

Disclaimers

Forward-Looking Information

The following presentation contains "forward-looking information" within the meaning of applicable securities laws in Canada. Forward-looking information may relate to future events or future performance of Neo. All statements in this presentation, other than statements of historical facts, with respect to Neo's objectives and goals, as well as statements with respect to its beliefs, plans, objectives, expectations, anticipations, estimates, and intentions, are forwardlooking information. Specific forward-looking statements in this presentation include, but are not limited to: expectations regarding certain of Neo's future results and information, including, among other things, revenue, expenses, revenue growth, capital expenditures, and operations;; risk factors relating to national or international economies (including the impact of COVID-19), and other risks present in the jurisdictions in which Neo, its customers, its suppliers, and/or its logistics partners operate, and; statements with respect to expected use of cash balances; continuation of prudent management of working capital; source of funds for ongoing business requirements and capital investments; expectations regarding sufciency of the allowance for uncollectible accounts and inventory provisions; analysis regarding sensitivity of the business to changes in exchange rates; impact of recently adopted accounting pronouncements; risk factors relating to intellectual property protection and intellectual property litigation; and, expectations concerning any remediation efforts to Neo's design of its internal controls over financial reporting and disclosure controls and procedures. Often, but not always, forward-looking information can be identified by the use of words such as "plans", "expects", "is expected", "budget", "scheduled", "estimates", "continues", "forecasts", "projects", "predicts", "intends", "anticipates" or "believes", or variations of, or the negatives of, such words and phrases, or state that certain actions, events or results "may", "could", "would", "should", "might" or "will" be taken, occur or be achieved. This information involves known and unknown risks, uncertainties and other factors that may cause actual results or events to differ materially from those anticipated in such forward-looking information. Neo believes the expectations reflected in such forward-looking information are reasonable but no assurance can be given that these expectations will prove to be correct and such forward-looking information included in this discussion and analysis should not be unduly relied upon. For more information on Neo, investors should review Neo's continuous disclosure filings that are available under its profile at www.sedar.com. Information contained in forward-looking statements in this Presentation is provided as of the date hereof and Neo disclaims any obligation to update any forward-looking statements, whether as a result of new information or future events or results, except to the extent required by applicable securities laws.

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This presentation refers to certain non-IFRS financial measures such as "Operating Income", "Adjusted Net Income", "EBITDA", "Adjusted EBITDA", and "Adjusted EBITDA Margin". These measures are not recognized measures under IFRS, do not have a standardized meaning prescribed by IFRS, and may not be comparable to similar measures presented by other companies. Rather, these measures are provided as additional information to complement IFRS financial measures by providing further understanding of Neo's results of operations from management's perspective. Neo's definitions of non-IFRS measures used in this news release may not be the same as the definitions for such measures used by other companies in their reporting.

Non-IFRS measures have limitations as analytical tools and should not be considered in isolation nor as a substitute for analysis of Neo's financial information reported under IFRS. Neo uses non-IFRS financial measures to provide investors with supplemental measures of its base-line operating performance and to eliminate items that have less bearing on operating performance or operating conditions and thus highlight trends in its core business that may not otherwise be apparent when relying solely on IFRS financial measures. Neo believes that securities analysts, investors and other interested parties frequently use non-IFRS financial measures in the evaluation of issuers. Neo's management also uses non-IFRS financial measures in order to facilitate operating performance comparisons from period to period. For the operating segments, Neo also uses "OIBDA" and "Adjusted OIBDA", which reconciles to operating income. Neo uses OIBDA and EBITDA interchangeably as the use of adjustments in each measure provides the same calculated outcome of operating performance. For definitions of how Neo defines such financial measures, please see the "Non-IFRS Financial Measures" section of Neo's management's discussion and analysis filing for the three months ended September 30, 2020, available on Neo's web site at www.neomaterials.com and on SEDAR at www.sedar.com

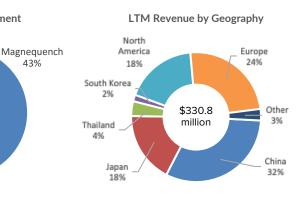




About Neo

At A Glance

Exchange / Ticker Symbol	Toronto Stock Exchange: TSX:NEO
Headquarters	Toronto, Canada
Operational and R&D footprint	Canada, U.S., Germany, U.K., Estonia, Thailand, South Korea, Singapore, China
Employees	1,800
Shares Outstanding (as of 9-30-2020)	• 37,575,874 • 38,795,751 (diluted)
Market Cap (as of 11-11-2020)	C\$442.6 million
52-Week Range (as of 11-11-2020)	C\$5.55 – C\$12.53



Percentages shown after inter-segment revenue eliminations

43%

Neo manufactures advanced materials that incorporate rare earth and rare metal elements. These materials form the building blocks of everyday products and emerging technologies with a sustainability focus. Our materials deliver a range of powerful properties to the products in which they are used, including magnetic, catalytic, luminescent, electrochemical and enhanced thermal stability.

Research Coverage

- Canaccord Genuity Corp.
- Cormark Securities Ltd.
- Scotia Capital Inc.
- Raymond James Ltd.
- ▶ Paradigm Capital
- Stifel GMP



Rare Metals

21%

Chemicals &

Oxides

36%

LTM Revenue by Segment

\$330.8

million

Quarterly Dividend of C\$0.10/share and Strong Cash Balance of \$74.6 Million

Neo's Three Foundational Elements

Long-Standing Relationships
With Customers





R&D Investment and Technical Expertise

Global Manufacturing
Footprint in Cost-Competitive
Markets and in Locations Near
Customers' Facilities



Parallel Rare Earth Supply Chains Inside and Outside of China

Neo is the only company in the world that operates dual supply chains inside and outside of China for REE separation and REE advanced materials. Neo owns the only operating rare earth separation facility in Europe.



REE Separation

- Sillamäe, Estonia
- Zibo, China
- Jiangyin, China

REE Metal Production

- Rayong, Thailand*
- Jiangxi Province, China*

REE Alloy + Magnetic Powders

- · Korat, Thailand
- Tianjin, China

REE Magnets

- · Tianjin, China
- Chuzhou, China

REE Environmental Catalyst Materials

- Sillamäe, Estonia
- Zibo, China

LED / Electronic specialties

- Hyeongok, South Korea
- Quapaw, Oklahoma, US

Rare Metals Refining / Recycling

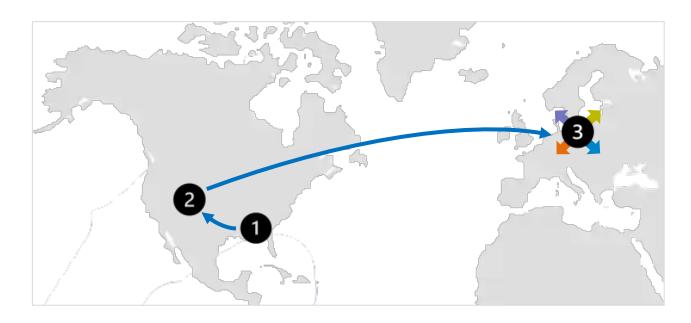
- Sillamäe, Estonia
- Sagard, Germany
- Peterborough, Ontario, CAN



New U.S. - European Rare Earth Supply Initiative

Neo and Energy Fuels Inc. recently launched a ground-breaking initiative to supply U.S. and European markets with value-added rare earth products processed from abundant U.S.-based rare earth feedstock.

- 1 Natural monazite sands are produced by The Chemours Company as a byproduct of current heavy mineral sands mining in the southeastern U.S.
- This material is then processed into a mixed REE carbonate, enriched in high-value magnetic REEs, in the state of Utah by Energy Fuels Inc.
- 3 Neo converts this material into highly engineered, value-added REE products at our EU processing facility in Sillamäe, Estonia.



Powerful Advantages of This New Rare Earth Supply Chain



Production In 2021



Highly Scalable



High Magnetic REE Content



Utilizes existing mining ops



Utilizes existing processing



No new permits or licenses required



Diversifies EU REE Supply



High Capital Efficiency



Neo's Advanced Materials Enable Advanced Technologies

Mining



Neo











Tier 1 & OEM Customers



























Chemicals & Oxides Business Unit



Advanced materials that enable key functionality and sustainability in multiple applications.

TOP 3 GLOBAL PRODUCER of materials for environmental emission catalysts.

Applications That Use Our Materials





Precursors for permanent magnet powders and magnets





Water Purification



Magnequench Business Unit



NdFeB powders and magnets for motors and sensors across multiple applications. **#1 MARKET LEADER** of powders for bonded and hot deformed magnets.

Applications That Use Our Materials





ICE / Hybrid / Electric Vehicles

Industrial Automation









Rare Metals Business Unit



Rare metals and compounds used in superalloys, electronics, communications, LED lighting and medical markets.

TOP 3 GLOBAL PRODUCER of tantalum for superalloys.

Applications That Use Our Materials





Mobile Communications





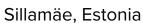




Integrated Product Development With Customers

New product development cycles take years to complete. Neo's existing development partnerships with Tier 1 and OEM customers is difficult for competitors to replicate.







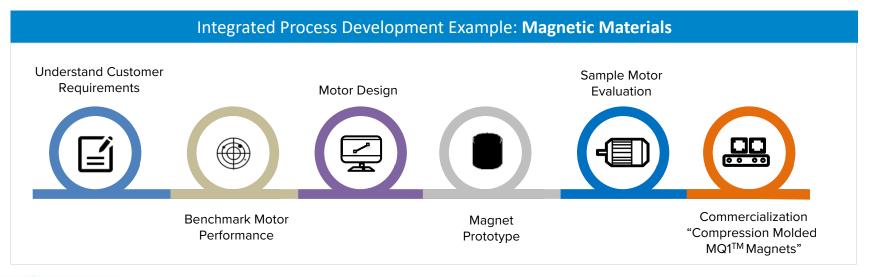
Singapore



Abingdon, UK



Zibo, China







Growth Strategies

Elements of Our Growth Strategy





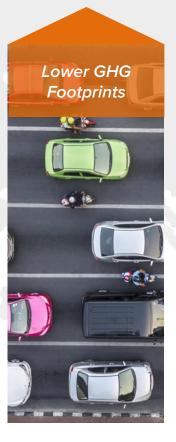
Macro Growth Drivers for Neo Products: 2020 - 2025

Neo's products deliver magnetic, catalytic, luminescent, electrochemical and enhanced thermal stability, properties that enable technologies considered vital to each of these mega trends.





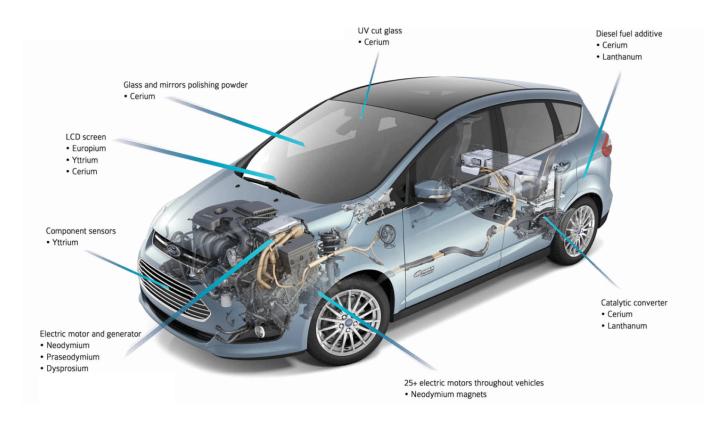








EXAMPLE: Rare Earths Needed for Electrified Transportation



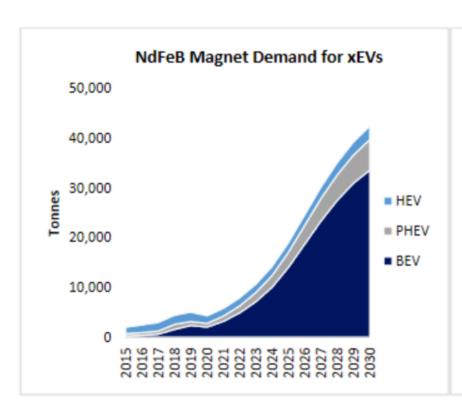
Source: UBS Electric Vehicle Teardown Analysis, 2017

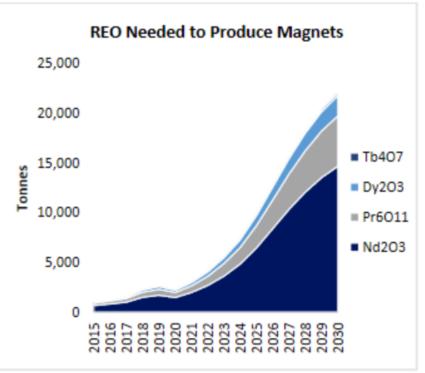
- Modern vehicles can use
 > 140 small electric
 motors, many of which
 utilize NdFeB magnets.
- EV and HEV models use an even greater number of small electric motors that are more likely to use NdFeB magnets.
- EVs and HEVs also use larger traction motors and generators that preferentially use NdFeB magnets.



2022 - 2030: Forecast NdFeB Magnet Demand for EV/PHEVs

Adamas Intelligence forecasts global demand for rare earth permanent magnets for EV/PHEV traction motors to grow at a CAGR of 23.3%. **This will require nearly an order of magnitude higher REO production.**





Source: Adamas Intelligence





Sustainability Starts with Us

How We Enable Sustainable Technologies

Neo utilizes sustainable practices in manufacturing our advanced materials, which themselves enable applications that advance societal sustainability goals

Neo Sustainable Practices

- Responsible Sourcing of Rare Earth Feedstock
- Conflict-Free Material Supply
- Reclamation of End-of-Life Materials
- Closed-Loop Recycling
- Rigorous Health & Safety Standards
- Integration of Renewable Energy
- Recycling Partnerships with Customers

Sustainable Technologies We Enable

- Hybrid / Electric Vehicles
- Energy-Efficient Motors & Pumps
- Renewable Energy Technologies
- Water Purification
- LED Lighting
- Automotive Environmental Catalyst Materials





Financial Performance

Q3 2020 Financial Performance

Selected Consolidated Results

US\$ 000s excl. Volume & EPS	Q3 2020	Q2 2020 ³	Q1 2020	Q4 2019	Q3 2019	YTD 2020	YTD 2019
Volume (tonnes)	3,035	2,545	3,303	3,371	3,131	8,883	10,228
Revenue	\$77,864	\$67,734	\$90,697	\$94,553	\$102,645	\$236,295	\$312,911
Net Income/(loss)	\$401	(\$63,364)	\$518	\$4,483	\$4,072	(\$62,445)	\$18,592
Adjusted Net Income/(loss)	\$1,291	(\$5,578)	\$869	\$6,117	\$4,608	(\$3,418)	\$17,982
Adjusted EBITDA	\$5,730	\$1,191	\$9,645	\$12,480	\$12,786	\$16,566	\$41,276
Basic EPS	\$0.01	(\$1.62)	\$0.01	\$0.12	\$0.10	(\$1.60)	\$0.47
Adjusted EPS	\$0.03	(\$0.14)	\$0.02	\$0.17	\$0.12	(\$0.09)	\$0.45
Cash ¹	\$78,651	\$82,591	\$80,012	\$88,920	\$76,441		
Cash Tax Paid	\$2,430	\$2,960	\$2,598	\$3,522	\$4,633	\$7,988	\$10,792
CAPEX ²	\$3,407	\$1,527	\$1,502	\$4,134	\$2,951	\$6,436	\$7,589



High Free Cash Flow Conversion

- ➤ NCIB: Re-purchased \$2.1 million of stock for the first 9 months of 2020
- ➤ Dividend (C\$0.10)
- ➤ Low CAPEX (\$8 15M)²
- ➤ Scalability (70 80% capacity)
- ➤ Efficient Global Tax Structure •
- ➤ Low Commodity Exposure
- Minimal Debt
- > Strong Cash (including restricted cash) Balance (\$78.7M)¹



[.] Includes restricted cash.

^{2.} Exclude purchase of Anhui Asia Magnets Co., Ltd. magnet business.

^{3.} Neo recorded a \$59.1 million impairment charge for the three and six months ended June 30, 2020.

Proven Leadership Team with Exceptional Track Record

Industry leaders with the expertise to deliver results, based on a combined 200+ years of experience



Constantine Karayannopoulos President, CEO & Director 26 years of experience at Neo.1 Served as President and CEO of Neo before 2012.



Rahim Suleman EVP & CFO EVP and CFO since 2017 Former CFO of Stackpole International



Kevin Morris EVP & COO 8 years of experience at Neo1 EVP and COO since 2016



Greg Kroll EVP Magnequench 19 years of experience at Neo¹ Former SVP, Sales & Marketing, at Magnequench



Jeff Hogan **EVP Chemicals & Oxides** 20 years of experience at Neo¹ **EVP Chemicals & Oxides** since 2016



Frank Timmerman **SVP Rare Metals** 14 years of experience at Neo¹ SVP Rare Metals since 2012

Board of Directors

Claire Kennedy Board Chair

Gail Edwards

Brook Hinchman

Constantine Karayannopoulos President, CEO & Director

Edgar Lee

Eric Noyrez

Greg Share







Performance Materials

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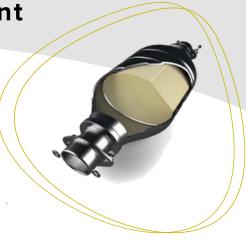
Q3 2020 Financial Performance by Segment



Selected C&O Results



NOTE: Neo recorded a \$59.1 million impairment charge for the three and six months ended June 30, 2020.



In The Quarter

- Lower volumes and sales driven largely by pandemic-related shutdowns and lower demand.
- However, auto catalyst volumes were consistent YoY as signs of recovery are evident and supply chains begin to refill.
- In RE separation, C&O benefited from an increase in the market price of certain products in the latter portion of the quarter.
- Cost-cutting initiatives helped to reduce working capital needs.



Q3 2020 Financial Performance by Segment



Selected Magnequench Results



US\$ 000s	Q3 2020	Q2 2020	Q1 2020	Q4 2019	Q3 2019	YTD 2020	YTD 2019
Volume (tonnes)	1,095	1,024	1,271	1,387	1,385	3,390	4,197
Revenue	\$31,620	\$30,267	\$38,526	\$42,748	\$42,024	\$100,413	\$131,052
Operating income	\$2,965	\$3,421	\$5,539	\$7,207	\$6,135	\$11,925	\$21,780
OIBDA	\$5,198	\$5,617	\$7,752	\$9,374	\$8,109	\$18,567	\$27,653
Adjusted OIBDA	\$5,244	\$5,565	\$7,715	\$9,545	\$8,324	\$18,524	\$27,508

NOTE: Neo recorded a \$59.1 million impairment charge for the three and six months ended June 30, 2020.

In The Quarter

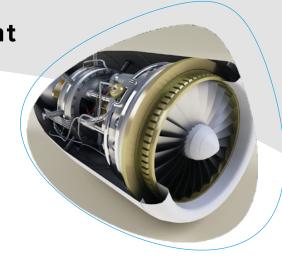
- Lower volume and revenue due to COVID-driven shutdowns and softened demand.
- However, demand higher for Neo compression molded magnets, used in consumer electronics and small electric motor applications.
- Some programs and end markets began to recover in the latter half of the quarter, partially due to some economic recovery and partially due to supply chains being refilled.
- Cost-cutting initiatives helped to reduce working capital needs.



Q3 2020 Financial Performance by Segment



Selected Rare Metals Results



US\$ 000s	Q3 2020	Q2 2020	Q1 2020	Q4 2019	Q3 2019	YTD 2020	YTD 2019
Volume (tonnes)	91	90	142	128	134	323	406
Revenue	\$13,613	\$13,529	\$20,450	\$21,564	\$22,500	\$47,592	\$69,058
Operating income	(\$892)	(\$24,728)	(\$177)	(\$15)	(\$155)	(\$25,797)	(\$369)
OIBDA	(\$179)	(\$23,625)	\$898	\$1,072	\$946	(\$22,906)	\$3,088
Adjusted OIBDA	(\$179)	\$376	\$911	\$1,181	\$963	\$1,108	\$3,951

NOTE: Neo recorded a \$59.1 million impairment charge for the three and six months ended June 30, 2020.

In The Quarter

- Lower volumes and selling prices due largely to COVID, with impacts across most end markets, particularly aerospace.
- However, demand began to strengthen toward the end of the quarter.
- The segment also recorded idle capacity charges in the quarter as it slowed down production in some facilities.



Consolidated Statements of Financial Position

(Unaudited - all figures in thousands of United States dollars)

	September 30, 2020	December 31, 2019
ASSETS		
Current		
Cash and cash equivalents	74,616	84,735
Restricted cash	4,035	4,185
Accounts receivable	44,654	44,297
Inventories	115,979	112,891
Income taxes receivable	2,182	1,460
Other current assets	12,552	14,230
Total current assets	254,018	261,798
Property, plant and equipment	75,193	94,490
Intangible assets	53,282	65,475
Goodwill	66,989	98,841
Investments	10,067	8,985
Deferred tax assets	2,407	805
Other non-current assets	839	837
Total non-current assets	208,777	269,433
Total assets	\$ 462,795	\$ 531,231
Current Bank advances and other short-term debt	74	54
Accounts payable and other accrued charges	63,353	56,138
Income taxes payable	2,161	4,756
Provisions	1,871	4,750
Lease obligations	1,310	1,660
Derivative liability	11,922	11,833
Other current liabilities	186	85
Total current liabilities	80,877	74.526
Employee benefits	1,828	2,031
Provisions	3,281	5,670
Deferred tax liabilities	13,666	15,894
Lease obligations	2,441	2,953
Other non-current liabilities	1,629	1,524
Total non-current liabilities	22,845	28,072
Total liabilities	103,722	102,598
Non-controlling interest	1,352	3,997
Equity attributable to equity holders of Neo Performance Materials Inc.	357,721	424,636
Total equity	359,073	428,633
Total liabilities and equity	\$ 462,795	\$ 531,231



Consolidated Statements of Profit or Loss

(Unaudited - all figures in thousands of United States dollars)

	Three Months Ended September 30,			Nine Months Ended September 30,				
		2020		2019		2020		2019
Revenue		77,864		102,645		236,295		312,911
Costs of sales								
Costs excluding depreciation and amortization		57,395		74,669		174,824		227,840
Depreciation and amortization		1,996		2,546		7,431		7,309
Gross profit		18,473		25,430		54,040		77,762
Expenses								
Selling, general and administrative		10,938		11,383		37,589		29,928
Share-based compensation		973		73		916		377
Depreciation and amortization		1,797		1,971		5,851		5,970
Research and development		3,628		3,604		9,449		9,985
Impairment of assets		_		_		59,084		1,014
		17,336		17,031		112,889		47,274
Operating (loss) income		1,137		8,399		(58,849)		30,488
Other (expense) income		(92)		129		(65)		(465)
Finance cost, net		(99)		(353)		(3,362)		(2,044)
Foreign exchange loss		(128)		(662)		(440)		(970)
Income (loss) from operations before income taxes								
and equity income of associates		818		7,513		(62,716)		27,009
Income tax expense		(1,198)	_	(3,612)	_	(811)	_	(8,807)
(Loss) income from operations before equity income of associates		(380)		3,901		(63,527)		18,202
Equity income of associates (net of income tax)		(300)		3,901		(03,327)		10,202
Equity income of associates (net of income tax)		781		171		1,082		390
Net income (loss)	\$	401	\$	4,072	\$	(62,445)	\$	18,592
Attributable to:					_		_	,
Equity holders of Neo Performance Materials Inc.	\$	423	\$	3,944	\$	(60,150)	\$	18,281
Non-controlling interest		(22)		128		(2,295)		311
	\$	401	\$	4,072	\$		\$	18,592
Earnings (Loss) per share attributable to equity holders of Neo Performance Materials Inc.:				-,		,,	_	
Basic	\$	0.01	\$	0.10	\$	(1.60)	\$	0.47
Diluted	\$	0.01	\$	0.10	\$	(1.60)	\$	0.47



Reconciliation of Net Income (Loss) to EBITDA, Adjusted EBITDA and Free Cash Flow

(\$000s)	T	hree Mor Septem			Nine Months Ended September 30,		
		2020 201			2020	2019	
Net income (loss)	\$	401	\$	4,072	\$(62,445)	\$ 18,592	
Add back (deduct):							
Finance cost, net		99		353	3,362	2,044	
Income tax expense		1,198		3,612	811	8,807	
Depreciation and amortization included in Costs of Sales		1,996		2,546	7,431	7,309	
Depreciation and amortization included in operating expenses		1,797		1,971	5,851	5,970	
EBITDA		5,491		12,554	(44,990)	42,722	
Adjustments to EBITDA:							
Equity income from associates		(781)		(171)	(1,082)	(390)	
Other expense (income)		92		(129)	65	465	
Foreign exchange loss		128		662	440	970	
Impairment of assets					59,084	1,014	
Share and value-based compensation		931		153	660	(1,273)	
Other non-recurring costs (recoveries)		(131)		(283)	2,389	(2,232)	
Adjusted EBITDA	\$	5,730	\$	12,786	\$ 16,566	\$ 41,276	
Adjusted EBITDA Margins		7.4%		12.5%	7.0%	13.2%	
Less:							
Capital expenditures		3,407		12,603	6,436	17,241	
Free Cash Flow	\$	2,323	\$	183	\$ 10,130	\$ 24,035	
Free Cash Flow Conversion		40.5%		1.4%	61.1%	58.2%	



Reconciliation of Net Income (Loss) to Adjusted Net Income or Loss

(\$000s)	Three Months Ended September 30,					Nine Months Ended September 30,		
		2020		2019		2020		2019
Net income (loss)		401	\$	4,072	\$	(62,445)	\$	18,592
Adjustments to net income (loss):								
Foreign exchange loss		128		662		440		970
Impairment of assets		_		_		59,084		1,014
Share and value-based compensation		931		153		660		(1,273)
Other non-recurring costs (recoveries)		(131)		(283)		2,389		(2,232)
Other items included in other expense		_		_		_		756
Tax impact of the above items		(38)		4		(3,546)		155
Adjusted net income (loss)	\$	1,291	\$	4,608	\$	(3,418)	\$	17,982
Attributable to:								
Equity holders of Neo	\$	1,313	\$	4,480	\$	(3,390)	\$	17,671
Non-controlling interest	\$	(22)	\$	128	\$	(28)	\$	311
Weighted average number of common shares outstand	ling:							
Basic	37,	,610,846	38,522,316		37,671,721		39,117,565	
Diluted	37,	,653,807	38,	652,911	31	7,671,721	39,291,920	
Adjusted earnings or loss per share attributable to equ	ıity h	olders of	Neo:					
Basic	\$	0.03	\$	0.12	\$	(0.09)	\$	0.45
Diluted	\$	0.03	\$	0.12	\$	(0.09)	\$	0.45

