

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549**

FORM 10-Q

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

FOR THE QUARTERLY PERIOD ENDED June 30, 2021

OR

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

COMMISSION FILE NUMBER: 1-12691

ION GEOPHYSICAL CORPORATION
(EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)

Delaware
(State or other jurisdiction of
incorporation or organization)

22-2286646
(I.R.S. Employer
Identification No.)

**2105 CityWest Blvd. Suite 100
Houston, Texas 77042-2855
(Address of principal executive offices) (Zip Code)**

REGISTRANT'S TELEPHONE NUMBER, INCLUDING AREA CODE: (281) 933-3339

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

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

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

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

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

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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

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

At August 9, 2021, there were 29,637,478 shares of common stock, par value \$0.01 per share, outstanding.

ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES
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PART I. FINANCIAL INFORMATION
Item 1. Financial Statements

ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(UNAUDITED)

	June 30, 2021	December 31, 2020
	(In thousands, except share data)	
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 26,731	\$ 37,486
Accounts receivable, net	10,531	8,045
Unbilled receivables	7,127	11,262
Inventories, net	10,783	11,267
Prepaid expenses and other current assets	7,243	7,116
Total current assets	62,415	75,176
Property, plant and equipment, net	8,131	9,511
Multi-client data library, net	55,145	50,914
Goodwill	19,898	19,565
Right-of-use assets	31,594	35,501
Other assets	2,079	2,926
Total assets	\$ 179,262	\$ 193,593
LIABILITIES AND STOCKHOLDERS' DEFICIT		
Current liabilities:		
Current maturities of long-term debt	\$ 26,976	\$ 143,731
Accounts payable	24,971	33,418
Accrued expenses	20,151	16,363
Accrued multi-client data library royalties	20,341	21,359
Deferred revenue	1,840	3,648
Current maturities of operating lease liabilities	8,360	7,570
Total current liabilities	102,639	226,089
Long-term debt, net of current maturities	106,861	—
Operating lease liabilities, net of current maturities	34,289	38,372
Other long-term liabilities	202	222
Total liabilities	243,991	264,683
Deficit:		
Common stock, \$0.01 par value; authorized 100,000,000 shares; outstanding 28,577,886 and 14,333,101 shares at June 30, 2021 and December 31, 2020, respectively.	285	143
Additional paid-in capital	995,323	958,584
Accumulated deficit	(1,042,265)	(1,011,516)
Accumulated other comprehensive loss	(19,398)	(19,913)
Total stockholders' deficit	(66,055)	(72,702)
Noncontrolling interests	1,326	1,612
Total deficit	(64,729)	(71,090)
Total liabilities and deficit	\$ 179,262	\$ 193,593

See accompanying Footnotes to Condensed Consolidated Financial Statements.

ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(UNAUDITED)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
	(In thousands, except per share data)			
Service revenues	\$ 12,366	\$ 15,547	\$ 19,830	\$ 63,032
Product revenues	7,348	7,184	13,920	16,113
Total net revenues	19,714	22,731	33,750	79,145
Cost of services	11,223	13,267	20,493	35,542
Cost of products	4,853	4,880	8,760	9,508
Impairment of multi-client data library	—	—	—	1,167
Gross profit	3,638	4,584	4,497	32,928
Operating expenses:				
Research, development and engineering	3,382	3,036	6,329	7,044
Marketing and sales	3,179	1,219	5,938	6,077
General, administrative and other operating expenses	4,458	5,801	9,845	14,803
Impairment of goodwill	—	—	—	4,150
Total operating expenses	11,019	10,056	22,112	32,074
Income (loss) from operations	(7,381)	(5,472)	(17,615)	854
Interest expense, net	(3,299)	(3,414)	(6,561)	(6,635)
Other income (expense), net	(4,070)	6,771	(4,677)	7,200
Income (loss) before income taxes	(14,750)	(2,115)	(28,853)	1,419
Income tax expense	8,776	3,052	1,927	8,926
Net loss	(23,526)	(5,167)	(30,780)	(7,507)
Less: Net income (loss) attributable to noncontrolling interests	(60)	(52)	31	25
Net loss attributable to ION	\$ (23,586)	\$ (5,219)	\$ (30,749)	\$ (7,482)
Net loss per share:				
Basic and Diluted	\$ (0.90)	\$ (0.37)	\$ (1.47)	\$ (0.53)
Weighted average number of common shares outstanding:				
Basic and Diluted	26,198	14,241	20,967	14,236

See accompanying Footnotes to Condensed Consolidated Financial Statements.

ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(UNAUDITED)

	<u>Three Months Ended June 30,</u>		<u>Six Months Ended June 30,</u>	
	<u>2021</u>	<u>2020</u>	<u>2021</u>	<u>2020</u>
	(In thousands)			
Net loss	\$ (23,526)	\$ (5,167)	\$ (30,780)	\$ (7,507)
Other comprehensive loss, net of taxes, as appropriate:				
Foreign currency translation adjustments	177	(734)	515	(2,515)
Comprehensive net loss	(23,349)	(5,901)	(30,265)	(10,022)
Comprehensive (income) loss attributable to noncontrolling interests	(249)	(52)	(21)	25
Comprehensive net loss attributable to ION	<u>\$ (23,598)</u>	<u>\$ (5,953)</u>	<u>\$ (30,286)</u>	<u>\$ (9,997)</u>

See accompanying Footnotes to Condensed Consolidated Financial Statements.

ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(UNAUDITED)

	Six Months Ended June 30,	
	2021	2020
	(In thousands)	
Cash flows from operating activities:		
Net loss	\$ (30,780)	\$ (7,507)
Adjustments to reconcile net loss to net cash (used in) provided by operating activities:		
Depreciation and amortization (other than multi-client library)	2,380	1,848
Amortization of multi-client data library	8,719	12,701
Impairment of multi-client data library	—	1,167
Impairment of goodwill	—	4,150
Stock-based compensation expense	779	1,094
Amortization of government relief funding	—	(6,923)
Provision for expected credit losses	498	—
Write-down of excess and obsolete inventory	—	—
Loss on restructuring transactions	4,696	—
Deferred income taxes	—	338
Change in operating assets and liabilities:		
Accounts receivable	(2,955)	18,678
Unbilled receivables	4,151	(2,080)
Inventories	339	179
Accounts payable, accrued expenses and accrued royalties	(7,891)	(6,930)
Deferred revenue	(1,813)	(466)
Other assets and liabilities	2,569	102
Net cash provided by (used in) operating activities	<u>(19,308)</u>	<u>16,351</u>
Cash flows from investing activities:		
Investment in multi-client data library	(12,643)	(14,596)
Purchase of property, plant and equipment	(767)	(697)
Net cash used in investing activities	<u>(13,410)</u>	<u>(15,293)</u>
Cash flows from financing activities:		
Borrowings under revolving line of credit	—	27,000
Repayments under revolving line of credit	(2,750)	(4,500)
Proceeds from the rights offering	41,836 (a)	—
Payments on notes payable and long-term debt	(18,576) (b)	(1,527)
Costs associated with debt issuance	(7,696) (c)	—
Net proceeds from the registered direct offering	9,802	—
Receipt of Paycheck Protection Program loan	—	6,923
Other financing activities	(575)	5
Net cash provided by financing activities	<u>22,041</u>	<u>27,901</u>
Effect of change in foreign currency exchange rates on cash, cash equivalents and restricted cash	(78)	538
Net increase (decrease) in cash, cash equivalents and restricted cash	(10,755)	29,497
Cash, cash equivalents and restricted cash at beginning of period	39,813	33,118
Cash, cash equivalents and restricted cash at end of period (see Footnote 12)	<u>\$ 29,058</u>	<u>\$ 62,615</u>

(a) Represents \$30.1 million in New Notes and \$11.7 million of ION common stock issued in connection with the Rights Offering described in the footnotes.

(b) Consists primarily of \$17.1 million payment for the Old Notes resulting from the Exchange Offer.

(c) Represents transaction costs incurred in connection with the Restructuring Transactions.

See accompanying Footnotes to Condensed Consolidated Financial Statements.

ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' DEFICIT
(UNAUDITED)

	Three Months Ended June 30, 2021						
	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Noncontrolling Interests	Total Deficit
	Shares	Amount					
(In thousands, except shares)							
Balance at April 1, 2021	17,344,187	\$ 173	\$ 968,633	\$ (1,018,679)	\$ (19,575)	\$ 1,077	\$ (68,371)
Net (loss) income	—	—	—	(23,586)	—	60	(23,526)
Translation adjustment	—	—	—	—	177	189	366
Stock-based compensation expense	—	—	494	—	—	—	494
Vesting of restricted stock units/awards	448,839	4	(4)	—	—	—	—
Vested restricted stock cancelled for employee minimum income taxes	(120,402)	(1)	(258)	—	—	—	(259)
Shares issued as part of the Restructuring Transactions	10,905,262	109	26,458	—	—	—	26,567
Balance at June 30, 2021	<u>28,577,886</u>	<u>\$ 285</u>	<u>\$ 995,323</u>	<u>\$ (1,042,265)</u>	<u>\$ (19,398)</u>	<u>\$ 1,326</u>	<u>\$ (64,729)</u>

	For the Six Months Ended June 30, 2021						
	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Noncontrolling Interests	Total Deficit
	Shares	Amount					
(In thousands, except shares)							
Balance at January 1, 2021	14,333,101	\$ 143	\$ 958,584	\$ (1,011,516)	\$ (19,913)	\$ 1,612	\$ (71,090)
Net (loss) income	—	—	—	(30,749)	—	(31)	(30,780)
Translation adjustment	—	—	—	—	515	52	567
Dividend payment to noncontrolling interest	—	—	—	—	—	(307)	(307)
Stock-based compensation expense	—	—	780	—	—	—	780
Vesting of restricted stock units/awards	473,204	5	(5)	—	—	—	—
Vested restricted stock cancelled for employee minimum income taxes	(123,682)	(2)	(266)	—	—	—	(268)
Stocks issued as part of the registered direct offering	2,990,001	30	9,772	—	—	—	9,802
Stocks issued as part of the Restructuring Transactions	10,905,262	109	26,458	—	—	—	26,567
Balance at June 30, 2021	<u>28,577,886</u>	<u>\$ 285</u>	<u>\$ 995,323</u>	<u>\$ (1,042,265)</u>	<u>\$ (19,398)</u>	<u>\$ 1,326</u>	<u>\$ (64,729)</u>

	Three Months Ended June 30, 2020						
	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Noncontrolling Interests	Total Deficit
	Shares	Amount					
(In thousands, except shares)							
Balance at April 1, 2020	14,240,126	\$ 142	\$ 957,254	\$ (976,554)	\$ (21,099)	\$ 1,654	\$ (38,603)
Net (loss) income	—	—	—	(5,219)	—	52	(5,167)
Translation adjustment	—	—	—	—	(734)	(98)	(832)
Stock-based compensation expense	—	—	477	—	—	—	477
Exercise of stock options	5,000	—	15	—	—	—	15
Vesting of restricted stock units/awards	1,000	—	—	—	—	—	—
Vested restricted stock cancelled for employee minimum income taxes	(297)	—	—	—	—	—	—
Balance at June 30, 2020	<u>14,245,829</u>	<u>\$ 142</u>	<u>\$ 957,746</u>	<u>\$ (981,773)</u>	<u>\$ (21,833)</u>	<u>\$ 1,608</u>	<u>\$ (44,110)</u>

	For the Six Months Ended June 30, 2020						
	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Noncontrolling Interests	Total Deficit
	Shares	Amount					
(In thousands, except shares)							
Balance at January 1, 2020	14,224,787	\$ 142	\$ 956,647	\$ (974,291)	\$ (19,318)	\$ 2,188	\$ (34,632)
Net (loss) income	—	—	—	(7,482)	—	(25)	(7,507)
Translation adjustment	—	—	—	—	(2,515)	(555)	(3,070)
Stock-based compensation expense	—	—	1,094	—	—	—	1,094
Exercise of stock options	5,000	—	15	—	—	—	15
Vesting of restricted stock units/awards	17,089	—	—	—	—	—	—
Vested restricted stock cancelled for employee minimum income taxes	(1,047)	—	(10)	—	—	—	(10)
Balance at June 30, 2020	<u>14,245,829</u>	<u>\$ 142</u>	<u>\$ 957,746</u>	<u>\$ (981,773)</u>	<u>\$ (21,833)</u>	<u>\$ 1,608</u>	<u>\$ (44,110)</u>

See accompanying Footnotes to Condensed Consolidated Financial Statements.

ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES
FOOTNOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(UNAUDITED)

(1) Summary of Significant Accounting Policies

Basis of Presentation

The condensed consolidated balance sheet of ION Geophysical Corporation and its subsidiaries (collectively referred to as the “Company” or “ION,” unless the context otherwise requires) at December 31, 2020, has been derived from the Company’s audited consolidated financial statements at that date. The condensed consolidated balance sheet at June 30, 2021, and the condensed consolidated statements of operations, condensed consolidated statements of comprehensive loss, condensed consolidated statements of stockholders’ deficit for the three and six months ended June 30, 2021 and 2020 and the condensed consolidated statements of cash flows for the six months ended June 30, 2021 and 2020, are unaudited. In the opinion of management, all adjustments of a normal recurring nature that are necessary for a fair presentation of the results of the interim period have been included. Interim results are not necessarily indicative of the operating results for a full year or of future operations. Intercompany transactions and balances have been eliminated.

The Company’s condensed consolidated financial statements reflect a non-redeemable noncontrolling interest in a majority-owned affiliate which is reported as a separate component of equity in “Noncontrolling interest” in the condensed consolidated balance sheets. Net (income) loss attributable to noncontrolling interest is stated separately in the condensed consolidated statements of operations. The activity for this noncontrolling interest relates to proprietary processing projects in Brazil.

Certain reclassifications were made to previously reported amounts in the condensed consolidated financial statements and notes thereto; particularly, the presentation of revenue by geographic area to make previously reported amounts consistent with current period presentation.

These condensed consolidated financial statements have been prepared using accounting principles generally accepted in the United States (“GAAP”) for interim financial information and the instructions to Form 10-Q and applicable rules of Regulation S-X of the Securities and Exchange Commission (the “SEC”). Certain information and footnote disclosures normally included in annual financial statements presented in accordance with GAAP have been omitted. The accompanying condensed consolidated financial statements should be read in conjunction with the Company’s Annual Report on Form 10-K for the year ended December 31, 2020.

Going Concern

On April 20, 2021, the Company completed the Restructuring Transactions (as further discussed below) that extended the maturity of the notes tendered in the Exchange Offer (as defined below) by four years to December 2025 and provided additional liquidity. While the Company completed the Restructuring Transactions and revenues in the second quarter improved sequentially, the timing of the market recovery remains uncertain and revenues for the first half of 2021 were lower than expected. These lower than planned revenues will have an impact on second half cash collections necessary to fund the Company’s operations and meet its debt and other obligations. This raises substantial doubt about the Company’s ability to continue as a going concern for the next twelve months. The condensed consolidated financial statements conform with accounting principles generally accepted in the United States of America (“GAAP”) on a going concern basis of accounting, which contemplates continuity of operations, realization of assets and satisfaction of liabilities and commitments in the normal course of business. Accordingly, the Company’s condensed consolidated financial statements exclude certain adjustments that might result if the Company is unable to continue as a going concern.

The Company continually evaluates conditions in the capital markets and will continue to explore additional funding opportunities through private or public equity transactions, debt financing or other capital sources such as the sale of non-strategic assets to meet its ongoing cash needs. In addition, the Company is implementing a significant cost reduction program, building on the over \$40 million eliminated last year, in an effort to right-size its business. These additional cost initiatives are targeting between \$15 million to \$20 million of annualized savings through a combination of both short-term and long-term reductions. In addition to maintaining the Company’s ongoing cost discipline, it will continue to identify opportunities for government relief such as employee retention credits. For further details, refer to Footnote 5, “*Government Relief Funding*.” Lastly, the Company’s plan to sell its 49% ownership interest in INOVA Geophysical Equipment Limited remains ongoing. This management plan reflects the Company’s continued focus on preserving cash and managing liquidity in the current uncertain macroeconomic environment.

If the Company is unable to raise additional funds through equity issuances, further debt financing arrangements, sales of assets or through other means of preserving cash through cost reduction initiatives, the Company’s liquidity and operations would be significantly impacted.

Old Notes Restructuring

On April 20, 2021, the Company successfully completed its previously announced offer to exchange (the “Exchange Offer”) the Old Notes for newly issued 8.00% Senior Secured Second Priority Notes due 2025 (the “New Notes”) and other consideration in the form of cash and ION common stock, as described in the Company’s Prospectus dated March 10, 2021 and its previously announced rights offering (the “Rights Offering”) to its holders of the Company’s common stock, par value \$0.01 per share (the “Common Stock”) to purchase for (i) \$2.78 principal amount of the New Notes per right, at a purchase price of 100% of the principal amount thereof or (ii) 1.08 shares of common stock per right, at a purchase price of \$2.57 per whole share of common stock. The Exchange Offer and the Rights Offering are sometimes referred to herein as the “Restructuring Transactions”.

As described in more detail in Footnote 4 “*Long-term Debt*”, the holders of the New Notes may convert all or any portion of their New Notes at their option at any time prior maturity. The initial conversion price is \$3.00 per share of Common Stock and is subject to adjustment as described in the New Notes Indenture. The total number of shares of Common Stock that may be issued upon conversion of the New Notes is 38.7 million shares, which excludes an additional 6.5 million shares that may be issued upon a conversion resulting from a make-whole change of control.

In the Exchange Offer, approximately \$113.5 million, or approximately 94.1%, of the \$120.6 million outstanding Old Notes were accepted and exchanged for (i) \$84.7 million aggregate principal amount of its New Notes, (ii) 6.1 million shares of Common Stock, including 1.5 million shares issued as the early participation payment and 4.6 million shares issued as stock consideration in lieu of the New Notes and (iii) \$20.7 million paid in cash, including \$3.6 million of accrued and unpaid interest that became due on the Old Notes as part of the exchange. The Company has accepted for exchange all such Old Notes validly tendered and not validly withdrawn in the Exchange Offer as of the expiration time on April 12, 2021. Pursuant to the Exchange

Offer, the Company will make an offer to participants to repurchase New Notes at par for up to 50% of the proceeds raised in excess of \$35.0 million from the Rights Offering valued at \$3.4 million.

In the concurrent Rights Offering, an aggregate amount of \$41.8 million of rights (including over-subscription) was validly exercised by the holders of Common Stock, apportioned as \$30.1 million in New Notes and \$11.7 million in Common Stock allocated in 4.6 million shares. All over-subscription rights were exercised without proration as the \$50.0 million limit on proceeds was not exceeded. Backstop parties were paid 5% backstop fees, in kind, resulting in the issuance of an additional \$1.5 million in aggregate principal amount of New Notes and 0.2 million shares of Common Stock.

In total, \$116.2 million in aggregate principal amount of New Notes and 10.9 million shares of Common Stock were issued. The Company received approximately \$14 million in net proceeds from the transactions after deducting noteholder obligations, estimated transaction fees and accrued and unpaid interest paid on the Old Notes. After the Restructuring Transactions, \$7.1 million of Old Notes remain outstanding and are due along with unpaid interest on December 15, 2021.

The Restructuring Transactions resulted in amendment to the Old Notes Indenture (as defined in Footnote 4, "*Long-term Debt*") effective as of April 20, 2021. The Old Notes were modified to, among other things, provide for the release of the second priority security interest in the collateral securing the Old Notes, and deleted in their entirety substantially all of the restrictive covenants and certain events of default pertaining to the Old Notes. Refer to Footnote 4 "*Long-term Debt - Old Notes*" for further details.

COVID-19 Business Impact and Response

The COVID-19 pandemic caused the global economy to enter a recessionary period starting in the second quarter of 2020. During 2020, the exploration and production (“E&P”) industry faced the dual impact of demand deterioration from COVID-19 and market oversupply from increased production, which caused oil and natural gas prices to decline significantly for most of 2020. The sharp commodity price decline triggered E&P companies to reduce budgets by approximately 25%. Exploration offerings and data purchases are often discretionary and, therefore, receive disproportionately higher reductions than overall budget cuts. Consequently, there has been a material slowdown in offshore seismic spending since second quarter of 2020.

During 2021, the global economy has started to recover and Brent crude prices, which are most relevant to ION’s internationally focused business, have rebounded above pre-pandemic levels, averaging over \$70 per barrel during July 2021. This reflects the continued expectation of rising oil demand as both the global economic activity and COVID-19 vaccination rates increase, combined with ongoing crude oil production limits from members of OPEC and partner countries. However, energy companies’ capital discipline remains firmly in place and management expects the seismic market to continue gradually improving yet remain challenging in the near-term.

In January 2021, the Biden Administration ordered an indefinite moratorium on new U.S. oil and gas leasing and drilling permits on federal lands onshore and offshore waters. Management believes this will have a negligible impact on its business given the Company’s diversified global footprint and international offshore focus. Should the moratorium result in longer-term change, this could drive large scale E&P company portfolio investment more towards international offshore, which would be well aligned with the Company’s offerings.

The Company expects continued portfolio rationalization and high grading as E&P companies seek to find the best return on investment opportunities to meet oil and gas demand in the next decade. Near-term, due to the impact of the COVID-19 pandemic, project high grading will likely be more acute due to budget reductions. Over the last several years, the Company had strategically shifted its portfolio closer to the reservoir, where revenue tends to be higher and more consistent. New Venture data acquisition offshore and Software and related personnel-based offshore services are expected to continue to be most impacted by COVID-19 travel restrictions. While offshore operations have been temporarily impacted by travel restrictions, the Company believes the demand for digitalization technologies will remain strong. In some cases, ION technology is expected to be more relevant and valuable in the current environment, such as offerings that facilitate remote working.

ION continues to work closely with its clients to understand their budgets and spending priorities and to scale its business appropriately. The Company partially mitigated the impact of the current macroeconomic environment by fully benefiting from the structural changes and associated cost reductions totaling approximately \$40 million through salary cuts, reduced capital expenditures, renegotiation of the Company’s leases and application for various government assistance programs, among others. In addition, the Company is implementing a further cost reduction program targeting between \$15 million to \$20 million of savings through a combination of both short-term and long-term reductions in an effort to right-size its business. The management plan reflects the Company’s continued focus on preserving cash and managing liquidity in the current uncertain macroeconomic environment.

Significant Accounting Policies

The Company’s significant accounting policies are disclosed in Footnote 1 “*Summary of Significant Accounting Policies*” of the Annual Report on Form 10-K for the year ended December 31, 2020. There have been no changes in such policies or the application of such policies during the six months ended June 30, 2021.

Use of Estimates

The preparation of condensed consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the condensed consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Significant estimates are made at discrete points in time based on relevant market information. These estimates may be subjective in nature and involve uncertainties and matters of judgment and, therefore, cannot be determined with precision. Areas involving significant estimates include, but are not limited to, collectability of accounts and unbilled receivables, inventory valuation reserves, sales forecasts related to multi-client data library, impairment of property, plant and equipment and goodwill and deferred taxes. Actual results could materially differ from those estimates.

Recent Accounting Pronouncement

In August 2020, the Financial Accounting Standards Board (“FASB”) issued ASU No. 2020-06, “*Debt — Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging — Contracts in Entity’s Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity’s Own Equity*.” The new guidance eliminates two of the three models in Accounting Standards Codification (“ASC”) 470-20 that require separating embedded conversion features from convertible instruments. As a result, only conversion features accounted for under the substantial premium model in ASC 470-20 and those that require bifurcation in accordance with ASC 815-153 will be accounted for separately. For contracts in an entity’s own equity, the new guidance eliminates some of the requirements in ASC 815-404 for equity classification. The guidance also addresses how convertible instruments are accounted for in the diluted earnings per share calculation and requires enhanced disclosures about the terms of convertible instruments and contracts in an entity’s own equity. For public business entities other than smaller reporting companies as defined by the SEC, the guidance is effective for annual periods beginning after December 15, 2021, and interim periods therein. For all other entities, it is effective for annual periods beginning after December 15, 2023, and interim periods therein. Early adoption is permitted in fiscal years beginning after December 15, 2020. The Company adopted the standard as of January 1, 2021. This resulted in presenting the New Notes holders’ conversion option within “long-term debt, net of current maturities” account in the condensed consolidated balance sheets instead of a separate presentation in equity. See Footnote 4, “*Long-term Debt - New Notes*” for further details.

(2) Segment Information

The Company evaluates and reviews its results of operations based on two reporting segments: E&P Technology & Services and Operations Optimization. Refer to Item 2, “*Management’s Discussion and Analysis of Financial Condition and Results of Operations*” for information about each business segment’s business, products and services.

The segments represent components of the Company for which separate financial information is available that is utilized on a regular basis by the Chief Operating Decision Maker in determining how to allocate resources and evaluate performance. The Company measures segment operating results

based on income (loss) from operations.

A summary of segment information follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Net revenues:				
E&P Technology & Services:				
New Venture	\$ 3,882	\$ 4,686	\$ 4,969	\$ 6,127
Data Library	5,393	6,867	7,877	46,998
Total multi-client revenues	9,275	11,553	12,846	53,125
Imaging and Reservoir Services	2,429	3,673	6,094	8,615
Total	\$ 11,704	\$ 15,226	\$ 18,940	\$ 61,740
Operations Optimization:				
Optimization Software & Services	\$ 3,370	\$ 3,377	\$ 6,214	\$ 7,804
Devices	4,640	4,128	8,596	9,601
Total	\$ 8,010	\$ 7,505	\$ 14,810	\$ 17,405
Total net revenues	\$ 19,714	\$ 22,731	\$ 33,750	\$ 79,145
Gross profit (loss):				
E&P Technology & Services	\$ 1,018	\$ 2,264	\$ (589)	\$ 25,994 (c)
Operations Optimization	2,620	2,320	5,086	6,934
Total gross profit	\$ 3,638	\$ 4,584	\$ 4,497	\$ 32,928
Gross margin:				
E&P Technology & Services	9%	15%	(3)%	42%
Operations Optimization	33%	31%	34%	40%
Total gross margin	18%	20%	13%	42%
Income (loss) from operations:				
E&P Technology & Services	\$ (2,691)	\$ 442	\$ (7,544)	\$ 18,394 (c)
Operations Optimization	244	(474)	(576)	(3,733) (d)
Support and other	(4,934)	(5,440)	(9,495)	(13,807)
Income (loss) from operations	(7,381)	(5,472)	(17,615)	854
Interest expense, net	(3,299)	(3,414)	(6,561)	(6,635)
Other income (expense), net	(4,070) (a)	6,771 (b)	(4,677) (a)	7,200 (b)
Income (loss) before income taxes	\$ (14,750)	\$ (2,115)	\$ (28,853)	\$ 1,419

(a) Includes loss on restructuring transactions of \$4.7 million for the three and six months ended June 30, 2021 resulting from the exchange of the Company's Old Notes for New Notes.

(b) Includes amortization of government relief funding of \$6.9 million for the three and six months ended June 30, 2020.

(c) Includes impairment of multi-client data library of \$1.2 million for the six months ended June 30, 2020.

(d) Includes impairment of goodwill of \$4.2 million for the six months ended June 30, 2020.

Intersegment sales are insignificant for all periods presented.

(3) Revenue from Contracts with Customers

The Company derives revenue from the (i) sale or license of multi-client and proprietary data, imaging and reservoir services within its E&P Technologies & Services segment; (ii) sale, license and repair of seismic data acquisition systems and other equipment; and (iii) sale or license of seismic command and control software systems and software solutions for operations management within its Operations Optimization segment. All E&P Technology & Services' revenues and the services component of Optimization Software & Services' revenues under Operations Optimization segment are classified as service revenues. All other revenues are classified as product revenues.

The Company uses a five-step model to determine proper revenue recognition from customer contracts. Revenue is recognized when (i) a contract is approved by all parties; (ii) the goods or services promised in the contract are identified; (iii) the consideration the Company expects to receive in exchange for the goods or services promised is determined; (iv) the consideration is allocated to the goods and services in the contract; and (v) control of the promised goods or services is transferred to the customer. The Company is not required to disclose information about remaining contractual future performance obligations with an original term of one year or less. The Company does not have any contractual future performance obligations with an original term of over one year.

Revenue by Geographic Area

The following table is a summary of net revenues by geographic area (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Europe	\$ 6,599	\$ 4,684	\$ 10,965	\$ 12,156
Africa	6,479	4,117	8,251	16,358
Asia Pacific	3,437	2,631	5,638	10,393
Latin America	1,072	7,992	4,575	28,053
North America	934	2,204	2,141	6,092
Middle East	704	942	1,432	1,896
Other	489	161	748	4,197
Total	\$ 19,714	\$ 22,731	\$ 33,750	\$ 79,145

Product revenues are allocated to geographic locations on the basis of the ultimate destination of the equipment, if known. If the ultimate destination of such equipment is not known, product revenues are allocated to the geographic location of initial shipment. Service revenues, which primarily relate to the Company's E&P Technology & Services segment, are allocated based upon the billing location of the customer and the geographic location of the data.

See Footnote 2 "Segment Information" for total net revenues by segment for the three and six months ended June 30, 2021 and 2020.

Unbilled Receivables

Unbilled receivables balances relate to revenues recognized on multi-client surveys, imaging and reservoir services and devices equipment repairs on a proportionate basis, and on licensing of multi-client data for which invoices have not yet been presented to the customer. The following table is a summary of unbilled receivables (in thousands):

	June 30, 2021	December 31, 2020
New Venture	\$ 5,396	\$ 9,158
Imaging and Reservoir Services	1,604	680
Devices	127	1,424
Total	\$ 7,127	\$ 11,262

The changes in unbilled receivables are as follows (in thousands):

Unbilled receivables at December 31, 2020	\$ 11,262
Recognition of unbilled receivables (a)	30,111
Revenues billed to customers (a)	(34,246)
Unbilled receivables at June 30, 2021	\$ 7,127

(a) Includes all gross revenue recognition and related billing activity of the Company. As a matter of process, all net revenue recognized is initially reflected as an unbilled receivable and subsequently billed to customers, as applicable, including net revenue for all of software and a portion of devices within the Operations Optimization segment, although they are billed at the time of recognition.

Deferred Revenue

Billing practices are governed by the terms of each contract based upon achievement of milestones or pre-agreed schedules. Billing does not necessarily correlate with revenue recognized on a proportionate basis as work is performed and control is transferred to the customer. Deferred revenue represents cash received in excess of revenue not yet recognized as of the reporting period but that will be recognized in future periods. The following table is a summary of deferred revenues (in thousands):

	June 30, 2021	December 31, 2020
New Venture	\$ 500	\$ 2,169
Imaging and Reservoir Services	316	665
Optimization Software & Services	946	766
Devices	78	48
Total	\$ 1,840	\$ 3,648

The changes in deferred revenues were as follows (in thousands):

Deferred revenue at December 31, 2020	\$ 3,648
Cash collected in excess of revenue recognized	1,831
Recognition of deferred revenue	(3,639)
Deferred revenue at June 30, 2021	<u>\$ 1,840</u>

The Company expects to recognize a majority of deferred revenue within the next twelve months.

Credit Risks

For each of the six months ended June 30, 2021 and 2020, the Company had one customer with sales that each exceeded 10% of the Company's consolidated net revenues. Revenues related to each of these customers are included within the E&P Technology & Services segment.

At June 30, 2021, the Company had two customers with balances that accounted for 53% of the Company's total combined accounts receivable and unbilled receivable balances. At June 30, 2020, the Company had two customers with a balance that accounted for 33% of the Company's total combined accounts receivable and unbilled receivable balances.

The Company routinely evaluates the financial stability and creditworthiness of its customers. The Company has a corporate credit policy that is intended to minimize the risk of financial loss due to a customer's inability to pay. Credit coverage decisions for customers are based on references, payment histories, financial and other data. The Company utilizes a third party trade credit insurance policy. The Company has historically not extended long-term credit to its customers.

Concentration of Foreign Sales Risk

The majority of the Company's foreign sales are denominated in U.S. dollars. For the six months ended June 30, 2021 and 2020, international sales comprised 94% and 92%, respectively, of total net revenues. To the extent that world events or economic conditions negatively affect the Company's future sales to customers in many regions of the world, as well as the collectability of the Company's existing receivables, the Company's future results of operations, liquidity and financial condition would be adversely affected.

(4) Long-term Debt

The following table is a summary of long-term debt (in thousands):

	June 30, 2021	December 31, 2020
New notes (maturing December 15, 2025)	\$ 116,193	\$ —
Old notes (maturing December 15, 2021)	7,097	120,569
Revolving credit facility (maturing August 16, 2023)	19,750	22,500
Equipment finance leases (see Footnote 11)	129	734
Other debt	—	905
Costs associated with issuances of debt	(9,332)	(977)
Total	133,837	143,731
Current maturities of long-term debt	(26,976)	(143,731)
Long-term debt, net of current maturities	\$ 106,861	\$ —

Old Notes

The Old Notes were senior secured second-priority debt obligations guaranteed by GX Technology Corporation, ION Exploration Products (U.S.A.) Inc., I/O Marine Systems Inc. and GX Geoscience Corporation, S. de R.L. de C.V. (the "Guarantors"). As a result of the Restructuring Transactions on April 20, 2021 as further discussed in Footnote 1 "*Summary of Significant Accounting Policies - Old Notes Restructuring*", \$113.5 million in aggregate principal amount outstanding of Old Notes were tendered and exchanged for New Notes. At June 30, 2021, \$7.1 million of Old Notes remain outstanding and are due along with unpaid interest on December 15, 2021.

The April 2016 indenture governing the Old Notes (the "Old Notes Indenture") contained certain covenants that, among other things, limited or prohibited ION Geophysical Corporation's and its restricted subsidiaries from taking certain actions or permitting certain conditions to exist during the term of the Old Notes, including among other things, incurring additional indebtedness in excess of permitted indebtedness, creating liens, paying dividends and making other distributions in respect of ION Geophysical Corporation's capital stock, redeeming ION Geophysical Corporation's capital stock, making investments or certain other restricted payments, selling certain kinds of assets, entering into transactions with affiliates, and effecting mergers or consolidations. These and other restrictive covenants contained in the Old Notes Indenture are subject to certain exceptions and qualifications. All of ION Geophysical Corporation's subsidiaries are currently restricted subsidiaries.

On April 20, 2021, the Company, the Guarantors, Wilmington Savings Fund Society, FSB, as trustee, and collateral agent, entered into a supplemental indenture (the "Supplemental Indenture") to the Old Notes Indenture, dated as of April 28, 2016, among the Company, the Guarantors, Wilmington Savings Fund Society, FSB (as successor to Wilmington Trust, National Association), as trustee, and U.S. Bank National Association, as collateral agent, governing the Old Notes Indenture. The Supplemental Indenture, among other things, provided for the release of the second priority security interest in the collateral securing the Old Notes, and deleted in their entirety substantially all of the restrictive covenants and certain events of default pertaining to the Old Notes. The Old Notes Indenture, as modified by the Supplemental Indenture, is materially less restrictive and affords significantly reduced protection to holders of such securities as compared to the restrictive covenants, events of default and other provisions previously contained in the Old Notes Indenture.

At June 30, 2021, the Company was in compliance with all of the covenants under the Old Notes.

New Notes

The \$116.2 million aggregate principal amount outstanding New Notes are governed by the Indenture (the "New Notes Indenture") dated as of April 20, 2021, among the Company, certain of the Company's subsidiaries, as Guarantors (as defined under *Old Notes* above), and UMB Bank, National Association, as trustee and collateral agent (the "New Notes Trustee"). The New Notes are senior secured second-priority debt obligations of the Company and will mature on December 15, 2025. The New Notes bear interest at a rate of 8.00% per annum. Interest on the New Notes will be payable on each June 15 and December 15, commencing on June 15, 2021. The New Notes will initially be guaranteed by each of ION's material domestic subsidiaries and one subsidiary organized under the laws of Mexico ("Guarantors"). For further details, refer to Footnote 1 "*Summary of Significant Accounting Policies - Old Notes Restructuring*."

The New Notes are senior obligations of ION; secured on a second-priority basis, equally and ratably with all obligations of ION under any future Parity Lien Debt (as defined in the New Notes Indenture), by Liens on all of the assets of ION other than the Excluded Assets, subject to the Liens securing ION's obligations under the Credit Agreement (as defined under *Revolving Credit Facility* below) and any other Priority Lien Debt and other Permitted Prior Liens (as defined in the New Notes Indenture); are effectively junior to any Permitted Prior Liens, to the extent of the value of the assets of ION subject to those Permitted Prior Liens; are senior in right of payment to any future subordinated Indebtedness of ION, if any; are unconditionally guaranteed by the Guarantors; and are structurally subordinated to all existing and future Indebtedness (as defined in the New Notes Indenture), claims of holders of preferred stock and other liabilities of subsidiaries of ION that do not guarantee the New Notes.

Each guarantee of the New Notes are senior obligations of each Guarantor; secured on a second-priority basis, equally and ratably with all obligations of that Guarantor under any other future Parity Lien Debt, by Liens on all of the assets of that Guarantor other than the Excluded Assets, subject to the Liens securing that Guarantor's guarantee of the Credit Agreement obligations and any other Priority Lien Debt and other Permitted Prior Liens; are effectively junior, to the extent of the value of the Collateral (as defined in the New Notes Indenture), to that Guarantor's guarantee of the Credit Agreement and any other Priority Lien Debt, which are secured on a first-priority basis by the same assets of that Guarantor that secure the New Notes; are effectively junior to any Permitted Prior Liens, to the extent of the value of the assets of that Guarantor subject to those Permitted Prior Liens; and are senior in right of payment to any future subordinated Indebtedness of that Guarantor, if any.

The New Notes Indenture contains covenants that, among other things, limit the Company's ability, and the ability of ION's restricted subsidiaries, to incur additional debt or issue certain preferred stock; make certain investments or pay dividends or distributions on ION's capital stock, purchase or redeem or retire capital stock, or make other restricted payments; sell assets, including capital stock of ION's restricted subsidiaries; restrict dividends or other payments by restricted subsidiaries; create liens; create unrestricted subsidiaries; enter into transactions with affiliates; and merge or consolidate with another company. These covenants are subject to a number of important limitations and exceptions that are described in the New Notes Indenture.

At June 30, 2021, the Company was in compliance with all of the covenants under the New Notes.

Holders of New Notes may convert all or any portion of their New Notes at their option at any time prior to the close of business on the business day immediately preceding the maturity date. The conversion rate will initially be 333 shares of Common Stock per \$1,000 principal amount of New Notes (equivalent to an initial conversion price of approximately \$3.00 per share of Common Stock) and is subject to adjustment as described in the New Notes Indenture. Upon conversion of a New Note, ION will satisfy its conversion obligation by paying or delivering, as the case may be, cash, shares of its Common Stock or a combination of cash and Common Stock, at ION's election. If ION satisfies its conversion obligation solely in cash or through payment and delivery, as the case may be, of a combination of cash and shares of its Common Stock, the amount of cash and shares of Common Stock, if any, due upon conversion will be based on a daily conversion value calculated on a proportionate basis for each trading day in a 30 trading day observation period. The total number of shares of Common Stock that may be issued upon conversion of the New Notes is 38.7 million shares, which excludes an additional 6.5 million shares that may be issued upon a conversion resulting from a make-whole change of control.

On or after the day that is the eighteen (18) month anniversary of the issue date of the New Notes (the "Issue Date"), ION may require the conversion of all or part of the New Notes, at its option, if Common Stock, as determined by ION, has a 20-day volume weighted average price of at least 175% of the conversion price then in effect ending on, and including, the trading day immediately preceding the date on which ION provides notice of

conversion (an “Optional Conversion”). If ION undergoes an Optional Conversion prior to the third anniversary of the Issue Date, holders of New Notes will be entitled to a make-whole premium payment in cash equal to the applicable premium amount.

The New Notes will be redeemable, in whole or in part, at ION's option at any time prior to December 15, 2023, at a cash redemption price equal to 100.0% of the principal amount of New Notes to be redeemed plus a make-whole premium and accrued and unpaid interest. The New Notes will also be redeemable, in whole or in part, at the Company's option at any time on or after December 15, 2023, at a cash redemption price equal to 100.0% of the principal amount of New Notes to be redeemed plus accrued and unpaid interest.

If a Change of Control (as described in the New Notes Indenture) occurs, holders of the New Notes may require the Company to repurchase their New Notes at a cash repurchase price equal to 101% of the principal amount of the New Notes to be repurchased, plus accrued and unpaid interest.

Upon certain asset sales, the Company may be required to use the net proceeds therefrom to purchase New Notes at an offer price in cash equal to 100% of the aggregate principal amount thereof, plus accrued and unpaid interest.

The Company issued one (1) share of Series A Preferred Stock (the “Series A Preferred Stock”) to the New Notes Trustee to (i) provide certain rights and protections to holders of the New Notes and (ii) allow, under certain circumstances, the holders of New Notes to vote on an as-converted basis. The New Notes Trustee shall take direction from holders of 50.1% of the New Notes for any action requiring the consent of the holder of the Series A Preferred Stock or each act on which the holder of the Series A Preferred Stock is entitled to vote.

Following a default or event of default under the New Notes Indenture, the Series A Preferred Stock will be entitled to vote with the Common Stock of the Company as a single class and having voting power equal to the number of shares of Common Stock issuable upon the conversion of the New Notes. In addition, at all times when the Common Stock is entitled to vote, the Series A Preferred Stock will be entitled to vote with the Common Stock as a single class and having voting powers equal to the number of shares of Common Stock issuable upon the conversion of the New Notes for any transaction (a) modifying, amending, supplementing, or waiving any provision of ION's organizational documents or (b) entering into any merger, consolidation, sale of all or substantially all of ION's assets, or other business combination transactions. The holder of the Series A Preferred Stock has the right to appoint two (2) directors to ION's board of directors, both of whom must be independent. This holder exercised this right in June 2021.

The one share of Series A Preferred Stock (i) ranks pari passu in respect of voting rights with respect to Common Stock, (ii) has a liquidation preference equal to \$1.00, (iii) will not produce preferred dividends or ordinary dividends, (iv) is not transferable, except to a successor New Notes Trustee under the terms of the New Notes Indenture, (v) is not convertible into any other class of equity of ION, and (vi) will not be granted registration rights. The Series A Preferred Stock may be redeemed by the Company upon the conversion into Common Stock, in the aggregate, of 75% or more of the New Notes. The redemption price will be \$1.00.

On April 20, 2021, the Company and the Guarantors acknowledged and agreed to an intercreditor agreement (the "Intercreditor Agreement") by and among PNC Bank, National Association ("PNC"), as first lien representative and collateral agent for the first lien secured parties, and UMB Bank, National Association, as second lien representative and collateral agent for the second lien secured parties. The Intercreditor Agreement, among other things, defines the relative priorities of the respective security interests in the collateral securing the New Notes and the obligations under the Company's senior secured credit facility and certain other matters relating to the administration of security interests, exercise of remedies, certain bankruptcy-related provisions and other intercreditor matters.

The Intercreditor Agreement superseded and replaced the second lien intercreditor agreement, dated as of April 28, 2016, by and among PNC Bank, National Association, as first lien representative for the first lien secured parties and collateral agent for the first lien secured parties, and Wilmington Savings Fund Society, FSB, as second lien representative and collateral agent for the second lien secured parties and third lien representative for the third lien secured parties and U.S. Bank National Association, as collateral agent for the third lien secured parties.

Derivative Liabilities Associated with the New Notes

On April 20, 2021, the Company issued New Notes in exchange for Old Notes (see detailed discussion above on both the New Notes and the Old Notes). Due to the interest make-whole premium payable in cash associated with the Optional Conversion Feature of the New Notes (as described above in more details), the Company has determined that the Optional Conversion Feature is a derivative liability. Further, the interest make-whole premium is not clearly and closely related to the New Notes and is therefore considered a derivative liability (the Optional Conversion Feature and interest make-whole premium are referenced herein as "derivative financial instruments" or "derivatives"). The accounting treatment for derivative financial instruments requires that the Company record the fair value of the derivatives at inception and is adjusted for fair value changes at each reporting date. Considering the impact of other features in the New Notes, the fair value of these derivative instruments using the "with or without" scenario under a lattice option pricing model was determined to be zero over the life of the derivative financial instruments.

Loss on Extinguishment of Old Notes

As discussed in more detail in Footnote 1 "Summary of Significant Accounting Policies - Old Notes Restructuring", on April 20, 2021, the Company successfully completed its offer to exchange the Old Notes for New Notes. As a result of these transactions, the Old Notes with a carrying value of \$113.5 million were replaced with \$84.7 million of New Notes issued at par and other consideration in the form of cash of \$17.1 million and ION common stock of \$15.7 million, including the early participation payment.

In accordance with ASC Topic No. 470, "Debt – Modifications and Extinguishments" (Topic 470), the transactions noted above were determined to be an extinguishment of the existing debt and an issuance of new debt. As a result, the Company recorded a loss on the extinguishment of debt in the amount of \$4.7 million presented in "Other income (expense)" account in the Condensed Consolidated Statements of Operations. Of the \$4.7 million loss on the extinguishment of debt, \$4.0 million represents the 1.5 million shares the Company issued to the holders of the Old Notes as the early participation payment. The remaining \$0.7 million represents the write-off of the remaining debt issuance costs related to the Old Notes.

Revolving Credit Facility

On April 20, 2021, ION and its material U.S. subsidiaries — GX Technology Corporation, ION Exploration Products (U.S.A.) Inc. and I/O Marine Systems Inc. (the "Material U.S. Subsidiaries") — along with GX Geoscience Corporation, S. de R.L. de C.V., a limited liability company (Sociedad de Responsabilidad Limitada de Capital Variable) organized under the laws of Mexico, and a subsidiary of the Company (the "Mexican Subsidiary"), (the Material U.S. Subsidiaries and the Mexican Subsidiary are collectively, the "Subsidiary Borrowers", together with ION Geophysical Corporation are the "Borrowers") — the financial institutions party thereto, as lenders, and PNC, as agent for the lenders, entered into that certain Fourth Amendment and Joinder to Revolving Credit and Security Agreement (the "Fourth Amendment"), amending the Revolving Credit and Security Agreement, dated as of August 22, 2014 (as previously amended by the First Amendment to Revolving Credit and Security Agreement, dated as of August 4, 2015, the Second Amendment to Revolving Credit and Security Agreement, dated as of April 28, 2016 and the Third Amendment to Revolving Credit and Security Agreement, dated as of August 16, 2018, the "Credit Agreement"). The Credit Agreement, as amended by the First Amendment, the Second Amendment, the Third Amendment and the Fourth Amendment is herein called the "Credit Facility"). The Credit Agreement, as amended by the Fourth Amendment, among other things, permitted the consummation of the Restructuring Transactions, including the issuance of the New Notes and certain cash payments to the Company's noteholders in connection with the Exchange Offer and the Rights Offering, and made certain other changes to the Credit Agreement's definitions and other provisions, including with respect to LIBOR, where the successor LIBOR rate index will be the benchmark replacement determined by PNC. The Credit Facility is available to provide for the Borrowers' general corporate needs, including working capital requirements, capital expenditures, surety deposits and acquisition financing.

The maximum interest rate in the Credit Facility is 3% per annum for domestic rate loans and 4% per annum for LIBOR rate loans with a minimum interest rate of 2% for domestic rate loans and 3% for LIBOR rate loans based on a leverage ratio for the preceding four-quarter period. The Credit Facility matures on August 16, 2023. The terms include a minimum excess borrowing availability threshold (excess borrowing availability less than \$6.25 million for five consecutive days or \$5.0 million on any given day), which (if the Borrowers have minimum excess borrowing availability below any such threshold) triggers the agent's right to exercise dominion over cash and deposit accounts.

The maximum amount available under the Credit Facility is the lesser of \$50.0 million or a monthly borrowing base. The borrowing base under the Credit Facility will increase or decrease monthly using a formula based on certain eligible receivables, eligible inventory and other amounts, including a percentage of the net orderly liquidation value of the Borrowers' multi-client data library (not to exceed \$28.5 million for the multi-client data library component). The borrowing base calculation includes the eligible billed receivables of the Mexican Subsidiary up to a maximum of \$5.0 million. At June 30, 2021, there was \$19.8 million outstanding indebtedness under the Credit Facility and the undrawn remaining borrowing base capacity was \$6.1 million. To maintain the minimum excess borrowing availability threshold of \$6.25 million (as described further above and below), the Company repaid \$0.4 million of the outstanding indebtedness under the Credit Facility in July 2021.

The obligations of Borrowers under the Credit Facility are secured by a first-priority security interest in 100% of the stock of the Subsidiary Borrowers and 65% of the equity interest in ION International Holdings L.P., and by substantially all other assets of the Borrowers. However, the first-priority security interest in the other assets of the Mexican Subsidiary is capped to a maximum exposure of \$5.0 million.

The Credit Facility contains covenants that, among other things, limit or prohibit the Borrowers, subject to certain exceptions and qualifications, from incurring additional indebtedness in excess of permitted indebtedness (including finance lease obligations), repurchasing equity, paying dividends or distributions, granting or incurring additional liens on the Borrowers' properties, pledging shares of the Borrowers' subsidiaries, entering into certain merger transactions, entering into transactions with the Company's affiliates, making certain sales or other dispositions of the Borrowers' assets, making certain investments, acquiring other businesses and entering into sale-leaseback transactions with respect to the Borrowers' property. The Credit Facility contains customary event of default provisions (including a "change of control" event affecting ION Geophysical Corporation), the occurrence of which could lead to an acceleration of the Company's obligations under the Credit Facility.

The Credit Facility requires that the Borrowers maintain a minimum fixed charge coverage ratio of 1.1 to 1.0 as of the end of each fiscal quarter during the existence of a covenant testing trigger event. The fixed charge coverage ratio is defined as the ratio of (i) ION's earnings before interest, taxes, depreciation and amortization ("EBITDA"), minus unfunded capital expenditures made during the relevant period, minus distributions (including tax distributions) and dividends made during the relevant period, minus cash taxes paid during the relevant period, to (ii) certain debt payments made during the relevant period. A covenant testing trigger event occurs upon (a) the occurrence and continuance of an event of default under the Credit Facility or (b) by a two-step process based on (i) a minimum excess borrowing availability threshold (excess borrowing availability less than \$6.25 million for five consecutive business days or \$5.0 million on any given business day), and (ii) the Borrowers' unencumbered cash maintained in a PNC deposit account is less than the Borrowers' then outstanding obligations.

At June 30, 2021, the Company was in compliance with all of the covenants under the Credit Facility.

A summary of future principal obligations under long-term debt and equipment capital lease obligations follows (in thousands):

Years Ending June 30,	Notes	Other Financing (1)	Total
2022	\$ 7,097	\$ 19,879	\$ 26,976
2023	—	—	—
2024	—	—	—
2025	—	—	—
Thereafter	116,193	—	116,193
Total	<u>\$ 123,290</u>	<u>\$ 19,879</u>	<u>\$ 143,169</u>

(1) While the outstanding balance of \$19.8 million under the Credit Facility is shown as a current liability, the Credit Facility matures on August 16, 2023.

(5) Government Relief Funding

Paycheck Protection Program

On April 11, 2020, the Company entered into a Note Agreement (“Note”) with PNC amounting to \$6.9 million pursuant to the Coronavirus Aid, Relief, and Economic Security Act’s (“CARES Act”) Paycheck Protection Program (“PPP”). Amounts outstanding under this Note bore interest at 1% per annum as of the date of disbursement. The Note was scheduled to mature in two years after the receipt of the loan proceeds. On June 16, 2021, the Company received the notice of forgiveness from the Small Business Administration for the full amount of the Note including all accrued interest.

The Company recognized the Note of \$6.9 million as a deferred income liability during 2020 and fully amortized to other income in the condensed consolidated income statements for the six months ended June 30, 2020, as the related expenses it was intended to offset were incurred from April 2020 to June 2020.

Employee Retention Credit

The Taxpayer Certainty and Disaster Tax Relief Act of 2020, enacted December 27, 2020, made a number of changes to the employee retention tax credits previously made available under the CARES Act, including modifying and extending the Employee Retention Credit (“ERC”) through December 31, 2021. As a result of the new legislation, eligible employers can now claim a refundable tax credit against the employer share of Social Security tax equal to 70% of the qualified wages they pay to employees after December 31, 2020 through December 31, 2021. This resulted in an ERC of \$3.2 million for the six months ended June 30, 2021, \$1.6 million of which has been received during the second quarter 2021 and the remaining \$1.6 million is expected to be refunded during the third quarter 2021. Further, based on current legislation, the Company expects that it will qualify for the ERC during the second half of 2021 with the refund expected to be received during fourth quarter 2021 and first quarter 2022.

(6) Net Loss per Common Share

Basic net loss per share is computed by dividing net loss attributable to ION by the weighted average number of common shares outstanding during the period. In computing diluted net income per share, basic net income per share is adjusted based on the assumption that dilutive restricted stock and restricted stock unit awards have vested and outstanding dilutive stock options have been exercised and the aggregate proceeds were used to reacquire common stock using the average price of such common stock for the period. The total number of shares issuable pursuant to outstanding stock options at June 30, 2021 and 2020 of 407,967 and 647,483, respectively, were excluded as their inclusion would have an anti-dilutive effect. The total number of shares issuable pursuant to restricted stock unit awards outstanding at June 30, 2021 and 2020 of 1,182,092 and 873,371, respectively, were excluded as their inclusion would have an anti-dilutive effect.

(7) Income Taxes

The Company maintains a valuation allowance for substantially all of its deferred tax assets. A valuation allowance is established or maintained when it is “more likely than not” that all or a portion of deferred tax assets will not be realized. Based on all available positive and negative evidence, the Company believed that it is more likely than not that the Company’s deferred tax assets will not be realized. A significant item of objectively verifiable negative evidence is the substantial doubt that the Company will continue as a going concern within the next twelve months. As a result of this substantial doubt as of June 30, 2021, the Company re-established a non-cash valuation allowance of \$7.7 million on its net deferred tax assets of certain foreign subsidiaries. The Company will continue to record a valuation allowance until there is sufficient evidence to warrant reversal, including the removal of the substantial doubt that the Company will continue as a going concern.

The tax provision for the six months ended June 30, 2021 has been calculated based on actual tax expense incurred during the period. Given the current uncertainty in expected income generated in various foreign jurisdictions, where tax rates can vary greatly, the Company’s actual tax rate is the best estimate of the year-to-date tax expense. The Company’s effective tax rates for the three and six months ended June 30, 2021 and 2020 were negatively impacted by the change in valuation allowance related to U.S. operating losses for which the Company cannot currently recognize a tax benefit. The Company’s income tax expense for the six months ended June 30, 2021 and 2020 of \$1.9 million and \$8.9 million primarily relates to results from the Company’s non-U.S. businesses, including a \$2.2 million of valuation allowance for the six months ended June 30, 2020.

In response to the global pandemic related to COVID-19, the President of the United States signed into law the CARES Act on March 27, 2020. The CARES Act provides numerous relief provisions for corporate taxpayers, including modifications of the utilization limitations on net operating losses, favorable expansions of the deduction for business interest expense under Internal Revenue Code Section 163(j), and the ability to accelerate timing of refundable AMT credits. For the six months ended June 30, 2021 and 2020, there were no material tax impacts to our condensed consolidated financial statements as it relates to COVID-19 measures. The Company continues to monitor additional guidance issued by the U.S. Treasury Department, the Internal Revenue Services (“IRS”) and others.

At June 30, 2021, the Company has approximately \$0.4 million of unrecognized tax benefits and does not expect to recognize significant increases in unrecognized tax benefits during the next twelve-month period. Interest and penalties, if any, related to unrecognized tax benefits are recorded in income tax expense.

At June 30, 2021, the Company’s U.S. federal tax returns for 2017 and subsequent years remain subject to examination by tax authorities. In the Company’s foreign tax jurisdictions, tax returns for 2016 and subsequent years generally remain open to examination.

(8) Litigation

In July 2018, the Company prevailed in an arbitration that it initiated against the Indian Directorate General of Hydrocarbons (“DGH”) relating to the Company’s ability to continue to license data under the Company’s IndiaSPAN program. The DGH filed a lawsuit in court in India to vacate the arbitration award; in connection with that lawsuit, the Company was ordered to escrow approximately \$4.5 million in sales proceeds that it had received in respect of sales from the IndiaSPAN program, pending the outcome of the DGH’s challenge to the arbitration award. The Company challenged the escrow order, but on December 9, 2019, the Supreme Court of India ordered the Company to comply with it. The Company prepared a petition to file with the court to request that a March 2020 deadline to deposit approximately \$4.5 million in escrow in early 2020 be extended due to the changes to the Company’s business, and to the markets, that have been spurred by the COVID-19 pandemic. The Company was unable to file the application because the courts in India were closed due to the pandemic (other than for emergencies), and were not accepting filings at that time. The Company served a copy of its draft petition on the DGH’s counsel and intends to address the escrow issue in advance of the next hearing, which has been repeatedly delayed due to the COVID-19 pandemic. The Company prevailed on the merits in the arbitration and expects to have that award upheld in Indian court, which would result in release of the portion of any money escrowed by the Company. The DGH’s request to vacate the arbitration award is currently scheduled to be heard by the court in India on September 1, 2021. The Company has not escrowed the money as of August 12, 2021.

The Company has been named in various other lawsuits or threatened actions that are incidental to its ordinary business. Litigation is inherently unpredictable. Any claims against the Company, whether meritorious or not, could be time-consuming, cause the Company to incur costs and expenses, require significant amounts of management time and result in the diversion of significant operational resources. The results of these lawsuits and actions cannot be predicted with certainty. The Company currently believes that the ultimate resolution of these matters will not have a material adverse effect on its financial condition or results of operations.

(9) Details of Selected Balance Sheet Accounts

Accounts Receivable

A summary of accounts receivable follows (in thousands):

	June 30, 2021	December 31, 2020
Accounts receivable, principally trade	\$ 11,778	\$ 10,458
Less: allowance for expected credit losses	(1,247)	(2,413)
Accounts receivable, net	<u>\$ 10,531</u>	<u>\$ 8,045</u>

Inventories

A summary of inventories follows (in thousands):

	June 30, 2021	December 31, 2020
Raw materials and purchased subassemblies	\$ 17,807	\$ 18,638
Work-in-process	1,841	1,218
Finished goods	3,977	4,417
Less: reserve for excess and obsolete inventories	(12,842)	(13,006)
Inventories, net	<u>\$ 10,783</u>	<u>\$ 11,267</u>

The Company’s inventories relate to its Operations Optimization segment. No significant provision for excess and obsolete inventories was recognized during the six months ended June 30, 2021 and 2020.

Property, Plant and Equipment

	June 30, 2021	December 31, 2020
Buildings	\$ 15,690	\$ 15,675
Machinery and equipment	122,170	120,949
Seismic rental equipment	2,200	2,003
Furniture and fixtures	3,180	3,172
Other (a)	29,808	30,287
Total	<u>173,048</u>	<u>172,086</u>
Less: accumulated depreciation	(128,364)	(126,022)
Less: impairment of long-lived assets	(36,553)	(36,553)
Property, plant, equipment and seismic rental equipment, net	<u>\$ 8,131</u>	<u>\$ 9,511</u>

(a) Consists primarily of cable-based ocean bottom acquisition technologies that were fully impaired.

Total depreciation expense, including amortization of assets recorded under equipment finance leases, for the six months ended June 30, 2021 and 2020 was \$2.4 million and \$1.8 million, respectively. No impairment charge was recognized during the six months ended June 30, 2021 and 2020.

Multi-client Data Library

	June 30, 2021	December 31, 2020
Gross costs of multi-client data creation	\$ 1,034,708	\$ 1,021,758
Less: accumulated amortization	(847,419)	(838,700)
Less: impairments to multi-client data library	(132,144)	(132,144)
Multi-client data library, net	<u>\$ 55,145</u>	<u>\$ 50,914</u>

Total amortization expense for the six months ended June 30, 2021 and 2020 was \$8.7 million and \$12.7 million, respectively. The decrease in total amortization expense is primarily due to higher revenue-based amortization of the multi-client data library in the prior quarter related to the increased sales of the Company's 2D global data library. For the six months ended June 30, 2021 and 2020, the Company recognized an impairment to multi-client data library of zero and \$1.2 million, respectively, for programs with capitalized costs exceeding the remaining sales forecasts.

Goodwill

	E&P Technology & Services	Optimization Software & Services	Total
Balance at January 1, 2020	\$ 2,943	\$ 20,642	\$ 23,585
Impairment of goodwill	—	(4,150)	(4,150)
Impact of foreign currency translation adjustments	—	130	130
Balance at December 31, 2020	2,943	16,622	19,565
Impact of foreign currency translation adjustments	—	333	333
Balance at June 30, 2021	<u>\$ 2,943</u>	<u>\$ 16,955</u>	<u>\$ 19,898</u>

The Company, following the qualitative consideration, assessed the relevant events and circumstances in evaluating whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. During the first quarter 2020, markets for oil and gas, as well as other commodities and equities, experienced significant volatility and price declines amid concerns over the economic effects of the COVID-19 pandemic. As a result, the Company's stock price experienced a significant decline. Based on these facts, the Company performed a goodwill impairment test at March 31, 2020 to determine if it was more likely than not that the fair value of certain reporting units was less than their carrying value.

The Company, following the quantitative consideration, compared the fair value of each reporting unit against its carrying value. If the carrying value of the reporting unit exceeds the fair value, an impairment loss shall be recognized in an amount equal to that excess. The fair value of each reporting unit at March 31, 2020 was determined using a discounted cash flow model. The Company utilized a discount rate of 19% for both reporting units. The Company used reasonable assumptions based on historical data supplemented by anticipated market conditions and estimated growth rates. However, given the uncertainty in determining the assumptions underlying a discounted cash flow analysis, actual results may differ which could result in additional impairment charges in the future.

As a result of this assessment, the Company recorded an impairment charge of \$4.2 million for the six months ended June 30, 2020 related to its Optimization Software & Services reporting unit, which is included within the Operations Optimization segment. No impairment charge was recognized for the Optimization Software & Services reporting unit for the six months ended June 30, 2021. No impairment charge was recognized for the E&P Technology Services reporting unit for the six months ended June 30, 2021 and 2020.

(10) Stockholders' Equity and Stock-based Compensation**Registered Direct Offering**

On February 16, 2021, the Company entered into a securities purchase agreement (the "Securities Purchase Agreement") which provided for the sale and issuance by the Company of an aggregate of 2,990,001 shares (the "Shares") of the Company's common stock, \$0.01 par value per share (the "Common Stock") at an offering price of \$3.50 per share for gross proceeds of approximately \$10.5 million before deducting the placement agent's fees and related offering expenses. The Securities Purchase Agreement contained customary representations, warranties and agreements by the Company, customary conditions to closing, indemnification obligations of the Company, other obligations of the parties and termination provisions. The Company used the net proceeds for working capital and general corporate purposes.

The Registered Direct Offering was made pursuant to a Registration Statement (No. 333-234606) on Form S-3, which was filed by the Company with the SEC on November 8, 2019, as amended on December 19, 2019, and declared effective on December 23, 2019.

Stock-Based Compensation

The total number of shares issued or reserved for future issuance under outstanding stock options at June 30, 2021 and 2020 was 407,967 and 647,483, respectively, and the total number of shares of restricted stock and shares reserved for restricted stock units outstanding at June 30, 2021 and 2020 was 1,182,092 and 873,371, respectively. The total number of stock appreciation rights ("SARs") awards outstanding at June 30, 2021 and 2020 was 662,591 and 906,850, respectively. The following table presents a summary of the activity related to stock options, restricted stock, restricted stock unit awards and SARs awards for the six months ended June 30, 2021:

	Stock Options	Restricted Stock and Units Awards	Stock Appreciation Rights
Outstanding at January 1, 2021	533,320	732,707	754,582
Increase in shares authorized	—	23,533	—
Granted	—	966,000	—
Stock options and SARs exercised/restricted stock and unit awards vested	—	(473,204)	(5,000)
Cancelled/forfeited	(125,353)	(66,944)	(86,991)
Outstanding at June 30, 2021	<u>407,967</u>	<u>1,182,092</u>	<u>662,591</u>

Stock-based compensation expense recognized for the six months ended June 30, 2021 and 2020, totaled \$0.8 million and \$1.1 million, respectively. SARs expense (credit) recognized for the six months ended June 30, 2021 and 2020, totaled zero and \$(1.0) million, respectively.

SARs awards are considered liability awards as they are ultimately settled in cash. As such, these amounts are incrementally accrued in the liability section of the condensed consolidated balance sheets over the service period. All of the Company's currently outstanding SARs awards achieve vesting through both a market condition and a service condition. SARs awards that are fully vested under both conditions are measured at intrinsic value (i.e. the difference between the market price on the last day of the quarter and the strike price of the awards times the number of awards vested and outstanding) and marked to market each quarter until settled. SARs awards that are not fully vested are incrementally accrued over the service period and adjusted to their fair value each quarter until settled based on a valuation model. The Company calculated the fair value of each award at June 30, 2021 and December 31, 2020 using a Monte Carlo simulation model. The following assumptions were used:

Risk-free interest rates	0.7%
Expected lives (in years)	5.31
Expected dividend yield	—%
Expected volatility	94.7%

At-The-Market Equity Offering Program

On April 26, 2021, the Company filed a prospectus supplement under which it may sell up to \$10.0 million of its common stock through an "at-the-market" equity offering program (the "ATM Program"). The Company intends to use the net proceeds from sales under the ATM Program for working capital and general corporate purposes. The timing of any sales will depend on a variety of factors to be determined by the Company.

Public Equity Offering

In July 2021, the Company filed a preliminary Form S-1 under which it may issue ION's common stock ("Common Stock") and warrants to purchase additional Common Stock. While the S-1 remains on file, there are several variables to consider, such as macroeconomic factors and the Company's stock price. The Company has decided not to issue its common stock at the current price levels, but the Company will continue to monitor market conditions.

(11) Lease Obligations

The Company leases offices, processing centers, warehouse spaces and, to a lesser extent, certain equipment. These leases have remaining terms of 1 year to 10 years, some of which have options to extend for up to 10 years and/or options to terminate within 1 year. The options to renew are not recognized as part of the Company's right-of-use assets and operating lease liabilities as the Company is not reasonably certain that it will exercise these options.

In January 2020, the Company amended its existing Houston, Texas headquarters lease agreement by extending the lease term from September 30, 2023 to June 30, 2029 and surrendering back to the landlord floors for which the Company had previously vacated. In July 2020, the Company re-negotiated the above-mentioned lease agreement to modify the rent abatement period from October 2023 through February 2024 to July 2020 through March 2021.

In May 2020, the Company amended its Houston data center lease agreement to reflect changes in the monthly base rent throughout the term of the lease and extend the lease term three months to December 2025. The execution of this amendment and the amendment to the Houston, Texas headquarters lease resulted in the Company obtaining rent relief of approximately \$4.0 million.

Total operating lease expense, including short-term lease expense was \$4.7 million and \$5.3 million for the six months ended June 30, 2021 and 2020, respectively.

Equipment Finance Leases

The Company has entered into equipment finance leases that are due in installments for the purpose of financing the purchase of computer equipment through August 2021. Interest accrues under these leases at a rate of 8.7% per annum, and the leases are collateralized by liens on the computer equipment. The assets are amortized over the lesser of their related lease terms or their estimated productive lives and such charges are reflected within depreciation expense.

(12) Supplemental Cash Flow Information and Non-Cash Activity

Supplemental disclosure of cash flow information follows (in thousands):

	Six Months Ended June 30,	
	2021	2020
Cash paid during the period for:		
Interest	\$ 5,884	\$ 6,048
Income taxes	1,824	5,448
Non-cash items from investing and financing activities:		
Exchange of Old Notes for ION common stock	11,755	—
Restructuring transaction costs in accounts payable	902	—

The following table is a reconciliation of cash, cash equivalents, and restricted cash to the condensed consolidated balance sheets:

	June 30,	
	2021	2020
	(In thousands)	
Cash and cash equivalents	\$ 26,731	\$ 62,540
Restricted cash included in prepaid expenses and other current assets	2,327 (d)	75
Total cash, cash equivalents, and restricted cash shown in consolidated statements of cash flows	<u>\$ 29,058</u>	<u>\$ 62,615</u>

(a) Relates to letters of credit issued during third quarter 2020, primarily in connection with the Houston office lease deposit.

(13) Fair Value of Financial Instruments

Authoritative guidance on fair value measurements defines fair value, establishes a framework for measuring fair value and stipulates the related disclosure requirements. The Company follows a three-level hierarchy, under which the fair value hierarchy prioritizes the inputs used to measure fair value. The three-tiered hierarchy is summarized as follows:

Level 1—Quoted prices in active markets for identical assets and liabilities.

Level 2—Other significant observable inputs including quoted prices or other market data for similar assets and liabilities in active markets or quoted prices for identical or similar assets and liabilities in less active markets.

Level 3—Significant unobservable inputs that require significant judgment for which there is little or no market data.

Due to their highly liquid nature, the amount of the Company's other financial instruments, including cash and cash equivalents, restricted cash, accounts and unbilled receivables, accounts payable and accrued multi-client data library royalties, represent their approximate fair value.

The carrying amounts of the Company's Old Notes at June 30, 2021 and December 31, 2020 were \$7.1 million and \$120.6 million, respectively, compared to its fair values of \$7.2 million and \$106.3 million at June 30, 2021 and December 31, 2020, respectively. The carrying amounts of the Company's New Notes at June 30, 2021 were \$116.2 compared to its fair values of \$119.4 million at June 30, 2021. Market conditions could cause an instrument to be reclassified from Level 1 to Level 2, or Level 2 to Level 3. The fair value of the Old Notes and New Notes was calculated using Level 2 inputs using significant observable data points for similar liabilities where estimated values are determined from observable transactions.

The carrying amount of any borrowings outstanding under the Credit Facility approximate fair value, as the interest rate is variable and reflective of market rates.

Fair value measurements are applied with respect to non-financial assets and liabilities on a non-recurring basis (e.g. when possible indicators of impairment exist), which would consist of measurements of goodwill, multi-client data library and property, plant and equipment. The fair value of these assets is determined based on valuation techniques using the best information available and may include comparable market data and discounted cash flow projections.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

In this Form 10-Q, "ION Geophysical," "ION," "the company" (or, "the Company"), "we," "our," "ours" and "us" refer to ION Geophysical Corporation and its consolidated subsidiaries, except where the context otherwise requires or as otherwise indicated.

The information contained in this Quarterly Report on Form 10-Q contains references to trademarks, service marks and registered marks of ION and our subsidiaries, as indicated. Except where stated otherwise or unless the context otherwise requires, the term "DigiFIN" refers to DigiFIN®, a registered mark owned by ION or its affiliates, and the terms "Gemini", "Marlin SmartPort" and "SailWing" refers to the Gemini™, Marlin SmartPort™ and SailWing™ trademarks and service marks owned by ION.

Going Concern

On April 20, 2021, we completed the Restructuring Transactions (as further discussed below) that extended the maturity of the notes tendered in the Exchange Offer (as defined below) by four years to December 2025 and provided additional liquidity. While we completed the Restructuring Transactions and revenues in the second quarter improved sequentially, the timing of the market recovery remains uncertain and revenues for the first half of 2021 were lower than expected. These lower than planned revenues will have an impact on second half cash collections necessary to fund our operations and meet our debt and other obligations. This raises substantial doubt about our ability to continue as a going concern for the next twelve months. The condensed consolidated financial statements conform with accounting principles generally accepted in the United States of America ("GAAP") on a going concern basis of accounting, which contemplates continuity of operations, realization of assets and satisfaction of liabilities and commitments in the normal course of business. Accordingly, our condensed consolidated financial statements exclude certain adjustments that might result if we are unable to continue as a going concern.

We will continue to explore additional funding opportunities through private or public equity transactions, debt financing or other capital sources such as the sale of non-strategic assets to meet our ongoing cash needs. In addition, we are implementing a significant cost reduction program, building on the over \$40 million eliminated last year, in an effort to right-size our business. These additional cost initiatives are targeting between \$15 million to \$20 million of annualized savings through a combination of both short-term and long-term reductions. In addition to maintaining our ongoing cost discipline, we will continue to identify opportunities for government relief such as employee retention credits. For further details, refer to Footnote 5, "Government Relief Funding" of Footnotes to *Condensed Consolidated Financial Statements*. Lastly, our plan to sell our 49% ownership interest in INOVA Geophysical Equipment Limited remains ongoing. This management plan reflects the Company's continued focus on preserving cash and managing liquidity in the current uncertain macroeconomic environment.

If we are unable to raise additional funds through equity issuances, further debt financing arrangements, sales of assets or through other means of preserving cash through cost reduction initiatives, the Company's liquidity and operations would be significantly impacted.

Old Notes Restructuring

On April 20, 2021, we successfully completed our previously announced offer to exchange (the "Exchange Offer") ION's Old Notes for newly issued 8.00% Senior Secured Second Priority Notes due 2025 (the "New Notes") and other consideration in the form of cash and ION common stock, as described in ION's Prospectus dated March 10, 2021 and our previously announced rights offering (the "Rights Offering") to the holders of ION's common stock, par value \$0.01 per share (the "Common Stock") to purchase for (i) \$2.78 principal amount of the New Notes per right, at a purchase price of 100% of the principal amount thereof or (ii) 1.08 shares of common stock per right, at a purchase price of \$2.57 per whole share of common stock. The Exchange Offer and the Rights Offering are sometimes referred to herein as the "Restructuring Transactions".

As described in more detail in Footnote 4 "Long-term Debt" of Footnotes to the *Condensed Consolidated Financial Statements*, the holders of the New Notes may convert all or any portion of their New Notes at their option at any time prior maturity. The initial conversion price is \$3.00 per share of Common Stock and is subject to adjustment as described in the New Notes Indenture. The total number of shares of Common Stock that may be issued upon conversion of the New Notes is 38.7 million shares, which excludes an additional 6.5 million shares that may be issued upon a conversion resulting from a make-whole change of control.

In the Exchange Offer, approximately \$113.5 million, or approximately 94.1%, of the \$120.6 million outstanding Old Notes were accepted and exchanged for (i) \$84.7 million aggregate principal amount of our New Notes, (ii) 6.1 million shares of Common Stock, including 1.5 million shares issued as the early participation payment and 4.6 million shares issued as stock consideration in lieu of the New Notes and (iii) \$20.7 million paid in cash, including \$3.6 million of accrued and unpaid interest that became due on the Old Notes as part of the exchange. We have accepted for exchange all such Old Notes validly tendered and not validly withdrawn in the Exchange Offer as of the expiration time on April 12, 2021. Pursuant to the Exchange Offer, we will make an offer to participants to repurchase New Notes at par for up to 50% of the proceeds raised in excess of \$35.0 million from the Rights Offering valued at \$3.4 million.

In the concurrent Rights Offering, an aggregate amount of \$41.8 million of rights (including over-subscription) was validly exercised by the holders of ION's Common Stock, apportioned as \$30.1 million in New Notes and \$11.7 million in Common Stock allocated in 4.6 million shares. All over-subscription rights were exercised without proration as the \$50.0 million limit on proceeds was not exceeded. Backstop parties were paid 5% backstop fees, in kind, resulting in the issuance of an additional \$1.5 million aggregate principal amount of New Notes and 0.2 million shares of Common Stock.

In total, \$116.2 million in aggregate principal amount of New Notes and 10.9 million shares of Common Stock were issued. We received approximately \$14 million in net proceeds from the transactions after deducting noteholder obligations, estimated transaction fees and accrued and unpaid interest paid on the Old Notes. After the Restructuring Transactions, \$7.1 million of Old Notes remain outstanding and are due along with unpaid interest on December 15, 2021.

The Restructuring Transactions resulted in amendment to the Old Notes Indenture (as defined in Footnote 4 "Long-term Debt - New Notes" of Footnotes to the *Condensed Consolidated Financial Statements*) effective as of April 20, 2021. The Old Notes were modified, among other things, to provide for the release of the second priority security interest in the collateral securing the Old Notes and deleted in their entirety substantially all of the restrictive covenants and certain events of default pertaining to the Old Notes. For further details, refer to Footnote 4 "Long-term Debt - New Notes" of Footnotes to the *Condensed Consolidated Financial Statements*.

COVID-19 Business Impact and Response

The COVID-19 pandemic caused the global economy to enter a recessionary period starting in the second quarter of 2020. During 2020, the exploration and production (“E&P”) industry faced the dual impact of demand deterioration from COVID-19 and market oversupply from increased production, which caused oil and natural gas prices to decline significantly for most of 2020. The sharp commodity price decline triggered E&P companies to reduce budgets by approximately 25%. Exploration offerings and data purchases are often discretionary and, therefore, receive disproportionately higher reductions than overall budget cuts. Consequently, there has been a material slowdown in offshore seismic spending since second quarter of 2020.

During 2021, the global economy has started to recover and Brent crude prices, which are most relevant to ION’s internationally focused business, have rebounded above pre-pandemic levels, averaging over \$70 per barrel during July 2021. This reflects the continued expectation of rising oil demand as both the global economic activity and COVID-19 vaccination rates increase, combined with ongoing crude oil production limits from members of OPEC and partner countries. However, energy companies’ capital discipline remains firmly in place and management expects the seismic market to continue gradually improving yet remain challenging in the near-term.

In January 2021, the Biden Administration ordered an indefinite moratorium on new U.S. oil and gas leasing and drilling permits on federal lands onshore and offshore waters. Management believes this will have a negligible impact on our business given ION’s diversified global footprint and international offshore focus. Should the moratorium result in longer-term change, this could drive large scale E&P company portfolio investment more towards international offshore, which would be well aligned with our offerings.

Our management expects continued portfolio rationalization and high grading as E&P companies seek to find the best return on investment opportunities to meet oil and gas demand in the next decade. Near-term, due to the impact of the COVID-19 pandemic, project high grading will likely be more acute due to budget reductions. Over the last several years, we strategically shifted our portfolio closer to the reservoir, where revenue tends to be higher and more consistent. New Venture data acquisition offshore and Software and related personnel-based offshore services are expected to continue to be most impacted by COVID-19 travel restrictions. While offshore operations have been temporarily impacted by travel restrictions, we believe the demand for digitalization technologies will remain strong. In some cases, ION technology is expected to be more relevant and valuable in the current environment, such as offerings that facilitate remote working.

We continue to work closely with our clients to understand their budgets and spending priorities and to scale our business appropriately. We partially mitigated the impact of the current macroeconomic environment by fully benefiting from the structural changes and associated cost reductions through salary cuts of approximately \$40 million, reduced capital expenditures, renegotiation of our leases and application for various government assistance programs, among others. In addition, we are implementing a further cost reduction program targeting between \$15 million to \$20 million of savings through a combination of both short-term and long-term reductions in an effort to right-size our business. The management plan reflects our continued focus on preserving cash and managing liquidity in the current uncertain macroeconomic environment.

Our Business

ION is an innovative, asset light global technology company that delivers powerful data-driven decision-making offerings to offshore energy and maritime operations markets. We are entering a fourth industrial revolution where technology is fundamentally changing how decisions are made. Decision-making is shifting from what was historically an art to a science. Data, analytics and digitalization provide a step-change opportunity to translate information into insights, enabling our clients to enhance decisions and returns.

We have been a leading technology innovator for over 50 years. While the traditional focus of our technology has been on the E&P industry, we are now diversifying our business into new markets such as energy logistics and management. Our offerings are focused on improving subsurface knowledge to enhance E&P decision-making and improving situational awareness to optimize offshore operations. We serve customers in most major energy producing regions of the world from strategically located offices. Our businesses are influenced by global spending primarily driven by our customers near and long-term commodity demand forecast and outlook for crude oil prices. The global economy is improving and commodity prices have rebounded to approximately \$70 per barrel, above pre-pandemic levels. However, energy companies' capital discipline remains firmly in place and management expects the seismic market to continue gradually improving yet remain challenging in the near-term.

The Company is publicly listed on the New York Stock Exchange under the ticker IO. We are headquartered in Houston, Texas with regional offices around the world. We have approximately 400 employees, 44% of whom are in technical roles and 21% have advanced degrees.

We provide our services and products through two business segments: E&P Technology & Services and Operations Optimization. In addition, we have a 49% ownership interest in INOVA Geophysical Equipment Limited ("INOVA Geophysical" or "INOVA"), a joint venture with BGP Inc. ("BGP"), a subsidiary of China National Petroleum Corporation. BGP owns the remaining 51% equity interest in INOVA. We wrote our investment in INOVA down to zero in 2014. See further discussion below on our agreement to sell our interest in INOVA.

Our E&P Technology & Services segment creates digital data assets and delivers services to help E&P companies improve decision-making, reduce risk and maximize value. Across the E&P lifecycle, our E&P offerings focus on driving customer decisions, such as which blocks to bid on and for how much, how to maximize portfolio value, where to drill wells or how to optimize production.

Our Operations Optimization segment develops mission-critical subscription offerings and provides engineering services that enable operational control and optimization offshore. This segment is comprised of our Optimization Software & Services and Devices offerings. Our hardware and software offerings facilitate some of the largest man-made mobile operations and in some of the harshest conditions.

We historically conducted our land seismic equipment business through INOVA, which manufactures land seismic data acquisition systems, digital sensors, vibroseis vehicles (i.e., vibrator trucks), and energy source controllers. In March 2020, we announced an agreement to sell our 49% ownership interest in INOVA joint venture for \$12.0 million, subject to regulatory approvals and other closing conditions. We renewed efforts to sell our 49% equity stake in the INOVA joint venture by bringing additional interested parties to the table to increase competition and accelerate closure.

E&P Technology & Services. Our offerings are designed to help E&P companies improve decision-making, reduce risk and maximize value. Within our E&P Technology and Services segment, there are two synergistic groups: Imaging and Reservoir Services and Ventures.

While our Imaging and Reservoir Services group processes and images data for customers on a proprietary basis, the majority of these resources support our higher potential return multi-client business. The proprietary work we take on is complex, where our advanced technology is valued and where we closely collaborate with our customers to solve their toughest challenges. We maintain approximately 19 petabytes of digital seismic data storage through our global data centers, including a core data center located in Houston. We utilize a globally distributed network of Linux-cluster processing centers in combination with our major hubs in Houston and London to process seismic data using advanced, proprietary algorithms and workflows.

Our Ventures group leverages the geoscience skills of the Imaging and Reservoir Services group to create global digital data assets that are licensed to multiple E&P companies to optimize their investment decisions. Our global data library consists of over 740,000 km of 2D and over 400,000 sq km of 3D multi-client seismic data in virtually all major offshore petroleum provinces. Ventures provides services to manage multi-client or proprietary surveys, from survey planning and design to data acquisition and management, to final subsurface imaging and reservoir characterization. We focus on the technologically intensive components of the image development process, such as survey planning and design, and data processing and interpretation, while outsourcing asset-intensive components (such as field acquisition) to experienced contractors.

Occasionally we develop proprietary technology solutions that fill a gap we have identified in the market and support our multi-client program development efforts. For example, previously we created an under-ice acquisition solution to collect data in the Arctic and Marlin™ was initially developed to help manage our own complex survey operations. In 2020, we commercialized Gemini™ extended frequency source technology. Gemini's unique design efficiently supports substantially improved data quality and lower environmental impact desired by the industry. This important ingredient to enhancing subsurface knowledge differentiates ION as we expand into the larger 3D multi-client new acquisition market while maintaining our asset light approach.

We offer our services to customers on both a proprietary and multi-client (non-exclusive) basis. In both cases, a majority of our survey costs are generally pre-funded by our customers, limiting our cost exposure. The period during which our multi-client surveys are being designed, acquired or processed is referred to as the "New Venture" phase. Once the New Venture phase is completed, the surveys become part of our Data Library. For proprietary services, the customer has exclusive ownership of the data. For multi-client surveys, we generally retain ownership of our long-term exclusive marketing rights to the data and receive ongoing revenue from subsequent data license sales.

We invested \$12.6 million in our multi-client data library during the first six months of 2021 and we expect investments in our multi-client data library to be in the range of \$25.0 million to \$35.0 million for 2021 (dependent upon the level of pre-funding or underwriting by our customers) compared to the \$27.2 million invested in 2020. Whether remaining planned expenditures will actually be spent in 2021 depends on industry conditions, project approvals and schedules, and careful monitoring of our levels of liquidity.

At June 30, 2021, our E&P Technology & Services segment backlog, which consists of commitments for (i) imaging and reservoir services work and (ii) new venture projects (both multi-client and proprietary) by our Ventures group underwritten by our customers, was \$13.9 million compared to \$19.7 million at December 31, 2020 and \$10.0 million at June 30, 2020. We anticipate that most of our backlog will be recognized as revenue during the second half of 2021. Decline in our backlog resulted from revenues recognized as our Mid North Sea High 3D multi-client program in the North Sea proceeded ahead of schedule this quarter.

Over the last five years, we have made an effort to diversify our offerings across the E&P life cycle and move closer to the reservoir, where capital investment tends to be higher and more consistent. Historically, our data library was largely 2D and exploration focused, which limited our revenues to approximately 3% of a \$2.0 to \$3.0 billion-dollar offshore multi-client market. In 2020, we entered the 3D multi-client new acquisition market, where revenue and earnings potential are at least five times a typical new 2D exploration program. This strategy shift builds on our 3D multi-client reimaging success and leverages our tier 1 imaging and new Gemini seismic source technology.

Operations Optimization. Our Operations Optimization segment develops mission-critical software and technology that enable operational control and optimization offshore. Our advanced systems improve situational awareness, communication and risk management to enable rapid, informed decisions in challenging offshore environments. Our industry-leading mission management, navigation, communications and sensing technologies enable safer, more efficient operations. While we have been focused on diversifying our offerings outside our core market for some time, it has become increasingly important given the slowdown in seismic vessel activity offshore. We are leveraging our technologies and core competencies across Software and Devices to optimize decision-making in new maritime markets, such as port operations, energy logistics and real-time infrastructure monitoring.

This segment is comprised of our Optimization Software & Services and Devices offerings.

Our Optimization Software & Services group provides survey design, command and control software systems and related services for marine towed streamer and seabed operations. We are market leaders in our core business and adapted our platform to more broadly optimize operations beyond our core market. Our software offerings leverage a leading data integration platform to control and optimize operations. Engineering services experts deliver in-field optimization services, equipment maintenance and training to maximize value from our offerings.

Our software is focused on creating high value information that drives efficiency and related resource utilization, and reductions in HSE exposure and greenhouse gas emissions. We are expanding our Marlin software to optimize maritime detection, port management, and energy logistics markets. Marlin is the only system that links vessel plans and schedules to live offshore activities, providing greater control and transparency in the management of offshore operations. By monitoring plans and providing feedback in real time, clients can minimize fuel consumption, decrease emissions and operate with just-in-time efficiency.

Our Devices group develops intelligent hardware and devices integrated with our software to optimize operations. Our Devices group develops, manufactures and repairs marine towed streamer and seabed data acquisition technology, sensors and compasses that have been deployed in marine robotics, defense, E&P and other commercial applications.

Our Devices diversification strategy is to develop real-time monitoring solutions that improve the safety and environmental compliance of offshore oil and gas operations. WellAlert™ leverages our core competencies, targets a growing market associated with sustainability and aligns with our strategy to provide decision support data and analytics. Clients are seeking advancements in technology to cost-effectively shift from reactive to proactive systems that provide more frequent, accurate measurements to assure safe operating environments. Our solution integrates sensing and communications technologies to monitor temporarily plugged and abandoned wells.

It is our view that technologies that provide a competitive advantage through improved imaging, lower costs, higher productivity, or enhanced safety will continue to be valued in the market. We believe our newest technologies will continue to attract customer interest because these technologies are designed to deliver those desirable attributes.

INOVA Geophysical. INOVA manufactures land acquisition systems, land source products, vibroseis vehicles, and source controllers and multicomponent sensors.

Key Financial Metrics

The table below provides an overview of key financial metrics for our company as a whole and our two business segments for the three and six months ended June 30, 2021, compared to the same period of 2020.

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Net revenues:				
E&P Technology & Services:				
New Venture	\$ 3,882	\$ 4,686	\$ 4,969	\$ 6,127
Data Library	5,393	6,867	7,877	46,998
Total multi-client revenues	9,275	11,553	12,846	53,125
Imaging and Reservoir Services	2,429	3,673	6,094	8,615
Total	\$ 11,704	\$ 15,226	\$ 18,940	\$ 61,740
Operations Optimization:				
Optimization Software & Services	\$ 3,370	\$ 3,377	\$ 6,214	\$ 7,804
Devices	4,640	4,128	8,596	9,601
Total	\$ 8,010	\$ 7,505	\$ 14,810	\$ 17,405
Total net revenues	\$ 19,714	\$ 22,731	\$ 33,750	\$ 79,145
Gross profit (loss):				
E&P Technology & Services	\$ 1,018	\$ 2,264	\$ (589)	\$ 25,994 (c)
Operations Optimization	2,620	2,320	5,086	6,934
Total gross profit	\$ 3,638	\$ 4,584	\$ 4,497	\$ 32,928
Gross margin:				
E&P Technology & Services	9%	15%	(3)%	42%
Operations Optimization	33%	31%	34%	40%
Total gross margin	18%	20%	13%	42%
Income (loss) from operations:				
E&P Technology & Services	\$ (2,691)	\$ 442	\$ (7,544)	\$ 18,394 (c)
Operations Optimization	244	(474)	(576)	(3,733) (d)
Support and other	(4,934)	(5,440)	(9,495)	(13,807)
Income (loss) from operations	(7,381)	(5,472)	(17,615)	854
Interest expense, net	(3,299)	(3,414)	(6,561)	(6,635)
Other income (expense), net	(4,070) (a)	6,771 (b)	(4,677) (a)	7,200 (b)
Income (loss) before income taxes	\$ (14,750)	\$ (2,115)	\$ (28,853)	\$ 1,419

(a) Includes loss on restructuring transactions of \$4.7 million for the three and six months ended June 30, 2021 resulting from the exchange of our Old Notes for New Notes.

(b) Includes amortization of government relief funding of \$6.9 million for the three and six months ended June 30, 2020.

(c) Includes impairment of multi-client data library of \$1.2 million for the six months ended June 30, 2020.

(d) Includes impairment of goodwill of \$4.2 million for the six months ended June 30, 2020.

For a discussion of factors that could impact our future operating results and financial condition, see (i) Item 1A. "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2020, and (ii) Item 1A. "Risk Factors" in Part II of this Form 10-Q.

Results of Operations

Three Months Ended June 30, 2021 Compared to Three Months Ended June 30, 2020

Our consolidated net revenues of \$19.7 million for the three months ended June 30, 2021 (the “Current Quarter”) decreased by \$3.0 million, or 13%, compared to consolidated net revenues of \$22.7 million for the three months ended June 30, 2020 (the “Comparable Quarter”). Our total gross margin was 18% in the Current Quarter, as compared to 20% in the Comparable Quarter. For the Current Quarter, our loss from operations was \$7.4 million, compared to \$5.5 million for the Comparable Quarter.

Net loss attributable to ION for the Current Quarter was \$23.6 million, or \$0.90 loss per share, compared to \$5.2 million, or \$0.37 loss per share, for the Comparable Quarter.

Net Revenues, Gross Profits and Gross Margins

E&P Technology & Services — Net revenues for the Current Quarter decreased by \$3.5 million, or 23%, to \$11.7 million, compared to \$15.2 million for the Comparable Quarter. Within the E&P Technology & Services segment, total multi-client net revenues were \$9.3 million, a decrease of 20% primarily due to lower volume of multi-client sales. A portion of 2D data library sales during the quarter were attributed to ION’s global 2D data library partnership with PGS. Imaging and Reservoir Services net revenues were \$2.4 million, a decrease of \$1.2 million compared to the Comparable Quarter due to lower proprietary tender activity. The Current Quarter reflects a gross profit of \$1.0 million, representing a 9% gross margin, compared to \$2.3 million, or 15% gross margin, in the Comparable Quarter. Changes in gross profit and margin were due to the decrease in our net revenues as discussed above.

Operations Optimization — Net revenues for the Current Quarter increased by \$0.5 million, or 7% to \$8.0 million, compared to \$7.5 million for the Comparable Quarter. Optimization Software & Services net revenues for the Current Quarter of \$3.4 million were consistent with the Comparable Quarter. Devices net revenues for the Current Quarter increased by \$0.5 million, or 12%, to \$4.6 million, compared to \$4.1 million for the Comparable Quarter primarily due to higher sales of towed streamer equipment spares and repairs. The Current Quarter reflects a gross profit of \$2.6 million, representing a 33% gross margin compared to a gross profit of \$2.3 million, representing a 31% gross margin for the Comparable Quarter.

Operating Expenses

Research, Development and Engineering — Research, development and engineering expenses were \$3.4 million for the Current Quarter, an increase of \$0.3 million, or 11% compared to \$3.0 million for the Comparable Quarter, predominantly related to the re-allocation of costs across various departments. We continue to invest in imaging algorithms and infrastructure, devices and software. We see significant long-term potential for investing in technologies that improve image quality, safety and productivity.

Marketing and Sales — Marketing and sales expenses were \$3.2 million for the Current Quarter, an increase of \$2.0 million, or 161% compared to \$1.2 million for the Comparable Quarter primarily due to the positive impact of a one-time, non-cash adjustment to marketing and sales expenses during the Comparable Period.

General, Administrative and Other Operating Expenses — General, administrative and other operating expenses were \$4.5 million for the Current Quarter, a decrease of \$1.3 million, or 22% compared to \$5.8 million for the Comparable Quarter primarily due to lower compensation expenses resulting from the employee retention credit that we qualified for during the Current Quarter.

Other Items

Interest Expense, Net — Interest expense, net, was \$3.3 million for the Current Quarter compared to \$3.4 million for the Comparable Quarter. For additional information, please refer to “*Liquidity and Capital Resources — Sources of Capital*” below.

Other income (expense), net — Other expense for the Current Quarter was \$(4.1) million compared to income of \$6.8 million for the Comparable Quarter, a decrease of \$10.8 million primarily due to the amortization of government relief funding of \$6.9 million in the Comparable Quarter (see further discussion at Footnote 5 “*Government Relief Funding*” of Footnotes to *Condensed Consolidated Financial Statements*) and the recognition of loss from the restructuring transactions of \$4.7 million during the Current Quarter (see further discussion at Footnote 4 “*Long-term Debt - Loss on Extinguishment of Old Notes*” of Footnotes to *Condensed Consolidated Financial Statements*).

Income Tax Expense — Income tax expense for the Current Quarter was \$8.8 million compared to \$3.1 million for the Comparable Quarter. The income tax expense for the Current Quarter and Comparable Quarter primarily relates to results by our non-U.S. business in certain foreign subsidiaries, including a \$7.7 million of valuation allowance in the Current Quarter. Our effective tax rates for the Current Quarter and Comparable Quarter were impacted by the change in valuation allowances related to U.S and certain foreign operating losses. Due to the impact of the valuation allowances on tax expense, our effective tax rates are not meaningful for all periods presented. See further discussion of establishment of the deferred tax valuation allowance at Footnote 7 “*Income Taxes*” of Footnotes to *Condensed Consolidated Financial Statements*.

Six Months Ended June 30, 2021 Compared to Six Months Ended June 30, 2020

Our consolidated net revenues of \$33.8 million for the six months ended June 30, 2021 (the “Current Period”) decreased by \$45.4 million, or 57%, compared to consolidated net revenues of \$79.1 million for the six months ended June 30, 2020 (the “Comparable Period”) which included a significant data library sale that was not repeated during the Current Period. Our total gross margin was 13% in the Current Period, as compared to 42% in the Comparable Period. For the Current Period, our loss from operations was \$17.6 million, compared to our income from operations of \$0.9 million for the Comparable Period.

Net loss attributable to ION for the Current Period was \$30.7 million, or \$1.47 loss per share, compared to \$7.5 million, or \$0.53 loss per share, for the Comparable Period.

Net Revenues, Gross Profits and Gross Margins

E&P Technology & Services — Net revenues for the Current Period decreased by \$42.8 million, or 69%, to \$18.9 million, compared to \$61.7 million for the Comparable Period primarily due to lower volume of data library sales, including a significant 2D data library that closed in the Comparable Period and was not repeated during the Current Period. Within the E&P Technology & Services segment, total multi-client net revenues were \$12.8 million, a decrease of 76% primarily due to lower volume of data library sales, including a significant 2D data library deal that was closed in the Comparable Period that was not repeated during the Current Period. Imaging and Reservoir Services net revenues were \$6.1 million, a decrease of \$2.5 million compared to the Comparable Period due to lower proprietary tender activity. The Current Period reflects a gross loss of \$0.6 million, representing a (3)% gross margin, compared to a gross profit of \$26.0 million, or 42% gross margin, in the Comparable Period. Changes in gross profit (loss) and margin were due to decrease in our net revenues as discussed above.

Operations Optimization — Net revenues for the Current Period decreased by \$2.6 million, or 15% to \$14.8 million, compared to \$17.4 million for the Comparable Period. Optimization Software & Services net revenues for the Current Period decreased by \$1.6 million, or 20% to \$6.2 million, compared to \$7.8 million for the Comparable Period due to reduced seismic vessel activity offshore. Devices net revenues for the Current Period decreased by \$1.0 million, or 10%, to \$8.6 million, compared to \$9.6 million for the Comparable Period primarily due to lower sales of towed streamer equipment spares and repairs. The Current Period reflects a gross profit of \$5.1 million, representing a 34% gross margin compared to a gross profit of \$6.9 million, representing a 40% gross margin for the Comparable Period. Changes in gross profit and margin were due to the decline in our net revenues as discussed above.

Operating Expenses

Research, Development and Engineering — Research, development and engineering expenses were \$6.3 million for the Current Period, a decrease of \$0.7 million, or 10% compared to \$7.0 million for the Comparable Period primarily due to the cost cutting initiative implemented following the COVID-19 related market impact. We continue to invest in imaging algorithms and infrastructure, devices and software. We see significant long-term potential for investing in technologies that improve sustainability, image quality, safety and productivity.

Marketing and Sales — Marketing and sales expenses were \$5.9 million for the Current Period, a decrease of \$0.2 million, or 3% compared to \$6.1 million for the Comparable Period.

General, Administrative and Other Operating Expenses — General, administrative and other operating expenses were \$9.8 million for the Current Period, a decrease of \$5.0 million, or 34% compared to \$14.8 million for the Comparable Period primarily due to the reduction in severance expenses and lower compensation expenses from furloughs and salary reductions as well as the employee retention credit that we qualified for during the Current Period.

Impairment of Goodwill — Impairment of goodwill was zero for the Current Period compared to \$4.2 million for the Comparable Period resulting from an impairment charge recognized during the Comparable Quarter. See further discussion at Footnote 9 “*Details of Selected Balance Sheet Accounts*” of Footnotes to *Condensed Consolidated Financial Statements*).

Other Items

Interest Expense, Net — Interest expense, net was \$6.6 million for the Current Period compared to \$6.6 million for the Comparable Period. For additional information, please refer to “*Liquidity and Capital Resources — Sources of Capital*” below.

Other income (expense), net — Other income (expense) for the Current Period was \$(4.7) million compared to \$7.2 million for the Comparable Period, a decrease of \$11.9 million primarily due to the amortization of government relief funding expected to be forgiven of \$6.9 million in the Comparable Period (see further discussion at Footnote 5 “*Government Relief Funding*” of Footnotes to *Condensed Consolidated Financial Statements*) and the recognition of loss from the restructuring transactions of \$4.7 million during the Current Period (see further discussion at Footnote 4 “*Long-term Debt - Loss on Extinguishment of Old Notes*” of Footnotes to *Condensed Consolidated Financial Statements*).

Income tax expense — Income tax expense for the Current Period was \$1.9 million compared to \$8.9 million for the Comparable Period. The income tax expense for the Current Period and Comparable Period primarily relates to results generated by our non-U.S. businesses in Latin America. The income tax expense for the Comparable Period includes \$2.2 million of non-cash valuation allowance established against our previously recognized deferred tax assets in our non-U.S. businesses. Our effective tax rates for the Current Period and Comparable Period were impacted by the change in valuation allowances related to U.S and certain foreign operating losses. Due to the impact of the valuation allowances on tax expense, our effective tax rates are not meaningful for all periods presented. See further discussion of establishment of the deferred tax valuation allowance at Footnote 7 “*Income Taxes*” of Footnotes to *Condensed Consolidated Financial Statements*.

Liquidity and Capital Resources

Sources of Capital

At June 30, 2021, total liquidity was \$32.8 million, consisting of \$26.7 million of cash on hand and \$6.1 million of remaining borrowing capacity under our Credit Facility. As of June 30, 2021, we had outstanding indebtedness of \$19.8 million under our Credit Facility. To maintain the minimum excess borrowing availability threshold of \$6.25 million, as described in Footnote 4 "*Long-term Debt*" of Footnotes to *Condensed Consolidated Financial Statements*, we repaid \$0.4 million of the outstanding indebtedness under the Credit Facility in July 2021.

Our cash requirements include working capital requirements and cash required for our debt service payments, multi-client seismic data acquisition activities and capital expenditures. As of June 30, 2021, we had negative working capital of \$40.2 million compared to negative working capital of \$150.9 million as of December 31, 2020. Improvement in working capital resulted from the completion of the Restructuring Transactions (refer to Footnote 1 "*Summary of Significant Accounting Policies - Old Notes Restructuring*" of Footnotes to the *Condensed Consolidated Financial Statements for further details*). Working capital requirements are primarily driven by our investment in our multi-client data library (\$12.6 million in the Current Period and \$25.0 million to \$35.0 million expected for the full year, dependent upon the level of pre-funding or underwriting by our customers) and royalty payments related to multi-client sales. Our multi-client data library investment in 2021 includes \$5.0 million of payments to our acquisition partners for seismic acquisition costs incurred in prior years. Approximately 24% of our accounts payable balance as of June 30, 2021 relates to amounts owed to our seismic acquisition partners. Whether remaining planned expenditures will be spent in 2021 depends on industry conditions, project approvals and schedules, and careful monitoring of our liquidity.

Our headcount remains a significant driver of our working capital needs. As a significant portion of our business is involved in the planning, processing and interpretation of seismic data services, one of our largest investments is in our employees, which requires cash expenditures for their salaries, bonuses, payroll taxes and related compensation expenses, including stock appreciation awards, typically in advance of related revenue billings and collections.

Our working capital requirements may change from time to time depending on factors, including our operating results and adjustments in our operating plan in response to industry conditions, competition and unexpected events. In recent years, our primary sources of funds have been cash flows generated from operations, existing cash balances, debt and equity issuances and borrowings under our Credit Facility.

Registered Direct Offering

On February 16, 2021, we entered into a securities purchase agreement (the "Securities Purchase Agreement") which provided for the sale and issuance by us of an aggregate of 2,990,001 shares of ION common stock, \$0.01 par value per share (the "Common Stock") at an offering price of \$3.50 per share for gross proceeds of approximately \$10.5 million before deducting the placement agent's fees and related offering expenses. The Securities Purchase Agreement contained customary representations, warranties and agreements by us, customary conditions to closing, indemnification obligations of ION, other obligations of the parties and termination provisions. We used the net proceeds for working capital and general corporate purposes.

The Registered Direct Offering was made pursuant to a Registration Statement (No. 333-234606) on Form S-3, which was filed with the SEC on November 8, 2019, as amended on December 19, 2019, and declared effective on December 23, 2019.

Old Notes Restructuring

On April 20, 2021, we successfully completed our offer to exchange (the "Exchange Offer") ION's 9.125% Senior Secured Second Priority Notes due 2021 (the "Old Notes") for newly issued 8.00% Senior Secured Second Priority Notes due 2025 (the "New Notes") and other consideration in the form of cash and ION common stock, as described in ION's Prospectus dated March 10, 2021 and our rights offering (the "Rights Offering") to our holders of ION's common stock, par value \$0.01 per share (the "Common Stock") to purchase for (i) \$2.78 principal amount of the New Notes per right, at a purchase price of 100% of the principal amount thereof or (ii) 1.08 shares of common stock per right, at a purchase price of \$2.57 per whole share of common stock.

As described in more detail in Footnote 4 "*Long-term Debt*" of Footnotes to the *Condensed Consolidated Financial Statements*, the holders of the New Notes may convert all or any portion of their New Notes at their option at any time prior maturity. The initial conversion price is \$3.00 per share of Common Stock and is subject to adjustment as described in the New Notes Indenture. The total number of shares of Common Stock that may be issued upon conversion of the New Notes is 38.7 million shares, which excludes an additional 6.5 million shares that may be issued upon a conversion resulting from a make-whole change of control.

In total, \$116.2 million in aggregate principal amount of New Notes and 10.9 million shares of ION common stock were issued. We received approximately \$14 million in net proceeds from the transactions after deducting noteholders obligations, estimated transaction fees and accrued and unpaid interest paid on the Old Notes. After the Restructuring Transactions, \$7.1 million of Old Notes remain outstanding and are due along with unpaid interest on December 15, 2021. For further details, refer to Footnote 1 "*Summary of Significant Accounting Policies - Old Notes Restructuring*" of Footnotes to the *Condensed Consolidated Financial Statements*.

Old Notes

The Old Notes were senior secured second-priority obligations guaranteed by the Material U.S. Subsidiaries and the Mexican Subsidiary (each as defined above and herein below, with the reference to the Old Notes, the "Guarantors"). As a result of the Restructuring Transactions on April 20, 2021 as further discussed in Footnote 1 "*Summary of Significant Accounting Policies - Old Notes Restructuring*" of Footnotes to *Condensed Consolidated Financial Statements*, \$113.5 million in aggregate principal amount outstanding of Old Notes were tendered and exchanged for New Notes. At June 30, 2021, \$7.1 million of Old Notes remain outstanding and are due along with unpaid interest on December 15, 2021.

The April 2016 indenture governing the Old Notes (the "Old Notes Indenture") contained certain covenants that, among other things, limited or prohibited us from taking certain actions or permitting certain conditions to exist during the term of the Old Notes, including among other things, incurring additional indebtedness in excess of permitted indebtedness, creating liens, paying dividends and making other distributions in respect of our capital stock, redeeming our capital stock, making investments or certain other restricted payments, selling certain kinds of assets, entering into transactions with affiliates, and effecting mergers or consolidations. These and other restrictive covenants contained in the Old Notes Indenture are subject to certain exceptions and qualifications. All of our subsidiaries are currently restricted subsidiaries.

On April 20, 2021, we, the Guarantors, Wilmington Savings Fund Society, FSB, as trustee, and collateral agent, entered into a supplemental indenture (the “Supplemental Indenture”) to the Old Notes Indenture, dated as of April 28, 2016, among us, the Guarantors, Wilmington Savings Fund Society, FSB (as successor to Wilmington Trust, National Association), as trustee, and U.S. Bank National Association, as collateral agent, governing the Old Notes Indenture. The Supplemental Indenture, among other things, provides for the release of the second priority security interest in the collateral securing the Old Notes, and deletes in their entirety substantially all of the restrictive covenants and certain events of default pertaining to the Old Notes. The Old Notes Indenture, as modified by the Supplemental Indenture, is materially less restrictive and affords significantly reduced protection to holders of such securities as compared to the restrictive covenants, events of default and other provisions previously contained in the Old Notes Indenture.

At June 30, 2021, we were in compliance with all of the covenants under the Old Notes. For further information regarding our Old Notes, see above Footnote 4 “*Long-term Debt*” of Footnotes to *Condensed Consolidated Financial Statements*.

New Notes

The \$116.2 million aggregate principal amount outstanding New Notes are governed by the Indenture (the “New Notes Indenture”) dated as of April 20, 2021, among us, certain of our subsidiaries, as guarantors (as defined under *Old Notes* above), and UMB Bank, National Association, as trustee and collateral agent (the “New Notes Trustee”). The New Notes are senior secured second-priority debt obligations of ION and will mature on December 15, 2025. The New Notes will bear interest at a rate of 8.00% per annum. Interest on the New Notes will be payable on each June 15 and December 15, commencing on June 15, 2021. The New Notes will initially be guaranteed by each of ION’s material domestic subsidiaries and one subsidiary organized under the laws of Mexico (“Guarantors”). For further details, refer to Footnote 1 “*Summary of Significant Accounting Policies - Old Notes Restructuring*” of Footnotes to the *Condensed Consolidated Financial Statements*.

The New Notes are senior obligations of ION; are secured on a second-priority basis, equally and ratably with all obligations of ION under any future Parity Lien Debt (as defined in the New Notes Indenture), by Liens on all of the assets of ION other than the Excluded Assets, subject to the Liens securing ION’s obligations under the Credit Agreement (as defined under *Revolving Credit Facility* below) and any other Priority Lien Debt and other Permitted Prior Liens (as defined in the New Notes Indenture); are effectively junior to any Permitted Prior Liens, to the extent of the value of the assets of ION subject to those Permitted Prior Liens; are senior in right of payment to any future subordinated Indebtedness of ION, if any; are unconditionally guaranteed by the Guarantors; and are structurally subordinated to all existing and future Indebtedness (as defined in the New Notes Indenture), claims of holders of preferred stock and other liabilities of subsidiaries of ION that do not guarantee the New Notes.

Each guarantee of the New Notes are senior obligations of each Guarantor; are secured on a second-priority basis, equally and ratably with all obligations of that Guarantor under any other future Parity Lien Debt, by Liens on all of the assets of that Guarantor other than the Excluded Assets, subject to the Liens securing that Guarantor’s guarantee of the Credit Agreement obligations and any other Priority Lien Debt and other Permitted Prior Liens; are effectively junior, to the extent of the value of the Collateral (as defined in the New Notes Indenture), to that Guarantor’s guarantee of the Credit Agreement and any other Priority Lien Debt, which are secured on a first-priority basis by the same assets of that Guarantor that secure the New Notes; are effectively junior to any Permitted Prior Liens, to the extent of the value of the assets of that Guarantor subject to those Permitted Prior Liens; and are senior in right of payment to any future subordinated Indebtedness of that Guarantor, if any.

The New Notes Indenture contains covenants that, among other things, limit our ability, and the ability of our restricted subsidiaries, to incur additional debt or issue certain preferred stock; make certain investments or pay dividends or distributions on our capital stock, purchase or redeem or retire capital stock, or make other restricted payments; sell assets, including capital stock of our restricted subsidiaries; restrict dividends or other payments by restricted subsidiaries; create liens; create unrestricted subsidiaries; enter into transactions with affiliates; and merge or consolidate with another company. These covenants are subject to a number of important limitations and exceptions that are described in the New Notes Indenture.

If a Change of Control (as described in the New Notes Indenture) occurs, holders of the New Notes may require us to repurchase their New Notes at a cash repurchase price equal to 101% of the principal amount of the New Notes to be repurchased, plus accrued and unpaid interest.

At June 30, 2021, we were in compliance with all of the covenants under the New Notes. For further information regarding our New Notes, see above Footnote 4 “*Long-term Debt*” of Footnotes to *Condensed Consolidated Financial Statements*.

Revolving Credit Facility

On April 20, 2021, we and our material U.S. subsidiaries — GX Technology Corporation, ION Exploration Products (U.S.A), Inc. and I/O Marine Systems, Inc. (the “Material U.S. Subsidiaries”) — along with GX Geoscience Corporation, S. de R.L. de C.V., a limited liability company (Sociedad de Responsabilidad Limitada de Capital Variable) organized under the laws of Mexico, and our subsidiary (the “Mexican Subsidiary”) (the Material U.S. Subsidiaries and the Mexican Subsidiary are collectively, the “Subsidiary Borrowers”, together with ION Geophysical Corporation are the “Borrowers”) — the financial institutions party thereto, as lenders, and PNC Bank, National Association (“PNC”), as agent for the lenders, entered into that certain Fourth Amendment and Joinder to Revolving Credit and Security Agreement (the “Fourth Amendment”), amending the Revolving Credit and Security Agreement, dated as of August 22, 2014 (as previously amended by the First Amendment to Revolving Credit and Security Agreement, dated as of August 4, 2015, the Second Amendment to Revolving Credit and Security Agreement, dated as of April 28, 2016 and the Third Amendment to Revolving Credit and Security Agreement, dated as of August 16, 2018, the “Credit Agreement”). The Credit Agreement, as amended by the First Amendment, the Second Amendment, the Third Amendment and the Fourth Amendment is herein called the “Credit Facility”). The Credit Facility matures on August 16, 2023. The Credit Agreement, as amended by the Fourth Amendment, among other things, permitted the consummation of the Restructuring Transactions, including the issuance of the New Notes and certain cash payments to our noteholders in connection with the Exchange Offer and the Rights Offering, and made certain other changes to the Credit Agreement’s definitions and other provisions, including with respect to LIBOR, where the successor LIBOR rate index will be the benchmark replacement determined by PNC.

The maximum amount available under the Credit Facility is the lesser of \$50.0 million or a monthly borrowing base. The borrowing base under the Credit Facility will increase or decrease monthly using a formula based on certain eligible receivables, eligible inventory and other amounts, including a percentage of the net orderly liquidation value of the Borrowers’ multi-client data library (not to exceed \$28.5 million for the multi-client data library component). At June 30, 2021, there was \$19.8 million outstanding indebtedness under the Credit Facility and the undrawn remaining borrowing base capacity was \$6.1 million. To maintain the minimum excess borrowing availability threshold of \$6.25 million, as described in Footnote 4 “*Long-term Debt*” of Footnotes to *Condensed Consolidated Financial Statements*, we repaid \$0.4 million of the outstanding indebtedness under the Credit Facility in July 2021.

The Credit Facility requires us to maintain compliance with various covenants. At June 30, 2021, we were in compliance with all of the covenants under the Credit Facility. For further information regarding our Credit Facility, see above Footnote 4 “*Long-term Debt*” of Footnotes to *Condensed Consolidated Financial Statements*.

At-The-Market Equity Offering Program

On April 26, 2021, we filed a prospectus supplement under which ION may sell up to \$10 million of its common stock through an "at-the-market" equity offering program (the "ATM Program"). We intend to use the net proceeds from sales under the ATM Program for working capital and general corporate purposes. The timing of any sales will depend on a variety of factors to be determined by us.

Public Equity Offering

In July 2021, we filed a preliminary Form S-1 under which we may issue ION's common stock ("Common Stock") and warrants to purchase additional Common Stock. While the S-1 remains on file, there are several variables to consider, such as macroeconomic factors and our stock price. We have decided not to issue our common stock at the current price levels, but we will continue to monitor market conditions.

Government Relief Funding

On April 11, 2020, we entered into a Note Agreement (“Note”) with PNC amounting to \$6.9 million pursuant to the Coronavirus Aid, Relief, and Economic Security Act’s (“CARES Act”) Paycheck Protection Program (“PPP”). Amounts outstanding under this Note bore interest at 1% per annum beginning on the six-month anniversary of the date of the Note. The Note was scheduled to mature in two years after the receipt of the loan proceeds. On June 16, 2021, the Company received the notice of forgiveness from the Small Business Administration for the full amount of the Note including all accrued interest.

The Company recognized the Note of \$6.9 million as a deferred income liability during 2020 and fully amortized to other income in the condensed consolidated income statements for the six months ended June 30, 2020, as the related expenses it was intended to offset were incurred from April 2020 to June 2020.

Further, we qualified for an employee retention credit (“ERC”) of \$3.2 million for the six months ended June 30, 2021, \$1.6 million of which has been received during the second quarter 2021 and the remaining \$1.6 million is expected to be refunded during the third quarter 2021. Further, based on current legislation, we expect that we will qualify for the ERC during the second half of 2021 with the refund expected to be received during fourth quarter 2021 and first quarter 2022. Refer to Footnote 5 “Government Relief Funding” of Footnotes to *Condensed Consolidated Financial Statements*.

Disclosure of Guarantees

As discussed in Footnote 4 “Long-term Debt” of Footnotes to *Condensed Consolidated Financial Statements*, prior to the Restructuring Transactions, the Old Notes were senior secured second-priority obligations issued by ION and are guaranteed by Guarantors, all of which are wholly-owned subsidiaries. The Old Notes contains certain covenants that, among other things, limited or prohibited us and the ability of our restricted subsidiaries to take certain actions or permit certain conditions to exist during the term of the Old Notes, including among other things, incurring additional indebtedness in excess of permitted indebtedness, creating liens, paying dividends and making other distributions in respect of ION’s capital stock, redeeming ION’s capital stock, making investments or certain other restricted payments, selling certain kinds of assets, entering into transactions with affiliates, and effecting mergers or consolidations. On April 20, 2021, we entered into a Supplemental Indenture (refer to “Old Notes” above and in Footnote 4 “Long-term Debt” of Footnotes to *Condensed Consolidated Financial Statements*) to the Old Notes Indenture that among other things, provided for the release of the second priority security interest in the collateral securing the Old Notes, and deleted in their entirety substantially all of the restrictive covenants and certain events of default pertaining to the Old Notes. The Old Notes Indenture, as modified by the Supplemental Indenture, are materially less restrictive and affords significantly reduced protection to holders of such securities as compared to the restrictive covenants, events of default and other provisions previously contained in the Old Notes Indenture.

Each guarantee of the New Notes are senior obligations of each Guarantor; secured on a second-priority basis, equally and ratably with all obligations of that Guarantor under any other future Parity Lien Debt, by Liens on all of the assets of that Guarantor other than the Excluded Assets, subject to the Liens securing that Guarantor’s guarantee of the Credit Agreement obligations and any other Priority Lien Debt and other Permitted Prior Liens; are effectively junior, to the extent of the value of the Collateral (as defined in the New Notes Indenture), to that Guarantor’s guarantee of the Credit Agreement and any other Priority Lien Debt, which are secured on a first-priority basis by the same assets of that Guarantor that secure the New Notes; are effectively junior to any Permitted Prior Liens, to the extent of the value of the assets of that Guarantor subject to those Permitted Prior Liens; and are senior in right of payment to any future subordinated Indebtedness of that Guarantor, if any.

The following is a description of the terms and conditions of the guarantees under the Old Notes (prior to the Restructuring Transactions) and New Notes:

- The Guarantors jointly and severally, unconditionally guarantee the payment of the principal, premium (if any) and interest on the Old Notes and New Notes in full when due, whether at maturity, by acceleration or redemption. If we fail to make a scheduled payment, Guarantors will be jointly and severally obligated to pay the same immediately.

- The guarantees are subject to release in the following circumstances: (i) the sale or disposition either through merger, consolidation or otherwise of the assets or capital stock of a Guarantor that does not violate the provisions of the Old Notes Indenture and New Notes Indenture other than to us or any of our restricted subsidiary; or (ii) the designation of a Guarantor as an “Unrestricted Subsidiary” (All of ION subsidiaries are currently restricted subsidiaries) or (iii) upon legal defeasance or covenant defeasance or (iv) upon liquidation or dissolution provided no default of event or (v) if consent is provided by an act of approximately 67% of our noteholders.
- Each guarantee is limited to an amount that will not render the guarantee, as it relates to each Guarantor, voidable under applicable law relating to fraudulent conveyances or fraudulent transfers.

On the basis of historical financial information, operating history and other factors, we believe that each of the Guarantors, after giving effect to the issuance of its guarantee of the Old Notes and New Notes when the guarantee was issued, was not insolvent and did not and has not incurred debts beyond its ability to pay such debts as they mature. We cannot predict, however, what standard a court would apply in making these determinations or that a court would agree with our conclusions in this regard.

The following tables include the summarized financial information of ION, the Guarantors, all other subsidiaries of ION that are not Guarantors and the consolidating adjustments necessary to present ION's results on a consolidated basis.

	June 30, 2021				
Summarized Balance Sheet	ION Geophysical Corporation	The Guarantors	All Other Subsidiaries	Consolidating Adjustments	Total Consolidated
	(In thousands)				
ASSETS					
Total current assets	\$ 29,139	\$ 20,853	\$ 12,423	\$ —	\$ 62,415
Investment in subsidiaries	828,174	287,695	—	(1,115,869)	—
Intercompany receivables	—	—	140,836	(140,836)	—
Total noncurrent assets	849,118	348,529	175,905	(1,256,705)	116,847
Total assets	<u>\$ 878,257</u>	<u>\$ 369,382</u>	<u>\$ 188,328</u>	<u>\$ (1,256,705)</u>	<u>\$ 179,262</u>
LIABILITIES					
Total current liabilities	\$ 39,122	\$ 53,757	\$ 9,760	\$ —	\$ 102,639
Intercompany payables	778,436	17,081	—	(795,517)	—
Total noncurrent liabilities	905,449	28,638	3,041	(795,776)	141,352
Total liabilities	<u>\$ 944,571</u>	<u>\$ 82,395</u>	<u>\$ 12,801</u>	<u>\$ (795,776)</u>	<u>\$ 243,991</u>
Six Months Ended June 30, 2021					
Summarized Income Statement	ION Geophysical Corporation	The Guarantors	All Other Subsidiaries	Consolidating Adjustments	Total Consolidated
	(In thousands)				
Total net revenues	\$ —	\$ 22,101	\$ 11,649	\$ —	\$ 33,750
Gross profit	—	733	3,764	—	4,497
Income (loss) from operations	(8,674)	(8,087)	(854)	—	(17,615)
Equity earnings (losses)	(9,844)	1,689	—	8,155	—
Net income (loss)	<u>(30,749)</u>	<u>(10,037)</u>	<u>1,851</u>	<u>8,155</u>	<u>(30,780)</u>

This summarized financial information should be read in conjunction with the accompanying condensed consolidated financial statements and footnotes.

Meeting our Liquidity Requirements

At June 30, 2021, our total outstanding indebtedness (including equipment finance leases) was approximately \$133.8 million, consisting primarily of approximately \$116.2 million outstanding New Notes, \$7.1 million outstanding Old Notes, \$19.8 million outstanding indebtedness under our Credit Facility, \$0.1 million of equipment finance leases and other short-term debt, partially offset by \$9.3 million of debt issuance costs.

For the Current Period, total capital expenditures, including the investments in our multi-client data library, were \$12.6 million. We expect capital expenditures, primarily related to investments in our multi-client data library, this year to be in the range of \$25.0 million to \$35.0 million, dependent upon the level of pre-funding or underwriting by our customers. Whether remaining planned expenditures will be spent in 2021 depends on industry conditions, project approvals and schedules, and careful monitoring of our liquidity.

We completed the Restructuring Transactions (as further discussed below) that extended the maturity of the notes tendered in the Exchange Offer (as defined below) by four years to December 2025 and provided additional liquidity. While we completed the Restructuring Transactions and second quarter 2021 revenues improved sequentially, the timing of the market recovery remains uncertain and revenues for the first half of 2021 were less than expected largely due to lower multi-client data sales. These low levels of revenue in the first half of the year will negatively impact cash collections heading into the second half of the year, which collections are necessary to fund our operations and meet our debt and other obligations. This raises substantial doubt about our ability to continue as a going concern for the next twelve months. If we are unable to raise additional funds through equity issuances, further debt financing arrangements, sales of assets or through other means or preserving cash through cost reduction initiatives, the Company's liquidity and operations would be significantly impacted.

Old Notes Restructuring

On April 20, 2021, we successfully completed our previously announced offer to exchange (the "Exchange Offer") ION's 9.125% Senior Secured Second Priority Notes due 2021 (the "Old Notes") for newly issued 8.00% Senior Secured Second Priority Notes due 2025 (the "New Notes") and other consideration in the form of cash and ION common stock, as described in ION's Prospectus dated March 10, 2021 and our previously announced rights offering (the "Rights Offering") to our holders of ION's common stock, par value \$0.01 per share (the "Common Stock") to purchase for (i) \$2.78 principal amount of the New Notes per right, at a purchase price of 100% of the principal amount thereof or (ii) 1.08 shares of common stock per right, at a purchase price of \$2.57 per whole share of common stock.

In total, \$116.2 million in aggregate principal amount of New Notes and 10.9 million shares of ION common stock were issued. We received approximately \$14 million in net proceeds from the transactions after deducting noteholders obligations, estimated transaction fees and accrued and unpaid interest paid on the Old Notes. After the Restructuring Transactions, \$7.1 million of Old Notes remain outstanding and are due along with unpaid interest on December 15, 2021. For further details, refer to Footnote 1 "Summary of Significant Accounting Policies - Old Notes Restructuring" of Footnotes to the Condensed Consolidated Financial Statements.

Cash Flow from Operations

In the Current Period, we used cash from operating activities of \$19.3 million compared to cash generated from operating activities of \$16.4 million for the Comparable Period. The decrease was driven primarily by the decline in revenues in the Current Period.

Cash Flow from Investing Activities

Cash used in investing activities was \$13.4 million in the Current Period compared to \$15.3 million for the Comparable Period. The principal uses of cash in our investing activities during the Current Period were \$12.6 million invested in our multi-client data library and \$0.8 million for capital expenditures related to property, plant and equipment.

Cash Flow from Financing Activities

Net cash provided by financing activities was \$22.0 million in the Current Period, compared to \$27.9 million for the Comparable Period. Cash provided by financing activities during the Current Period was related to the \$41.8 million proceeds from the rights offering, \$9.8 million received from the registered direct offering, partially offset by \$18.6 million of payments of long-term debt, including equipment finance leases, \$2.8 million of payments of credit facility and \$7.7 million of costs associated with issuance of debt.

Inflation and Seasonality

Recent inflationary trends have not had a material effect on our supply chain, cost of goods or labor, or the prices for our products or services. Traditionally, our business has been seasonal, with strongest demand often occurring in the second half of our fiscal year.

Critical Accounting Policies and Estimates

Refer to our Annual Report on Form 10-K for the year ended December 31, 2020, for a complete discussion of our significant accounting policies and estimates.

Foreign Sales Risks

The majority of our foreign sales are denominated in U.S. dollars. Product revenues are allocated to geographic locations on the basis of the ultimate destination of the equipment, if known. If the ultimate destination of such equipment is not known, product revenues are allocated to the geographic location of initial shipment. Service revenues, which primarily relate to our E&P Technology & Services segment, are allocated based upon the billing location of the customer and the geographic location of the data. The table below includes certain reclassifications to make Comparable Period amounts consistent with the Current Period presentation. For the Current and Comparable Periods, international sales comprised 94% and 92%, respectively, of total net revenues.

	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Europe	\$ 6,599	\$ 4,684	\$ 10,965	\$ 12,156
Africa	6,479	4,117	8,251	16,358
Asia Pacific	3,437	2,631	5,638	10,393
Latin America	1,072	7,992	4,575	28,053
North America	934	2,204	2,141	6,092
Middle East	704	942	1,432	1,896
Other	489	161	748	4,197
Total	<u>\$ 19,714</u>	<u>\$ 22,731</u>	<u>\$ 33,750</u>	<u>\$ 79,145</u>

Credit Risks

For each of the three and six months ended June 30, 2021 and 2020, we had one customer with sales that each exceeded 10% of our consolidated net revenues.

At June 30, 2021, we had two customers with balances that accounted for 53% of our total combined accounts receivable and unbilled receivable balances. At June 30, 2020, we had two customers with a balance that accounted for 33% of our total combined accounts receivable and unbilled receivable balances.

The loss of these customers or deterioration in our relationship with these customers could have a material adverse effect on our results of operations and financial condition.

We routinely evaluate the financial stability and creditworthiness of our customers. We have a corporate credit policy that is intended to minimize the risk of financial loss due to a customer's inability to pay. Credit coverage decisions for customers are based on references, payment histories, financial and other data. We utilize a third-party trade credit insurance policy. We have historically not extended long-term credit to our customers.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

For the six months ended June 30, 2021 and 2020, we recorded net foreign currency losses of approximately \$0.2 million and \$0.5 million, respectively, primarily due to currency fluctuations related to our operations in Brazil.

Refer to Item 7A of our Annual Report on Form 10-K for the year ended December 31, 2020 for a discussion regarding our quantitative and qualitative disclosures about market risk. There have been no material changes to those disclosures during the Current Period.

Item 4. Controls and Procedures

Disclosure Controls and Procedures. Disclosure controls and procedures are designed to ensure that information required to be disclosed in the reports we file with or submit to the SEC under the Securities Exchange Act of 1934, as amended (the "Exchange Act") is recorded, processed, summarized and reported within the time period specified by the SEC's rules and forms. Disclosure controls and procedures are defined in Rule 13a-15(e) under the Exchange Act, and they include, without limitation, controls and procedures designed to ensure that information required to be disclosed under the Exchange Act is accumulated and communicated to management, including the principal executive officer and the principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

Our management carried out an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures as of June 30, 2021. Based upon that evaluation, our principal executive officer and principal financial officer have concluded that our disclosure controls and procedures were effective as of June 30, 2021.

Changes in Internal Control over Financial Reporting. There was not any change in our internal control over financial reporting that occurred during the three months ended June 30, 2021, which has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II — OTHER INFORMATION**Item 1. *Legal Proceedings***

In July 2018, we prevailed in an arbitration that we initiated against the Indian Directorate General of Hydrocarbons (“DGH”) relating to our ability to continue to license data under our IndiaSPAN program. The DGH filed a lawsuit in court in India to vacate the arbitration award; in connection with that lawsuit, we were ordered to escrow approximately \$4.5 million in sales proceeds that we received in respect of sales from the IndiaSPAN program, pending the outcome of the DGH’s challenge to the arbitration award. We challenged the escrow order, but on December 9, 2019, the Supreme Court of India ordered us to comply with it. We prepared a petition to file with the court to request that a March 2020 deadline to deposit approximately \$4.5 million in escrow in early 2020 be extended due to the changes to our business, and to the markets, that have been spurred by the COVID-19 pandemic. We were unable to file the application because the courts in India were closed due to the pandemic (other than for emergencies), and were not accepting filings at that time. We served a copy of our draft petition on the DGH’s counsel and intends to address the escrow issue in advance of the next hearing, which has been repeatedly delayed due to the COVID-19 pandemic. We prevailed on the merits in the arbitration and expects to have that award upheld in Indian court, which would result in release of the portion of any money escrowed by us. The DGH’s request to vacate the arbitration award is currently scheduled to be heard by the court in India on September 1, 2021. The Company has not escrowed the money as of August 12, 2021.

We have been named in various other lawsuits or threatened actions that are incidental to our ordinary business. Litigation is inherently unpredictable. Any claims against us, whether meritorious or not, could be time-consuming, cause us to incur costs and expenses, require significant amounts of management time and result in the diversion of significant operational resources. The results of these lawsuits and actions cannot be predicted with certainty. We currently believe that the ultimate resolution of these matters will not have a material adverse effect on our financial condition or results of operations or our liquidity.

Item 1A. Risk Factors

This report contains or incorporates by reference statements concerning our future results and performance and other matters that are “forward-looking” statements within the meaning of Section 27A of the Securities Act of 1933, as amended (“Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (“Exchange Act”). These statements involve known and unknown risks, uncertainties, and other factors that may cause our or our industry’s results, levels of activity, performance, or achievements to be materially different from any future results, levels of activity, performance, or achievements expressed or implied by such forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “would,” “should,” “intend,” “expect,” “plan,” “anticipate,” “believe,” “estimate,” “predict,” “potential,” or “continue” or the negative of such terms or other comparable terminology. Examples of other forward-looking statements contained or incorporated by reference in this report include statements regarding:

- the substantial doubt about our ability to continue as a going concern;
- the timing and extent of the recovery of customer demand for seismic data;
- the ultimate benefits of our completed restructuring transactions;
- our ability to comply with our debt financial covenants;
- the impact of the COVID-19 pandemic on our business, financial condition, and results of operations;
- future levels of our capital expenditures and of our customers for seismic activities;
- future oil and gas commodity prices;
- the effects of current and future worldwide economic conditions (particularly in developing countries) and demand for oil and natural gas and seismic equipment and services;
- future implication of our negative working capital and stockholders’ deficit, including future cash needs and availability of cash, to fund our operations and pay our obligations;
- the effects of current and future unrest in the Middle East, North Africa and other regions;
- the timing of anticipated revenues and the recognition of those revenues for financial accounting purposes;
- the effects of ongoing and future industry consolidation;
- the timing of future revenue realization of anticipated orders for multi-client survey projects and data processing work in our E&P Technology & Services segment;
- future government laws or regulations pertaining to the oil and gas industry, including trade restrictions, embargoes and sanctions imposed by the U.S government or laws curtailing the exploration for, or use of; hydrocarbons;
- future government actions that may result in the deprivation of our contractual rights, including the potential for adverse decisions by judicial or administrative bodies in foreign countries with unpredictable or corrupt judicial systems;
- expected net revenues, gross margins, income from operations and net income for our services and products;
- future seismic industry fundamentals, including future demand for seismic services and equipment;
- future benefits to our customers to be derived from new services and products;
- future benefits to be derived from our investments in technologies, joint ventures and acquired companies;
- future growth rates for our services and products;
- the degree and rate of future market acceptance of our new services and products;
- expectations regarding E&P companies and seismic contractor end-users purchasing our more technologically-advanced services and products;
- anticipated timing and success of commercialization and capabilities of services and products under development and start-up costs associated with their development;
- future opportunities for new products and projected research and development expenses;
- expectations regarding realization of deferred tax assets;
- expectations regarding the impact of the U.S. Tax Cuts, Jobs Act and CARES Act;
- anticipated results with respect to certain estimates we make for financial accounting purposes;
- future success dependent on our continuing ability to identify, hire, develop, motivate and retain skilled personnel for all areas of our organization;
- breaches to our systems could lead to loss of intellectual property, dissemination of highly confidential information, increased costs and impairment of our ability to conduct our operations;
- evolving cybersecurity risks, such as those involving unauthorized access or control, denial-of-service attacks, malicious software, data privacy breaches by employees, insiders or others with authorized access, cyber or phishing-attacks, ransomware, malware, social engineering, physical breaches or other actions;
- compliance with the U.S. Foreign Corrupt Practices Act and other applicable U.S. and foreign laws prohibiting corrupt payments to government officials and other third parties;
- anticipated approval of the INOVA sale by applicable regulators;
- expectations regarding the collectability of our accounts receivables; and
- the adoption of additional executive orders, regulatory action, and/or legislation targeting greenhouse gas emissions, or prohibiting, delaying or restricting oil and gas development activities in certain areas, during the Biden Administration.

Risks Related to the New Notes

Our indebtedness could adversely affect our liquidity, financial condition and our ability to fulfill our obligations and operate our business.

We have a substantial amount of indebtedness. As of June 30, 2021, we had approximately \$133.8 million of total outstanding indebtedness, consisting primarily of approximately \$116.2 million of New Notes, \$7.1 million Old Notes, \$19.8 million outstanding under our Credit Facility,

\$0.1 million of equipment finance leases and other short-term debt, which is partially offset by \$9.3 million of debt issuance costs. In addition, we may also incur additional indebtedness in the future. Higher levels of indebtedness could have negative consequences to us, including:

- we may have difficulty satisfying our obligations with respect to our outstanding debt;
- we may have difficulty obtaining financing in the future for working capital, capital expenditures, acquisitions or other purposes;
- we may need to use all, or a substantial portion, of our available cash flow to pay interest and principal on our debt, which will reduce the amount of money available to finance our operations and other business activities;
- our vulnerability to general economic downturns and adverse industry conditions could increase;
- our flexibility in planning for, or reacting to, changes in our business and in our industry in general could be limited;
- our amount of debt and the amount we must pay to service our debt obligations could place us at a competitive disadvantage compared to our competitors that have less debt;
- our customers may react adversely to our significant debt level and seek or develop alternative licensors or suppliers;
- we may have insufficient funds, and our debt level may also restrict us from raising the funds necessary to repurchase all of the News Notes tendered to us upon the occurrence of a change of control, which would constitute an event of default under the New Notes; and
- our failure to comply with the restrictive covenants in our debt instruments which, among other things, limit our ability to incur debt and sell assets, could result in an event of default that, if not cured or waived, could have a material adverse effect on our business or prospects.

Our level of indebtedness will require that we use a substantial portion of our cash flow from operations to pay principal of, and interest on, our indebtedness, which will reduce the availability of cash to fund working capital requirements, capital expenditures, research and development and other general corporate or business activities.

We may not be able to generate sufficient cash flow to meet our debt service obligations.

Our ability to make payments on our indebtedness, including the New Notes and any Old Notes remaining outstanding after the Restructuring Transactions, and to fund planned capital expenditures will depend on our ability to generate cash in the future. This, to a certain extent, is subject to conditions in the oil and gas industry, the COVID-19 pandemic, general economic and financial conditions and the impact of legislative and regulatory actions on how we conduct our business and other factors, all of which are beyond our control.

We cannot assure you that our business will generate sufficient cash flow from operations to service our outstanding indebtedness, or that future borrowings will be available to us in an amount sufficient to enable us to pay our indebtedness or to fund our other capital needs. If our business does not generate sufficient cash flow from operations to service our outstanding indebtedness, we may have to undertake alternative financing plans, such as:

- refinancing or restructuring our debt;
- selling assets;
- reducing or delaying acquisition programs; or
- seeking to raise additional capital.

However, we cannot assure you that we would be able to implement alternative financing plans, if necessary, on commercially reasonable terms or at all, or that implementing any such alternative financing plans would allow us to meet our debt obligations. In addition, any failure to make scheduled payments of interest and principal on our outstanding indebtedness, including the New Notes, would likely result in a reduction of our credit rating, which could harm our ability to incur additional indebtedness on acceptable terms.

Our inability to generate sufficient cash flow to satisfy our debt obligations, including our obligations under the New Notes, or to obtain alternative financings, could materially and adversely affect our business, financial condition, results of operations and prospects.

Despite our current level of indebtedness, we may incur substantially more debt.

We may incur substantial additional indebtedness in the future, subject to certain limitations, including under our revolving credit facility (the "Credit Facility") and the indenture governing the New Notes (the "New Notes Indenture"). If new indebtedness is added to our current debt levels, the related risks that we now face could increase. Our level of indebtedness could, for instance, prevent us from engaging in transactions that might otherwise be beneficial to us or from making desirable capital expenditures. This could put us at a competitive disadvantage relative to other less leveraged competitors that have more cash flow to devote to their operations. In addition, the incurrence of additional indebtedness could make it more difficult to satisfy our existing financial obligations, including those relating to the New Notes. Furthermore, the New Notes Indenture permits us to incur up to \$75 million of priority debt (inclusive of borrowings under the Credit Facility). If we incur any additional indebtedness that ranks prior to the New Notes, the holders of such indebtedness will be entitled to receive proceeds distributed in connection with any insolvency, liquidation, reorganization, dissolution or other winding up of us before the holders of the New Notes, and if we incur additional indebtedness that ranks equal to the New Notes, the holders of that indebtedness will be entitled to share ratably with you in any proceeds distributed in connection with any insolvency, liquidation, reorganization, dissolution or other winding up of us.

Our Credit Facility and the New Notes Indenture contain, a number of restrictive covenants that will limit our ability to finance future operations or capital needs or engage in other business activities that may be in our interest.

Our Credit Facility and the New Notes Indenture impose, and the terms of any future indebtedness may impose, operating and other restrictions on us and our subsidiaries. Such restrictions affect or will affect, and in many respects limit or prohibit, among other things, our ability and the ability of our restricted subsidiaries to:

- incur additional indebtedness (including certain capital lease obligations), grant or incur additional liens on our properties, pledge shares of our subsidiaries, enter into certain merger or other change-in-control transactions, enter into certain transactions with our affiliates, make certain sales or other dispositions of assets, make certain investments and acquire other businesses;
- pay cash dividends on our common stock; and
- repurchase and acquire our capital stock.

Our Credit Facility contains other restrictions and covenants which require us to achieve certain financial and operating results and maintain compliance with specified financial ratios. Our ability to comply with these ratios may be affected by events beyond our control. We cannot assure you that we will be able to maintain compliance with these covenants in the future and, if we fail to do so, that we will be able to obtain waivers from the lenders and/or amend the covenants.

The restrictions contained in our Credit Facility and the New Notes Indenture could:

- limit our ability to plan for or react to market or economic conditions or meet capital needs or otherwise restrict our activities or business plans; and
- adversely affect our ability to finance our operations or other capital needs or to engage in other business activities that would be in our interest.

A failure to comply with the restrictions in our Credit Facility or the New Notes Indenture could result in an event of default under the New Notes Indenture. Our future operating results may not be sufficient to enable compliance with the covenants in our Credit Facility or New Notes Indenture or to remedy any such default. In addition, in the event of an acceleration, we may not have or be able to obtain sufficient funds to refinance our indebtedness or make any accelerated payments, including those under our Credit Facility or our outstanding notes. Also, we may not be able to obtain new financing. Even if we were able to obtain new financing, we cannot guarantee that the new financing will be on commercially reasonable terms or terms that are acceptable to us. If we default on our indebtedness, our business, financial condition or results of operations could be materially and adversely affected.

Risks Related to the Operation of our Business

There is substantial doubt about our ability to continue as a going concern.

The timing and extent of the recovery of customer demand for seismic data remains uncertain and revenues for the first half of 2021 were less than expected largely due to lower multi-client data sales. These low levels of revenue in the first half of the year will negatively impact cash collections heading into the second half of the year, which collections are necessary to fund our operations and meet our debt and other obligations. These lower revenues and cash collections also negatively impact the excess borrowing availability threshold under our Credit Facility, the terms of which, as noted in Footnote 4 "Long-term Debt" of Footnotes to the *Condensed Consolidated Financial Statements*, allow our lender to exercise dominion over cash and deposit accounts if that threshold drops below a certain level; this would restrict our ability to fund our operations with debt. If we are unable to generate positive cash flow from operations in the near future or to adequately supplement such cash flow from operations with proceeds from capital raising activities, divestitures or other similar transactions, our ability to continue as a going concern would be significantly impacted.

Our business depends on the level of exploration and production activities by the oil and natural gas industry. If capital expenditures by E&P companies decline, typically because of lower price realizations for oil and natural gas, the demand for our services and products would decline and our results of operations would be materially adversely affected.

Demand for our services and products depends upon the level of spending by E&P companies and seismic contractors for exploration and production activities, and those activities depend in large part on oil and gas prices. Spending by our customers on services and products that we provide is highly discretionary in nature, and subject to rapid and material change. Any decline in oil and gas related spending on behalf of our customers could cause alterations in our capital spending plans, project modifications, delays or cancellations, general business disruptions or delays in payment, or non-payment of amounts that are owed to us, any one of which could have a material adverse effect on our financial condition. E&P companies' willingness to explore, develop and produce depends largely upon prevailing industry conditions that are influenced by numerous factors over which our management has no control, such as:

- the timing and extent of the recovery of customer demand for seismic data;
- the supply of and demand for oil and gas;
- the level of prices, and expectations about future prices, of oil and gas;
- the cost of exploring for, developing, producing and delivering oil and gas;
- the expected rates of decline for current production;
- the discovery rates of new oil and gas reserves;
- weather conditions, including hurricanes, that can affect oil and gas operations over a wide area, as well as less severe inclement weather that can preclude or delay seismic data acquisition;
- domestic and worldwide economic conditions;
- public health crises, such as the coronavirus outbreak at the beginning of 2020;
- changes in government leadership;

- political instability in oil and gas producing countries;
- technical advances affecting energy consumption;
- government policies regarding the exploration, production and development of oil and gas reserves;
- the ability of oil and gas producers to raise equity capital and debt financing;
- merger and divestiture activity among oil and gas companies and seismic contractors; and
- compliance by members of OPEC and non-OPEC members, such as Russia, with agreements to cut oil production.

The level of oil and gas exploration and production activity has been volatile in recent years. Trends in oil and gas exploration and development activities have declined, together with demand for our services and products. Any prolonged substantial reduction in oil and gas prices would likely further affect oil and gas production levels and therefore adversely affect demand for the services we provide and products we sell.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds*(c) Purchase of Equity Securities by the Issuer and Affiliated Purchasers*

During the three months ended June 30, 2021, in connection with the vesting of (or lapse of restrictions on) shares of our restricted stock held by certain employees, we acquired shares of our common stock in satisfaction of tax withholding obligations that were incurred on the vesting date. The date of acquisition, number of shares and average effective acquisition price per share were as follows:

Period	(a) Total Number of Shares Acquired	(b) Average Price Paid Per Share	(c) Total Number of Shares Purchased as Part of Publicly Announced Plans or Program	(d) Maximum Number (or Approximate Dollar Value) of Shares That May Yet Be Purchased Under the Plans or Program
April 1, 2021 to April 30, 2021	—	\$ —	Not applicable	Not applicable
May 1, 2021 to May 31, 2021	—	—	Not applicable	Not applicable
June 1, 2021 to June 30, 2021	120,402	2.16	Not applicable	Not applicable
Total	<u>120,402</u>	<u>\$ 2.16</u>		

Item 5. Other Information

None.

Item 6. Exhibits

- 3.1 [Restated Certificate of Incorporation of ION Geophysical Corporation filed July 7, 2021 as Exhibit 3.1 to the Current Report on Form 8-K and incorporated herein by reference.](#)
- 3.2 [Amended and Restated Bylaws of ION Geophysical Corporation filed July 7, 2021 as Exhibit 3.2 to the Current Report on Form 8-K and incorporated herein by reference.](#)
- 10.1** [Fourth Amended and Restated 2013 Long-Term Incentive Plan filed on May 11, 2021 as Appendix 4.3 to the Registration Statement Form S-8 and incorporated herein by reference.](#)
- 10.2* ** [Form of Restricted Stock Awards Agreement dated May 11, 2021 issued under the Fourth Amended and Restated 2013 Long-Term Incentive Plan dated May 11, 2021.](#)
- 10.3* ** [Form of Restricted Stock Units Awards Agreement dated May 11, 2021 issued under the Fourth Amended and Restated 2013 Long-Term Incentive Plan dated May 11, 2021.](#)
- 31.1 [Certification of Chief Executive Officer](#)
- 31.2 [Certification of Chief Financial Officer](#)
- 32.1 [Certification of Chief Executive Officer](#)
- 32.2 [Certification of Chief Financial Officer](#)

101 The following materials are formatted in Inline Extensible Business Reporting Language (iXBRL): (i) Condensed Consolidated Balance Sheets as of June 30, 2021 and December 31, 2020, (ii) Condensed Consolidated Statements of Operations for the three and six months ended June 30, 2021 and 2020, (iii) Condensed Consolidated Statements of Comprehensive Loss for the three and six months ended June 30, 2021 and 2020, (iv) Condensed Consolidated Statements of Cash Flows for the six months ended June 30, 2021 and 2020, (v) Condensed Consolidated Statements of Stockholders' Deficit for the three and six months ended June 30, 2021 and 2020 and (vi) Footnotes to Condensed Consolidated Financial Statements.

- 101.INS Inline XBRL Instance Document.
- 101.SCH Inline XBRL Taxonomy Schema Document.
- 101.CAL Inline XBRL Taxonomy Calculation Linkbase Document.
- 101.DEF Inline XBRL Taxonomy Definition Linkbase Document.
- 101.LAB Inline XBRL Taxonomy Label Linkbase Document.
- 101.PRE Inline XBRL Taxonomy Presentation Linkbase Document.
- 104 Cover page interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).

* Filed herewith.

** Management contract or compensatory plan or arrangement.

ION Geophysical Corporation
Fourth Amended and Restated 2013 Long Term Incentive Plan
RESTRICTED STOCK AGREEMENT

1. **Grant of Restricted Stock Shares.** On May 11, 2021 (the “**Grant Date**”), ION Geophysical Corporation (the “**Company**”) granted «**written_out**» («**Granted**») shares of restricted Common Stock (the “**Restricted Stock**”) in the Company to «**First_Name**» «**Last_Name**» (the “**Grantee**”) subject to the terms of this Restricted Stock Agreement (this “**Agreement**”), and subject and pursuant to the terms of the Company’s Fourth Amended and Restated 2013 Long Term Incentive Plan (the “**Plan**”). The Restricted Stock and its release are subject in all respects to the terms as set forth in the Plan, a copy of which is available from the General Counsel of the Company, and to any rules promulgated pursuant to the Plan by the Committee. Capitalized terms not otherwise defined herein are as defined in the Plan. The effectiveness of such grant is expressly conditioned upon Grantee executing and returning this Agreement to the Company’s General Counsel.
2. **Dividends and Voting Rights.** Grantee shall not be entitled to receive any dividends paid with respect to the Restricted Stock that become payable except as to any Restricted Stock that has vested as set forth below in this Agreement. From the Grant Date, Grantee shall be entitled to vote the shares of Restricted Stock, even if it they have not vested, to the same extent as would have been applicable to Grantee if Grantee was then vested in the shares of Restricted Stock; *provided, however*, that Grantee shall not be entitled to vote the shares of Restricted Stock with respect to record dates for such voting rights arising prior to the Grant Date, or with respect to record dates occurring on or after the date, if any, on which Grantee has forfeited such shares of Restricted Stock.
3. **Deposit of Restricted Stock.** Upon vesting and satisfying all applicable tax withholding obligations, the Company shall cause a book-entry registration or certificate or certificates to be issued without legend (except for any legend required pursuant to applicable securities laws or any other agreement to which Grantee is a party) in Grantee’s name evidencing the shares of Restricted Stock that have vested. Prior to the satisfaction of such vesting conditions or the occurrence of such events, the Restricted Stock is not transferable and shall be held by Company in such depository as may be designated by the Committee as a depository for safekeeping until the forfeiture of such Restricted Stock occurs or the vesting of the shares pursuant to the terms of the Plan and this Agreement. In the Company’s sole discretion, the Restricted Stock may be evidenced by an electronic book-entry account in Grantee’s name created by the Company’s stock transfer agent. No book-entry registration or physical certificates evidencing the Restricted Stock will be issued to Grantee until the satisfaction of all vesting conditions set forth herein and the satisfaction of all applicable tax withholding obligations. Grantee shall, if required by the Committee, deliver to the Company a stock power, endorsed in blank, relating to the Restricted Stock.
4. **Vesting.** Subject to Paragraph 5 below, Grantee’s Restricted Stock shall become vested, if at all, only if Grantee is an Employee, Director, or Consultant in continuous service with the Company between the Grant Date and the Vesting Date as provided in the following schedule:

Vesting Date	Time Vested Percentage
May 11, 2022	33.33%
May 11, 2023	66.66%
May 11, 2024	100%

5. **Early Vesting on Certain Events; Transfer and Forfeiture of Restricted Stock.** Sections 7.6(c), 7.7(b), and 7.7(d) of the Plan shall not apply to the shares of Restricted Stock subject to this Agreement. For the avoidance of doubt, to the extent of any conflict between the provisions of Section 7 of the Plan and this Agreement, the provisions of this Agreement shall supersede and control. Section 7.5 of the Plan shall continue to apply. In addition to (and notwithstanding anything to the contrary in) the vesting criteria set forth in Paragraph 4 above, Grantee shall become fully vested in the shares of Restricted Stock awarded hereunder (to the extent not already vested), as follows:
 - a. **Termination of Employment by Company other than for Cause.** If Grantee’s employment is terminated by Company for any reason other than for Cause prior to the date that some or all of the shares of Restricted Stock become vested, then Grantee’s shares of Restricted Stock shall become fully vested upon Grantee’s Date of Termination. For the avoidance of doubt, Grantee’s voluntary termination of his or her own employment shall not precipitate early vesting under this paragraph (a). (Paragraph 5(b) next following provides additional early vesting in certain cases in the twelve months after a Change in Control; for the avoidance of doubt, Paragraph 5(b) does not limit the early vesting provisions of this Paragraph 5(a), and this Paragraph 5(a) will continue to apply following the date that is twelve months after a Change in Control.)
 - b. **Change of Control.** If a Change in Control occurs prior to the date that some or all of the shares of Restricted Stock become vested, then the provisions of this Paragraph 5(b) shall apply as follows:
 - (1) The shares of Restricted Stock shall become vested as set forth in Paragraph 4 above.
 - (2) Notwithstanding Paragraph 5(b)(1), the shares of Restricted Stock shall become fully vested on the Grantee’s Date of Termination if Grantee is Involuntarily Terminated by the Company. As used in this paragraph, “**Involuntarily Terminated**” means Grantee’s employment with the Company (or, if applicable the Company’s (or the Company’s successor’s) affiliates) ceases during the twelve month period beginning on the effective date of the Change in Control due to either (i) employment termination by the Company for reasons other than (a) Grantee’s gross negligence or willful misconduct in the performance of duties with the Company or (b) Grantee’s final conviction of a felony or a misdemeanor involving moral turpitude, or (ii) resignation by Grantee after (a) a reduction by the Company of Grantee’s authority, duties or responsibilities immediately prior to the Change in Control (excluding for this purpose (A) an insubstantial reduction of such authorities, duties or responsibilities or an insubstantial reduction of Grantee’s offices, titles and reporting requirements, or (B) an isolated, insubstantial and inadvertent action not taken in bad faith and which is remedied by the Company promptly after receipt of notice thereof given by Grantee), (b) a material reduction of Grantee’s base salary or total compensation as in effect immediately prior to the Change in Control (total compensation means for this purpose: base salary, participation in an annual bonus plan, and participation in a long-term incentive plan (and not reductions in any annual bonus or long-term incentives actually paid, which shall remain at the sole discretion of the Company), or (c) Grantee’s transfer, without Grantee’s express

written consent, to a location which is outside the general metropolitan area in which Grantee's principal place of business immediately prior to the Change in Control may be located or the Company requiring Grantee to travel on Company business to a substantially greater extent than required immediately prior to the Change in Control.

- (3) After a Change in Control, if the vesting requirement is satisfied or Grantee is Involuntarily Terminated, Grantee shall be entitled to receive, in lieu of the number of shares of Restricted Stock that Grantee would have received on the applicable Vesting Date, shares of capital stock of the Company's successor or other securities or property, such as cash, equal in value to the number of shares of Restricted Stock that Grantee would have received, multiplied by the NYSE reported closing Share price on the day immediately preceding the Change in Control. (For clarity, this subparagraph (3) is intended to apply in those situations where the nature of the Change in Control (as might happen, for example, in the event of a merger) would make it impossible or very difficult to transfer or un-restrict the shares underlying the award of Restricted Stock in accordance with the award formula used by the Committee in setting the award shortly before the Grant Date.)
- c. Shares of Restricted Stock may not be sold, assigned, transferred, pledged or otherwise encumbered until Grantee is vested in such shares. Except as otherwise provided in this Paragraph 5, if Grantee's Date of Termination occurs prior to full vesting, Grantee shall forfeit the then unvested shares of Restricted Stock as of Grantee's Date of Termination. Grantee's "**Date of Termination**" shall be the day, hour, minute and second occurring on or after the Grant Date at which time Grantee is no longer employed by the Company or any Subsidiary (that is, the last second that Grantee was employed), regardless of the reason for the termination of employment; provided that a termination of employment shall not be deemed to occur by reason of a transfer of Grantee between the Company and a Subsidiary or between two Subsidiaries; and further provided that Grantee's employment shall not be considered terminated while Grantee is on a leave of absence from the Company or a Subsidiary approved by Grantee's employer.
6. **Heirs and Successors.** This Agreement shall be binding upon, and inure to the benefit of, the Company and its successors and assigns, and upon any person acquiring, whether by merger, consolidation, purchase of assets or otherwise, all or substantially all of the Company's assets and business. If any rights of Grantee or benefits distributable to Grantee under this Agreement have not been exercised or distributed, respectively, at the time of Grantee's death, such rights shall be exercisable by the legal representative of the estate of Grantee.
7. **Administration.** The authority to manage and control the operation and administration of this Agreement shall be vested in the Committee, and the Committee shall have all powers with respect to this Agreement as it has with respect to the Plan. Any interpretation of this Agreement by the Committee and any decision made by it with respect to this Agreement is final and binding.
8. **Plan Governs.** Notwithstanding anything contained in this Agreement to the contrary, the terms of this Agreement shall be subject to the terms of the Plan, a copy of which may be obtained by Grantee from the office of the General Counsel of the Company.
9. **Amendment.** This Agreement may only be amended by written agreement of Grantee and the Company.
10. **Tax Requirements.** The Company shall have the right to deduct any federal, state, or local taxes required by law to be withheld with respect to the award of Restricted Stock made hereunder. Grantee shall be required to pay the Company the amount of any taxes which the Company is required to withhold with respect to such shares of Restricted Stock.
11. **Not an Employment Contract.** No award of Restricted Stock shall confer on Grantee any right with respect to continuance of employment or other service with the Company or any Subsidiary, nor will it interfere in any way with any right the Company or any Subsidiary would otherwise have to terminate or modify the terms of such Grantee's employment or other service at any time.
12. **Notices.** Any written notices provided for in this Agreement or the Plan shall be in writing and shall be deemed sufficiently given if either sent by nationally recognized overnight courier, or by postage paid first class mail. Notices sent by U.S. mail shall be deemed received on the date of actual receipt. Notices sent by nationally recognized overnight courier shall be deemed received upon the first day that the courier attempts delivery at the recipient's address. Notices shall be directed, if to Grantee, at Grantee's address indicated by the Company's records, and if to the Company, at the Company's principal executive office, to the attention of the General Counsel.
13. **Applicable Law; Dispute Resolution.** Except to the extent preempted by federal or Delaware law, this Agreement shall be governed by and construed in accordance with the laws of the State of Texas, excluding any conflict-of-law rules or principles that would result in the laws of another state being applied. TO THE MAXIMUM EXTENT PERMITTED BY LAW, COMPANY AND GRANTEE EACH WAIVES ANY RIGHT TO TRIAL BY JURY OR TO HAVE A JURY PARTICIPATE IN RESOLVING ANY DISPUTE, WHETHER SOUNDING IN CONTRACT, TORT OR OTHERWISE, BETWEEN COMPANY AND GRANTEE ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE MATTERS RELATED HERETO. The prevailing party in any litigation or other proceeding to enforce the terms of this Agreement shall be entitled to recoup its reasonable attorneys' fees and costs from the non-prevailing party. To the fullest extent permitted by law, the parties agree that any suit or proceeding arising out of or relating to this Agreement shall be brought in court in Harris County, Texas, to the exclusion of any other forum or venue.

[Signature Page Follows]

IN WITNESS WHEREOF, the Company has caused this Agreement to be executed in its name and on its behalf, all effective as of the Grant Date.

ION Geophysical Corporation

By: _____

Name: Christopher T. Usher
Title: President and Chief Executive Officer

Address for Notices:

ION Geophysical Corporation

Attn: General Counsel
2105 CityWest Blvd., Suite 100
Houston, TX 77042

ACKNOWLEDGED AND AGREED BY:

GRANTEE:

«First_Name» «Last_Name»

ION Geophysical Corporation
Fourth Amended and Restated 2013 Long Term Incentive Plan
RESTRICTED STOCK UNITS AGREEMENT

1. **Grant of Restricted Stock Units.** On May 11, 2021 (the “**Grant Date**”), ION Geophysical Corporation (the “**Company**”) granted «**written_out**» («**Granted**») restricted Common Stock units (the “**Restricted Stock Units**”) in the Company to «**First_Name**» «**Last_Name**» (the “**Grantee**”) subject to the terms of this Restricted Stock Units Agreement (this “**Agreement**”), and subject and pursuant to the terms of the Company’s Fourth Amended and Restated 2013 Long Term Incentive Plan (the “**Plan**”). The Restricted Stock Units and their release are subject in all respects to the terms as set forth in the Plan, a copy of which is available from the General Counsel of the Company, and to any rules promulgated pursuant to the Plan by the Committee. Capitalized terms not otherwise defined herein are as defined in the Plan. The effectiveness of such grant is expressly conditioned upon Grantee executing and returning this Agreement to the Company’s General Counsel.
2. **Dividends and Voting Rights.** Grantee shall not be entitled to receive any dividends paid with respect to the shares of Common Stock underlying the Restricted Stock Units that become payable except as to any Restricted Stock Units that have vested as set forth below in this Agreement. Grantee shall not be entitled to vote the shares of Common Stock underlying the Restricted Stock Units.
3. **Vesting.** Subject to Paragraph 4 below, Grantee’s Restricted Stock Units shall become vested, if at all, only if Grantee is an Employee, Director, or Consultant in continuous service with the Company between the Grant Date and the Vesting Date as provided in the following schedule:

Vesting Date	Time Vested Percentage
May 11, 2022	33.33%
May 11, 2023	66.66%
May 11, 2024	100%

4. **Early Vesting on Certain Events; Transfer and Forfeiture of Restricted Stock.** Sections 7.6(c), 7.7(b), and 7.7(d) of the Plan shall not apply to the Restricted Stock Units subject to this Agreement. For the avoidance of doubt, to the extent of any conflict between the provisions of Section 7 of the Plan and this Agreement, the provisions of this Agreement shall supersede and control. Section 7.5 of the Plan shall continue to apply. In addition to (and notwithstanding anything to the contrary in) the vesting criteria set forth in Paragraph 3 above, Grantee shall become fully vested in the Restricted Stock Units awarded hereunder (to the extent not already vested), as follows:
 - a. **Termination of Employment by Company other than for Cause.** If Grantee’s employment is terminated by Company for any reason other than for Cause prior to the date that some or all of the Restricted Stock Units become vested, then Grantee’s Restricted Stock Units shall become fully vested upon Grantee’s Date of Termination. For the avoidance of doubt, Grantee’s voluntary termination of his or her own employment shall not precipitate early vesting under this paragraph (a). (Paragraph 4(b) next following provides additional early vesting in certain cases in the twelve months after a Change in Control; for the avoidance of doubt, Paragraph 4(b) does not limit the early vesting provisions of this Paragraph 4(a), and this Paragraph 4(a) will continue to apply following the date that is twelve months after a Change in Control.)
 - b. **Change of Control.** If a Change in Control occurs prior to the date that some or all of the Restricted Stock Units become vested, then the provisions of this Paragraph 4(b) shall apply as follows:
 - (1) The Restricted Stock Units shall become vested as set forth in Paragraph 3 above.
 - (2) Notwithstanding Paragraph 4(b)(1), the Restricted Stock Units shall become fully vested on the Grantee’s Date of Termination if Grantee is Involuntarily Terminated by the Company. As used in this paragraph, “**Involuntarily Terminated**” means Grantee’s employment with the Company (or, if applicable the Company’s (or the Company’s successor’s) affiliates) ceases during the twelve month period beginning on the effective date of the Change in Control due to either (i) employment termination by the Company for reasons other than (a) Grantee’s gross negligence or willful misconduct in the performance of duties with the Company or (b) Grantee’s final conviction of a felony or a misdemeanor involving moral turpitude, or (ii) resignation by Grantee after (a) a reduction by the Company of Grantee’s authority, duties or responsibilities immediately prior to the Change in Control (excluding for this purpose (A) an insubstantial reduction of such authorities, duties or responsibilities or an insubstantial reduction of Grantee’s offices, titles and reporting requirements, or (B) an isolated, insubstantial and inadvertent action not taken in bad faith and which is remedied by the Company promptly after receipt of notice thereof given by Grantee), (b) a material reduction of Grantee’s base salary or total compensation as in effect immediately prior to the Change in Control (total compensation means for this purpose: base salary, participation in an annual bonus plan, and participation in a long-term incentive plan (and not reductions in any annual bonus or long-term incentives actually paid, which shall remain at the sole discretion of the Company), or (c) Grantee’s transfer, without Grantee’s express written consent, to a location which is outside the general metropolitan area in which Grantee’s principal place of business immediately prior to the Change in Control may be located or the Company requiring Grantee to travel on Company business to a substantially greater extent than required immediately prior to the Change in Control.
 - (3) After a Change in Control, if the vesting requirement is satisfied or Grantee is Involuntarily Terminated, Grantee shall be entitled to receive, in lieu of the number of shares of Common Stock that Grantee would have received on the applicable Vesting Date, shares of capital stock of the Company’s successor or other securities or property, such as cash, equal in value to the number of shares of Common Stock that Grantee would have received, multiplied by the NYSE reported closing Share price on the day immediately preceding the Change in Control. (For clarity, this subparagraph (3) is intended to apply in those situations where the nature of the Change in Control (as might happen, for example, in the event of a merger) would make it impossible or very difficult to transfer or un-restrict the shares underlying the award of Restricted Stock Units in accordance with the award formula used by the Committee in setting the award shortly before the Grant Date.)

- c. Restricted Stock Units may not be sold, assigned, transferred, pledged or otherwise encumbered until Grantee is vested in such shares. Except as otherwise provided in this Paragraph 4, if Grantee's Date of Termination occurs prior to full vesting, Grantee shall forfeit the then unvested Restricted Stock Units as of Grantee's Date of Termination. Grantee's "**Date of Termination**" shall be the day, hour, minute and second occurring on or after the Grant Date at which time Grantee is no longer employed by the Company or any Subsidiary (that is, the last second that Grantee was employed), regardless of the reason for the termination of employment; provided that a termination of employment shall not be deemed to occur by reason of a transfer of Grantee between the Company and a Subsidiary or between two Subsidiaries; and further provided that Grantee's employment shall not be considered terminated while Grantee is on a leave of absence from the Company or a Subsidiary approved by Grantee's employer.
5. **Heirs and Successors.** This Agreement shall be binding upon, and inure to the benefit of, the Company and its successors and assigns, and upon any person acquiring, whether by merger, consolidation, purchase of assets or otherwise, all or substantially all of the Company's assets and business. If any rights of Grantee or benefits distributable to Grantee under this Agreement have not been exercised or distributed, respectively, at the time of Grantee's death, such rights shall be exercisable by the legal representative of the estate of Grantee.
6. **Administration.** The authority to manage and control the operation and administration of this Agreement shall be vested in the Committee, and the Committee shall have all powers with respect to this Agreement as it has with respect to the Plan. Any interpretation of this Agreement by the Committee and any decision made by it with respect to this Agreement is final and binding.
7. **Plan Governs.** Notwithstanding anything contained in this Agreement to the contrary, the terms of this Agreement shall be subject to the terms of the Plan, a copy of which may be obtained by Grantee from the office of the General Counsel of the Company.
8. **Amendment.** This Agreement may only be amended by written agreement of Grantee and the Company.
9. **Tax Requirements.** The Company shall have the right to deduct any federal, state, or local taxes required by law to be withheld with respect to the award of Restricted Stock Units made hereunder. Grantee shall be required to pay the Company the amount of any taxes which the Company is required to withhold with respect to such shares of Restricted Stock.
10. **Not an Employment Contract.** No award of Restricted Stock Units shall confer on Grantee any right with respect to continuance of employment or other service with the Company or any Subsidiary, nor will it interfere in any way with any right the Company or any Subsidiary would otherwise have to terminate or modify the terms of such Grantee's employment or other service at any time.
11. **Notices.** Any written notices provided for in this Agreement or the Plan shall be in writing and shall be deemed sufficiently given if either sent by internationally recognized overnight courier, or by postage paid first class mail. Notices sent by U.S. mail shall be deemed received on the date of actual receipt. Notices sent by internationally recognized overnight courier shall be deemed received upon the first day that the courier attempts delivery at the recipient's address. Notices shall be directed, if to Grantee, at Grantee's address indicated by the Company's records, and if to the Company, at the Company's principal executive office, to the attention of the General Counsel.
12. **Applicable Law; Dispute Resolution.** Except to the extent preempted by federal or Delaware law, this Agreement shall be governed by and construed in accordance with the laws of the State of Texas, excluding any conflict-of-law rules or principles that would result in the laws of another state being applied. TO THE MAXIMUM EXTENT PERMITTED BY LAW, COMPANY AND GRANTEE EACH WAIVES ANY RIGHT TO TRIAL BY JURY OR TO HAVE A JURY PARTICIPATE IN RESOLVING ANY DISPUTE, WHETHER SOUNDING IN CONTRACT, TORT OR OTHERWISE, BETWEEN COMPANY AND GRANTEE ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE MATTERS RELATED HERETO. The prevailing party in any litigation or other proceeding to enforce the terms of this Agreement shall be entitled to recoup its reasonable attorneys' fees and costs from the non-prevailing party. To the fullest extent permitted by law, the parties agree that any suit or proceeding arising out of or relating to this Agreement shall be brought in court in Harris County, Texas, to the exclusion of any other forum or venue.

[Signature Page Follows]

IN WITNESS WHEREOF, the Company has caused this Agreement to be executed in its name and on its behalf, all effective as of the Grant Date.

ION Geophysical Corporation

By: _____

Name: Christopher T. Usher
Title: President and Chief Executive Officer

Address for Notices:

ION Geophysical Corporation
Attn: General Counsel
2105 CityWest Blvd., Suite 100
Houston, TX 77042

ACKNOWLEDGED AND AGREED BY:

GRANTEE:

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO RULE 13a-14(a) OR RULE 15d-14(a)**

I, Christopher Usher, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the period ended June 30, 2021, of ION Geophysical Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 12, 2021

/s/ Christopher Usher

Christopher Usher

President and Chief Executive Officer

**CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO RULE 13a-14(a) OR RULE 15d-14(a)**

I, Mike Morrison, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the period ended June 30, 2021, of ION Geophysical Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 12, 2021

/s/ Mike Morrison

Mike Morrison

Executive Vice President and Chief Financial Officer

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO 18 U.S.C. §1350**

In connection with the Quarterly Report of ION Geophysical Corporation (the "Company") on Form 10-Q for the period ended June 30, 2021, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Christopher Usher, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to my knowledge that:

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

Date: August 12, 2021

/s/ Christopher Usher

Christopher Usher

President and Chief Executive Officer

**CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO 18 U.S.C. §1350**

In connection with the Quarterly Report of ION Geophysical Corporation (the "Company") on Form 10-Q for the period ended June 30, 2021, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Mike Morrison, Executive Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to my knowledge, that:

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

Date: August 12, 2021

/s/ Mike Morrison

Mike Morrison

Executive Vice President and Chief Financial Officer