
December 31, 2021				
Revenue from unaffiliated clients	\$ 313,609	\$ 156,643	\$ —	\$ 470,252
Inter-segment revenue	346	299	(645)	—
Segment operating income (loss)	28,958	15,163	1,141	45,262
Total assets (at end of period)	305,256	142,310	133,287	580,853
Capital expenditures	9,572	2,281	1,686	13,539
Depreciation and amortization	11,789	5,728	999	18,516
December 31, 2020				
Revenue from unaffiliated clients	\$ 355,041	\$ 132,226	\$ —	\$ 487,267
Inter-segment revenue	313	521	(834)	—
Segment operating income (loss)	55,044	(133,449)	1,600	(76,805)
Total assets (at end of period)	327,386	129,568	111,625	568,579
Capital expenditures	6,135	5,460	285	11,880
Depreciation and amortization	13,612	6,203	1,052	20,867

(1) "Corporate and other" represents those items not directly related to a particular operating segment and eliminations.

Disaggregated Revenue

We derive our revenue from services and product sales contracts with clients primarily in the oil and gas industry. No single client accounted for 10% or more of revenue in any of the periods presented. Summarized financial information of our contracts is shown in the following table (in thousands):

	For the Years Ended December 31,		
	2022	2021	2020
Reservoir Description Services	\$ 296,201	\$ 296,576	\$ 332,085
Production Enhancement Services	50,773	47,766	44,336
Total Revenue - Services	\$ 346,974	\$ 344,342	\$ 376,421
Reservoir Description Product sales	\$ 11,490	\$ 17,033	\$ 22,956
Production Enhancement Product sales	131,271	108,877	87,890
Total Revenue - Product sales	\$ 142,761	\$ 125,910	\$ 110,846
Total Revenue	\$ 489,735	\$ 470,252	\$ 487,267

We attribute service revenue to the country in which the service was performed rather than where the reservoir or project is located while we attribute product sales revenue to the country where the product was shipped as we feel this gives a clearer view of our operations. We do, however, have significant levels of service revenue performed and recorded in the U.S. that are sourced from projects on non-U.S. oilfields. Summarized financial information of our geographic regions is shown in the following table (in thousands):

As at and for the years ended:	United States	Other Countries ⁽¹⁾ ₍₂₎	Consolidated
December 31, 2022			
Revenue	\$ 166,701	\$ 323,034	\$ 489,735
Property, plant and equipment, net	54,384	50,644	105,028
December 31, 2021			
Revenue	\$ 148,183	\$ 322,069	\$ 470,252
Property, plant and equipment, net	58,031	52,921	110,952
December 31, 2020			
Revenue	\$ 158,937	\$ 328,330	\$ 487,267
Property, plant and equipment, net	62,619	52,674	115,293

(1) Revenue earned in other countries, including the Netherlands, was not individually greater than 10% of our consolidated revenue in 2022, 2021 and 2020.

(2) Property, plant and equipment, net in other countries, including the Netherlands, was not individually greater than 10% of our consolidated property, plant and equipment in 2022, 2021 and 2020.

23. SUBSEQUENT EVENTS

On January 17, 2023, the Company announced its intention to reorganize the Company's corporate structure, which will include redomestication (the "Redomestication") of the parent company from the Netherlands to the United States as Core Laboratories Inc., a Delaware corporation. Following shareholder approval, the Redomestication will be completed through a series of steps, as follows:

- (i) Core Laboratories N.V. will merge with and into Core Laboratories Luxembourg S.A, a wholly-owned subsidiary of Core Laboratories N.V., with Core Laboratories Luxembourg S.A. surviving, and
- (ii) As soon as practicable thereafter, Core Laboratories Luxembourg S.A. will migrate out of Luxembourg and redomesticate into the state of Delaware, as Core Laboratories Inc., which will become the ultimate parent company.

Upon completion of the transaction, Core Laboratories N.V. shareholders will hold one share of common stock of Core Laboratories Inc. for each common share of Core Laboratories N.V. owned immediately prior to the Redomestication. The Company's shares will continue to trade uninterrupted during and upon completion of the Redomestication.

The Redomestication requires a shareholder vote for approval, which will be conducted through an extraordinary general meeting of the Company's shareholders, anticipated to occur in late March of 2023. If shareholder approval is obtained, the transaction is expected to become effective approximately 30 days following the date of the extraordinary general meeting.

Upon completion of the transaction, the common shares of Core Laboratories Inc. will remain listed on the New York Stock Exchange ("NYSE") under the ticker symbol "CLB" and will be registered with the U.S. Securities and Exchange Commission ("SEC") under the Securities Exchange Act of 1934, as amended, and be subject to the same SEC reporting requirements, the mandates of the Sarbanes-Oxley Act of 2002 and the applicable corporate governance rules of the NYSE. The Company will continue to report its financial results in U.S. dollars and under U.S. GAAP. Core Laboratories Inc. will in the ordinary course of business make available customary financial information and other reports filed with the SEC, consistent with its established current practices.

CORE LABORATORIES N.V.

**Schedule II - Valuation and Qualifying Account
(In thousands)**

	Balance at Beginning of Period	Additions Charged to/Recovered from Expense	Write-offs	Other ⁽¹⁾	Balance at End of Period
Year ended December 31, 2022					
Reserve for credit losses	\$ 3,225	\$ (6)	\$ (1,006)	\$ 1	\$ 2,214
Year ended December 31, 2021					
Reserve for credit losses	\$ 4,068	\$ (256)	\$ (588)	\$ 1	\$ 3,225
Year ended December 31, 2020					
Reserve for credit losses	\$ 2,730	\$ 1,618	\$ (650)	\$ 370	\$ 4,068

(1) Comprised primarily of differences due to changes in exchange rate and adjustments associated with the discontinued operations.