MANAGEMENT'S DISCUSSION AND ANALYSIS

NEO PERFORMANCE MATERIALS INC.

FOR THE YEAR ENDED DECEMBER 31, 2019

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Unless otherwise noted, all amounts in this discussion are expressed in United States dollars

The following Management's Discussion and Analysis ("**MD&A**") for Neo Performance Materials Inc. ("**Neo**") should be read in conjunction with the accompanying audited consolidated financial statements and related notes thereto as at and for the year ended December 31, 2019 available on Neo's website at www.neomaterials.com and on SEDAR at www.sedar.com. Unless otherwise stated, references in this section to "Neo", "our", "we" or "Group", refer to Neo Performance Materials Inc. and its consolidated subsidiaries.

The financial results presented in this MD&A are prepared in accordance with International Financial Reporting Standards ("**IFRS**") as issued by the International Accounting Standards Board *(*"**IASB**"*)*. "Adjusted EBITDA", "Adjusted EBITDA Margin", "Adjusted Net Income or Loss", "Adjusted OIBDA", "Adjusted OIBDA Margin", "Adjusted Earnings per Share", "EBITDA", "Free Cash Flow", "Free Cash Flow Conversion" and "OIBDA" are not measures recognized under IFRS and do not have any standardized meaning prescribed by IFRS. These measures may differ from those used by, and are not necessarily comparable to similar measures presented by other companies. There are no directly comparable IFRS measures to any of these measures. These measures are intended to provide additional information and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS. See "*Management's Discussion and Analysis - Non-IFRS Financial Measures*" below.

This discussion contains forward-looking statements and information. The actual results, performance and achievements could differ materially from those implied by these forward-looking statements as a result of various factors, including those discussed below, particularly under "*Risk Factors*". See "*Forward-Looking Information*".

The discussion and analysis in this MD&A are based upon information available to management as of March 11, 2020. This MD&A should not be considered all-inclusive, as it excludes changes that may occur in general economic, political and environmental conditions. Additionally, other events may or may not occur that could affect Neo in the future.

1. Forward-Looking Information

The following discussion and analysis contain "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 disclosure, 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 forward-looking information. Specific forward-looking statements in this discussion include, but are not limited to the following: expectations regarding certain of Neo's future results and information, including, among other things: revenue, expenses, revenue growth, capital expenditures, and operations; 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 sufficiency 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 can 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 and 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.

The forward-looking information is only provided as of the date of this MD&A, March 11, 2020, and is subject to change as a result of new information, future events or other circumstances, as discussed above, in which case the forward-looking information will be updated by Neo as required by law.

2. Overview

Neo manufactures the building blocks of many modern technologies that enhance efficiency and sustainability. Neo's advanced industrial materials - magnetic powders and magnets, specialty chemicals, metals, and alloys - are critical to the performance of many everyday products and emerging technologies. Neo's products help to deliver the technologies of tomorrow to consumers today.

Neo has approximately 1,853 employees and has a global platform that includes 11 manufacturing facilities located in China, the United States ("**U.S.**"), Germany, Canada, Estonia, Thailand and South Korea as well as two dedicated research and development ("**R&D**") centres in Singapore and the United Kingdom ("**UK**"). Since 1994, Neo has leveraged its processing expertise to innovate and grow into a leading manufacturer of advanced industrial materials for specialty end markets. Neo has established itself as a leading commercial partner to some of the world's largest customers in the automotive, semiconductor, advanced electronic and specialty chemical industries. This includes establishing the number one (#1) global market position for powders used in bonded and hot-deformed fully dense neodymium-iron-boron ("**NdFeB**" or "**neo**") magnets, a top-three global market position in auto emission control catalysts, a leading global producer of gallium trichloride ("$\mathbf{GaCl_3}$") producer for light-emitting diodes ("**LED**s"), and growth opportunities into end markets such as waste-water treatment and superalloys for aerospace and other applications. Neo is organized along three business segments: Magnequench, Chemicals & Oxides ("**C&O**") and Rare Metals, as well as the Corporate segment.

Magnequench

The Magnequench segment, with more than 30 years of manufacturing experience, is the world leader in the production of magnetic powders used in bonded and hot-deformed, fully dense neo magnets. These powders are formed through Magnequench's market-leading technology related to the development, processing, and manufacturing of neo magnetic powders. Magnequench uses a proprietary process to manufacture Magnequench powder using a blend of various inputs. Magnequench also manufactures magnets using these bonded magnetic powders. These powders and bonded permanent magnets are components in automotive motors, micro motors, traction motors, sensors, and other applications requiring high levels of magnetic strength, improved performance, and reduced size and weight.

C&O

The C&O segment manufactures and distributes a broad range of advanced industrial materials that have become an indispensable part of modern life. Neo's world-class processing and advanced materials manufacturing capabilities enable Neo to meet increasingly demanding specifications from manufacturers that need custom engineered materials. Applications from these products include auto catalysts, magnetic materials, consumer electronics, petroleum refining, hybrid and electric vehicles, medical devices, and wastewater treatment.

Rare Metals

The Rare Metals segment sources, reclaims, produces, refines, and markets high-value specialty metals and their compounds. These products include both high-temperature metals (tantalum, niobium, hafnium and rhenium) and electronic metals (gallium and indium). Applications from products made in this segment primarily include superalloys for jet engines, medical imaging, wireless technologies and LED lighting. Other applications include flat panel displays, solar, steel additives, batteries and electronics applications.

Corporate

Neo's global head office is in Toronto, Ontario, Canada, with additional corporate offices in Greenwood Village, Colorado, U.S.; Singapore; and Beijing, China. The functions of this group include finance, administration, information technology, accounting, and legal.

3. Selected Financial Highlights

($000s, except volume)	Year Ended December 31,			Three Months Ended December 31,		
	2019	**2018**	**2017**	**2019**	**2018**	**2017**
Revenue						
Magnequench	$ 173,800	$ 213,712	$ 202,905	$ 42,748	$ 47,210	$ 59,131
C&O	158,226	161,422	170,890	33,650	38,207	36,212
Rare Metals	90,622	93,789	76,009	21,564	27,309	19,722
Corporate / Eliminations	(15,184)	(14,728)	(15,635)	(3,409)	(3,365)	(5,613)
Consolidated Revenue	**$ 407,464**	**$ 454,195**	**$ 434,169**	**$ 94,553**	**$ 109,361**	**$ 109,452**
Operating Income (Loss)						
Magnequench	$ 28,987	$ 41,957	$ 40,986	$ 7,207	$ 6,670	$ 12,831
C&O	18,354	12,934	16,892	2,898	3,101	1,005
Rare Metals	(384)	4,578	3,935	(15)	438	720
Corporate / Eliminations	(9,455)	(16,581)	(26,988)	(3,076)	(3,985)	(9,840)
Consolidated Operating Income	**$ 37,502**	**$ 42,888**	**$ 34,825**	**$ 7,014**	**$ 6,224**	**$ 4,716**
Adjusted EBITDA [(1)]						
Magnequench	$ 37,053	$ 50,483	$ 49,407	$ 9,545	$ 9,051	$ 14,686
C&O	22,872	18,483	25,294	4,417	4,569	2,359
Rare Metals	5,132	9,754	9,123	1,181	1,702	1,951
Corporate / Eliminations	(11,301)	(11,607)	(15,928)	(2,663)	(2,087)	(3,403)
Consolidated Adjusted EBITDA	**$ 53,756**	**$ 67,113**	**$ 67,896**	**$ 12,480**	**$ 13,235**	**$ 15,593**
Volume (in mt)						
Magnequench	5,584	6,128	6,305	1,387	1,446	1,539
C&O	7,841	7,611	8,656	1,940	1,843	1,923
Rare Metals	534	650	448	128	227	124
Corporate / Eliminations	(360)	(306)	(324)	(84)	(77)	(97)
Consolidated Volumes	**13,599**	**14,083**	**15,085**	**3,371**	**3,439**	**3,489**
Net Income	**$ 23,075**	**$ 41,139**	**$ 25,393**	**$ 4,483**	**$ 4,381**	**$ (1,666)**
Attributable to:						
Equity holders of Neo	22,920	40,795	24,620	4,639	4,285	(1,903)
Non-controlling interest	155	344	773	(156)	96	237
Earnings per share attributable to equity holders of Neo						
Basic	$ 0.59	$ 1.02	$ 0.62	$ 0.12	$ 0.11	$ (0.05)
Diluted	$ 0.59	$ 1.01	$ 0.61	$ 0.12	$ 0.11	$ (0.05)
Adjusted Net Income [(2)]	**$ 24,099**	**$ 38,923**	**$ 36,936**	**$ 6,117**	**$ 7,497**	**$ 4,887**
Attributable to:						
Equity holders of Neo	23,944	38,579	36,163	6,273	7,401	4,650
Non-controlling interest	155	344	773	(156)	96	237
Adjusted Earnings per Share attributable to equity holders of Neo [(2)]:						
Basic	$ 0.62	$ 0.97	$ 0.91	$ 0.17	$ 0.19	$ 0.12
Diluted	$ 0.61	$ 0.96	$ 0.90	$ 0.16	$ 0.18	$ 0.11
Capital expenditures excluding business combination	$ 11,723	$ 13,511	$ 12,279	$ 3,742	$ 4,760	$ 4,807
Cash taxes paid	$ 14,314	$ 13,169	$ 9,264	$ 3,522	$ 3,219	$ (1,444)
Dividends paid to shareholders	$ 11,481	$ 11,714	$ 24,924	$ 2,856	$ 2,855	$ —
Repurchase of common shares under Normal Course Issuer Bid ("**NCIB**")	$ 16,917	$ 3,771	$ —	$ 3,704	$ 1,886	$ —

	December 31,		
	2019	**2018**	**2017**
Cash and cash equivalents	$ 84,735	$ 71,015	$ 96,805
Debt	$ 54	$ 3,970	$ 181

Notes:

(1) Neo uses references to Adjusted OIBDA and Adjusted EBITDA interchangeably as the use of adjustments in each measure provides the same calculated outcome of operating performance. See *"Non-IFRS Financial Measures"* and details of computation of Adjusted OIBDA.

(2) See *"Non-IFRS Financial Measures"* for computations of Adjusted Net Income and Adjusted Earnings per Share.

Highlights for the year ended December 31, 2019

Consolidated Results

- For the year ended December 31, 2019, revenues of $407 million were 10.3% lower than in 2018. The Magnequench segment led the decline in revenues as volumes were adversely affected by slower economic activity in various regions globally, including in the automotive industry, and by customer inventory adjustments. The C&O segment continued to see growth in three-way auto catalyst sales, although revenues were negatively impacted by the softening of certain commodity prices in 2019 and the continued market slowdown in diesel vehicles. The revenue decline in the Rare Metals segment was driven by the decline in pricing for tantalum-based products and lower volume in gallium-based products.

- Operating income was $37.5 million in 2019, a decline of $5.4 million compared to 2018. Neo also reported lower net income for the year ended December 31, 2019. The Magnequench segment was adversely affected by lower volumes, foreign exchange costs and the timing effect of the input cost pass-through mechanic. Improved performance in the C&O segment was driven by increased three-way catalyst sales, increased spot sales, and no premium freight costs in 2019. The Rare Metals segment benefitted from higher hafnium sales but was adversely impacted by lower tantalum selling prices with higher inventoried costs, as well as impairment and other charges related to the closure of its plant in Utah. Net income for the year ended December 31, 2018 was $9.8 million higher due to the partial settlement of the insurance claims from the fire affecting Neo's Silmet facility in 2015, offset by a retro-duty charge.

- Adjusted EBITDA for the year ended December 31, 2019 was $53.8 million; a decrease of $13.4 million compared to 2018. This was driven largely by lower volumes and the timing effect of the input cost pass-through mechanic in the Magnequench segment and by lower tantalum selling prices with higher inventoried costs in the Rare Metals segment, offset by increased spot sales and no premium freight in the C&O segment, as noted above.

- Neo continues to see longer-term growth in demand for many of its key products driven by several global macro trends, including increased electrification of automobiles, which increases the need for Neo's functional materials on a per-vehicle basis; greater demand for precision and efficient motors across multiple sectors, which encourages higher utilization of Neo's magnetic materials; growth in hybrid and electric vehicles; more stringent government regulation with respect to air and water emissions; and trends toward greater utilization of lighter-weight materials in industries such as aerospace and consumer electronics. Neo's advanced industrial materials are integral to technologies in all these end markets.

- Neo continues to have a strong financial position. As at December 31, 2019, Neo had $84.7 million in cash as compared to $71.0 million as at December 31, 2018, and nominal debts.

Magnequench Segment

- For the year ended December 31, 2019, volumes decreased 8.9% compared to the prior year. Revenues were down $39.9 million compared to 2018, due to lower volumes and lower material input commodity prices in 2019. Neo passes through these material input cost changes to most of its customers on a lagged basis.

- Volumes in the Magnequench segment decreased, mostly in legacy and longer-running programs. Magnequench continues to see growth related to newer products including traction motors for hybrid and electric vehicles, as well as applications that are still ramping up volumes to full production levels. Exclusive of its legacy electronic power steering ("**EPS**") program, Magnequench volume in automotive applications grew by approximately 9% year-over-year, despite the slowdown of the automotive industry generally. This growth includes the traction motor application, used in hybrid and electric vehicle drivetrains, where volumes grew by approximately 45% year-over-year. Magnequench is benefiting from growth in precision and efficient motors and by the increased utilization of its neo magnetic materials on a per-vehicle basis, a continuing growth trend driven by a larger global macro trend toward increasing electrification of various vehicle systems.

- Adjusted EBITDA was $37.1 million for the year ended December 31, 2019, compared to $50.5 million in 2018. Adjusted EBITDA was affected by lower volumes (both in margin and overhead absorption), changes in foreign exchange rates, and by timing impacts from Neo's input cost pass-through mechanics. This pass-through mechanic, which updates selling prices on a lagged basis (generally monthly and quarterly) is a key feature of Neo's strategic focus on value-add margins. A rapid change in material input costs in the latter half of 2017 had a lagging pass-through effect which translated into higher selling prices (and higher margins) in the last quarter of 2017 and into the first six months of 2018. These material input costs, and associated pass-through pricing, were relatively stable in the second half of 2018 and declined through 2019.

- On July 15, 2019, Neo, through a newly formed wholly owned subsidiary entered into a definitive agreement to purchase the net assets of Anhui Asia Magnets Co., Ltd. ("**SAMAG**"), a privately-owned manufacturer in Chuzhou, China of compression molded NdFeB bonded magnets, for a purchase price of $9.2 million (RMB 64.8 million), plus working capital of $0.3 million (RMB 2.3 million). The acquisition will further enhance the value that Neo provides to customers and is expected to leverage Neo's ability to produce high-performance neo magnetic powders and magnets. The transaction closed on August 26, 2019.

Chemicals and Oxide (C&O) Segment

- In 2019, three-way auto catalyst volumes continued to show growth (approximately 8%) year-over-year despite a general slowdown in automotive markets throughout the year. This was offset by a decline in diesel catalyst products, which were lower by approximately 45% year-over-year. With declining diesel volumes in the past several quarters, overall product mix between three-way and diesel catalysts for Neo is now more reflective of market mix considerations. The C&O segment did not incur premium freight costs in 2019, as opposed to $4.2 million of premium freight costs incurred in 2018.

- In C&O's rare earth separation business, the continuing decline of rare earth commodity prices led to a lagging impact of higher cost inventory relative to current selling prices and this has had a negative impact on margins for rare earth separation in the three months and year ended December 31, 2019. Partially offsetting this, C&O benefited from increased spot sales in 2019 compared to 2018.

- Since launching its wastewater treatment business several years ago, the C&O segment achieved commercial success in 2019 with sales volumes growing greater than 70% and revenues growing greater than 130% compared to the prior year. While these specialty chemical products made up a small portion of Neo's consolidated revenues, they have the potential to grow into a more meaningful business in the future.

Rare Metals Segment

- The Rare Metals segment's operating loss of $0.4 million in 2019 was driven by the continued decline in pricing for tantalum-based products and by a general slowdown in gallium trichloride-related markets. The segment has considerable material in the production system, so when material prices change, there is a lead-lag impact into current period results as the operation is processing and selling material on hand purchased in a prior period. The inventory in the system at the beginning of 2019 was particularly high and given the price decline in finished products throughout the year, the lead-lag impact was particularly strong in 2019. As at the end of 2019, there is considerably less inventory in the system and prices of both raw material inputs and finished goods have been relatively stable since July 2019. The Rare Metals segment continues to develop new products and focus on value-added margins to mitigate short-term variations in its earnings due to input material price volatility.

- In the year ended December 31, 2019, the segment recorded a $1.0 million impairment of assets affecting operating income related to the closure of the production plant in Blanding, Utah, Neo Rare Metals (Utah), LLC ("**NRM Utah**"). In addition to this impairment, the segment also had recognized a restructuring and other charge of $0.8 million. Subsequent to the closure, a substantial portion of NRM Utah's business will be transferred to the segment's operation in Peterborough, Ontario, which already houses the balance of the segment's gallium business. This is expected to result in additional synergies and efficiencies. Neo expects to complete the transfer and closure activities around mid-year of 2020 and to see immediate operating and financial benefits after the transfer is complete. The NRM Utah facility was a modest-sized facility with $2.6 million in annualized sales and nominal EBITDA.

Cash and Other Highlights for the year ended December 31, 2019

- Neo continues to have a strong financial position. As at December 31, 2019, Neo had $84.7 million in cash and nominal debt after it returned $28.4 million to shareholders in 2019 (via dividends and the Normal Course Issuer Bid ("**NCIB**") program) and investing $9.5 million in cash as part of the SAMAG purchase (including inventory, net of liabilities assumed).

- Cash provided by operating activities was $71.3 million, including generating $29.0 million from working capital reductions.

- Neo invested $21.0 million in capital expenditures including $9.3 million to purchase SAMAG, and paid $14.3 million in cash taxes in the year ended December 31, 2019.

- For the year ended December 31, 2019, Neo paid dividends to its shareholders of $11.5 million. As part of the NCIB program, Neo purchased and canceled 1,902,631 shares with an aggregate disbursement of $16.9 million.

- On March 10, 2019, Luxfer Holdings plc ("**Luxfer**"), 2671219 Ontario Inc. (the "**Purchaser**") and Neo mutually agreed to terminate the arrangement agreement to acquire the issued and outstanding common shares of Neo for a combination of cash and stock (the "**Luxfer Transaction**"). Under the termination agreement, Luxfer agreed to pay all reasonable expenses incurred by Neo in connection with the termination of the arrangement agreement up to a maximum of $3.5 million. Neo received the payment on April 5, 2019.

Potential impact of COVID-19

The COVID-19 virus has impacted many industries across many countries with the largest impact to date in China. With respect to Neo, approximately 31% of Neo's annual sales are derived from end markets in China. Of Neo's 11 manufacturing plants, three of the larger manufacturing plants (plus the newly acquired magnet plant) are located in China. Neo operates and sells its products primarily to the automotive, aerospace, and other industrials segments. These industries and their supply chains are global and complex. It is unknown how the impact in China and other areas of the world will affect Neo's customers and other supply chain elements.

4. Factors Affecting Neo's Performance

Revenue

Neo produces advanced industrial materials that are essential inputs to high-technology, high-growth, and future-facing industries. Our products are indispensable inputs for many applications because of their unique physical and chemical properties. These include magnetic, catalytic, luminescent, electrochemical, thermal stability and superconductive properties. Revenue is related to the demand of these end markets as well as the suitability and competitiveness of Neo's products.

Among the input materials utilized by Neo in our advanced industrial materials are rare earths. Greater than 80% of the world's rare earth sources are mined in China. Neo's Chinese manufacturing facilities in the C&O segment are subject to rare earth separation quotas in China and the source rare earths used in the Magnequench business largely come from China. Restrictions in supply of these source rare earths may impact revenues from magnetic powders. Neo's customers are global and a substantial amount of sales are generated in the same regions as Neo's manufacturing facilities.

Input material prices are affected by supply and demand, and policies and circumstances affecting supply from China, including the continued existence of unlicensed mining operations in China. Most of Neo's custom and standardized element sales are subject to current market pricing. Most of Neo's magnetic powder sales and auto catalyst functional material sales have various forms of raw material pass-through agreements. These agreements generally have mechanisms tied to the pricing of the various input materials but are implemented over established time frames (monthly, quarterly, semi-annually and annually). Accordingly, changes in input material pricing may have an impact on total revenue.

Costs of sales

Neo's costs of sales is comprised of raw materials, labour, processing costs, production overheads and depreciation and amortization of productive assets.

The largest element of Neo's costs of sales is related to the input materials used in production that it purchases from outside vendors. Changes in input material costs are either translated into selling prices of spot sales or incorporated into future selling prices via pass-through mechanisms. There are timing delays between the incorporation of changing material costs and selling prices.

Outside of input material cost, Neo's largest costs include labour and benefits, chemical reagents, natural gas, electricity, maintenance, operating supplies, other plant overheads and depreciation and amortization. Some of these costs are fixed and some are variable. For a portion of variable costs, adjustments to production levels are made over periods of time. Accordingly, as production volume increases or decreases, average cost per volume produced decreases or increases, respectively. Some of these costs are subject to volume fluctuations and are influenced by general economic conditions beyond Neo's control.

Selling, general and administrative ("SG&A") expense

SG&A expense consists primarily of personnel and related costs, including freight, legal, accounting and other professional service fees and information technology costs.

Neo has a global sales force that is highly technically trained and fluent in the major languages of its customers. Neo has made significant investments in creating and maintaining this global sales force in geographic proximity to its major customers, which positions Neo to better leverage global demand, work closely with customers in product development efforts, and maximize pricing.

Share-based compensation

Neo Cayman Holdings Ltd.'s ("**Neo Cayman**") management incentive plan was assigned to Neo upon the completion of the Arrangement. See *"Basis of Presentation"*. This plan, **(**the "**Legacy Plan**"), was comprised of Share Options ("**Options**"), Restricted Share Units ("**RSU**s"), Performance Stock Units ("**PSU**s") and Special Performance Stock Units ("**Special PSUs**") (collectively referred to as "**Stock Units**"). These Stock Units were granted under the Legacy Plan to directors, officers, and employees, and provide the right for these individuals to receive Common Shares or, in the case of the options, to purchase Common Shares. Options and RSUs vest at a rate of 25% per year but also vest immediately if a liquidity event occurs, which is defined as consummation of a transaction or series of related transactions that results in Oaktree Capital Management L.P. ("**Oaktree**"), and its affiliates, ceasing to own at least 51% of the shares of Neo. PSUs and Special PSUs vest in segments upon a liquidity event occurring and achieving Oaktree's internal milestones.

In connection with the Arrangement, Neo has undertaken to issue Common Shares of Neo underlying the Stock Units, applying the exchange ratio applied in connection with the Arrangement. See *"Basis of Presentation".* On October 13, 2017, Neo adopted a Stock Option Plan, in conjunction with the Initial Public Offering. On May 9, 2018, Neo adopted a long-term incentive plan (the "**LTIP**"). Neo granted Options under the Stock Option Plan, and Deferred Share Units ("**DSUs**") under the Directors Share Unit Plan, and Restricted Share Units ("**RSUs**"), Performance Stock Units ("**PSUs**") and Additional PSUs, under the LTIP. The Special PSUs under the Legacy Plan and Additional PSUs under the LTIP, have all been cancelled as at December 31, 2018 as the liquidity event condition was not met.

R&D

One critical success factor for Neo is to continually develop and evolve new products that meet customer's exacting specifications. This includes maintaining close relationships with key customers, understanding changing market factors and responding with innovative products both as improvements to existing applications and developing new applications and solutions.

Neo invests in R&D activities in response to customer needs as well as perceived market development. These expenses consist primarily of salaries, outside labour, materials and equipment. R&D activities occur in both plant manufacturing locations and in dedicated R&D centres and are coordinated through global efforts within each business segment. Neo continues to dedicate resources to research and develop new applications for its products, provide technical solutions to its customers and drive new process development. These factors allow for a more efficient and profitable use of Neo's products.

Finance income (costs), net

From time to time, Neo may draw upon the various revolving lines of credit available to each subsidiary as part of the cash management strategy for that subsidiary. Financing costs may be incurred as a result of these cash management strategies. In addition, finance costs may be incurred as a result of the re-measurement in each period of Neo's derivative liability, which is comprised of a put option issued to the non-controlling interest of a consolidated subsidiary, Buss & Buss.

Income tax (expense) benefit

Neo's income tax expense or benefit is based on the income earned or loss incurred in each tax jurisdiction at the enacted or substantively enacted tax rate applicable to that income or loss.

In the ordinary course of business, there are many transactions for which the ultimate tax outcome is uncertain, and estimates are required for exposures related to examinations by tax authorities. Management reviews these transactions and exposures and records tax liabilities based on its assessment of many factors, including past experience and interpretations of tax law applied to the facts of each matter. The determination of tax liabilities is subjective and generally involves a significant amount of judgment. The final outcome may differ from estimates, and a change to these estimates could impact the income tax provision.

Neo recognizes deferred tax assets to the extent management believes it is probable that the related tax benefit amount will be realized. Management considers factors such as the reversal of taxable temporary differences, projected future taxable income, the character of the income tax asset, tax planning strategies, changes in tax laws and other factors. A change to these factors could impact the amount of deferred tax assets Neo recognizes.

Neo's effective income tax rate can vary significantly from quarter-to-quarter for various reasons, including the mix and volume of business in different tax jurisdictions, jurisdictions with tax holidays and tax incentives, and jurisdictions for which no deferred tax assets have been recognized because management believed it was not probable that future taxable profit would be available against which tax losses and deductible temporary differences could be utilized. Neo's effective income tax rate can also vary due to the impact of foreign exchange fluctuations, operating losses, changes in its provisions related to tax uncertainties and changes in management's assessment as to whether temporary differences arising from investments in subsidiaries will reverse in the foreseeable future.

5. Basis of Presentation

On September 12, 2017 OCM Neo Holdings (Cayman), L.P. ("**OCM**") formed Neo, a company incorporated in the province of Ontario, for the purpose of completing a Cayman Islands scheme of arrangement (the "**Arrangement**") with Neo Cayman and a subsequent public offering of Common Shares of Neo.

On November 30, 2017, Neo finalized the court approved Arrangement with Neo Cayman whereby Neo acquired all of the issued and outstanding shares of Neo Cayman in exchange for the issuance of an aggregate of 39,878,383 Common Shares. The acquisition by Neo of Neo Cayman was a transaction amongst entities under common control. Accordingly, Neo accounted for this transaction using book value accounting, based on the book values recognized in the consolidated financial statements of Neo Cayman. Financial information for the pre-acquisition period, including comparative period, is presented based on the historical information of Neo Cayman.

On November 30, 2017, Neo completed an IPO by way of a Secondary Offering on the Toronto Stock Exchange ("**TSX**") that began trading on December 8, 2017. Neo offered 11,115,000 Common Shares for total proceeds of Canadian dollar ("**Cdn**") $200,070,000 with an over-allotment option. On January 8, 2018, the underwriters exercised a portion of the over-allotment option for the purchase of an additional 1,100,000 Common Shares for additional gross proceeds of Cdn $19,800,000. All proceeds, net of underwriter commissions, were paid to the selling shareholder, Oaktree and its affiliates. Oaktree continues to be the largest and majority shareholder of Neo.

On July 15, 2019, Neo, through a newly formed wholly owned subsidiary, Magnequench Magnetics (Chu Zhou) Co., Ltd. ("**MQCZ**") entered into a definitive agreement to purchase the net assets of SAMAG, a privately-owned manufacturer in Chuzhou, China of compression molded NdFeB bonded magnets, for a purchase price of $9.2 million (RMB 64.8 million), plus working capital of $0.3 million (RMB 2.3 million). Neo has applied IFRS 3 Business Combinations to account for the purchase of SAMAG.

On November 12, 2019, Neo entered into an equity interest transfer agreement to purchase the entire 59.6% equity interest of Zibo Shijia Trading Co., Ltd. ("**ZSTC**") from Mr. Sun Dekuan for a purchase price of $1.1 million (RMB 7.9 million). ZSTC is a privately-owned holding company in Shandong, China which holds a 5% equity interest in Zibo Jiahua Advanced Material Resources Co., Ltd. ("**ZAMR**") one of Neo's subsidiaries in Shandong, China. The acquisition of the 59.6% equity interest in ZSTC increases Neo's equity interest in ZAMR from 95% to 98%. The transaction closed on December 29, 2019. Neo has accounted for the purchase as an equity transaction resulting in a reduction of non-controlling interest.

All intercompany transactions have been eliminated.

6. Consolidated Results of Operations

Comparison of the three months and year ended December 31, 2019 to the three months and year ended December 31, 2018

($000s)	Three Months Ended December 31,		Year Ended December 31,	
	2019	**2018**	**2019**	**2018**
Revenue	94,553	109,361	407,464	454,195
Costs of sales				
Costs excluding depreciation and amortization	66,072	81,700	293,912	324,361
Depreciation and amortization	2,656	2,352	9,965	9,741
Gross profit	**25,825**	**25,309**	**103,587**	**120,093**
Expenses				
Selling, general and administrative	12,007	13,898	41,935	49,948
Share-based compensation	401	(222)	778	3,436
Depreciation and amortization	2,062	1,716	8,032	6,978
Research and development	4,341	3,693	14,326	16,843
Impairment of assets	—	—	1,014	—
	18,811	19,085	66,085	77,205
Operating income	**7,014**	**6,224**	**37,502**	**42,888**
Other (expense) income	(1,027)	723	(1,492)	10,660
Finance (costs) income, net	(266)	(945)	(2,310)	649
Foreign exchange gain (loss)	50	(382)	(920)	(565)
Income from operations before income taxes and equity income (loss) of associates	**5,771**	**5,620**	**32,780**	**53,632**
Income tax expense	(1,278)	(1,948)	(10,085)	(12,465)
Income from operations before equity income (loss) of associates	**4,493**	**3,672**	**22,695**	**41,167**
Equity income (loss) of associates (net of income tax)	(10)	709	380	(28)
Net income	**$ 4,483**	**$ 4,381**	**$ 23,075**	**$ 41,139**
Attributable to:				
Equity holders of Neo	4,639	$ 4,285	22,920	$ 40,795
Non-controlling interest	(156)	96	155	344
	$ 4,483	**$ 4,381**	**$ 23,075**	**$ 41,139**
Earnings per share data attributable to equity holders of Neo:				
Basic	$ 0.12	$ 0.11	$ 0.59	$ 1.02
Diluted	$ 0.12	$ 0.11	$ 0.59	$ 1.01

Revenue

Neo's consolidated revenue for the year ended December 31, 2019 was $407.5 million compared to $454.2 million for year ended December 31, 2018; a decrease of $46.7 million or 10.3%. For the three months ended December 31, 2019 consolidated revenue was $94.6 million compared to $109.4 million in the prior year, a decrease of $14.8 million or 13.5%.

For the year ended December 31, 2019, Magnequench segment revenue was $173.8 million compared to $213.7 million in the prior year; a decrease of $39.9 million or 18.7%. Magnequench segment revenue decreased to $42.7 million in the three months ended December 31, 2019 compared to $47.2 million in the same period of the prior year; a decrease of $4.5 million or 9.5%. The Magnequench segment represented 42.7% of consolidated revenue in the year ended December 31, 2019.

For the year ended December 31, 2019, C&O segment revenue was $158.2 million compared to $161.4 million for the same period in the prior year; a decrease of $3.2 million or 2.0%. C&O segment revenue decreased to $33.7 million in the three months ended December 31, 2019 compared to $38.2 million in the same period of the prior year; a decrease of $4.6 million or 11.9%. The C&O segment represented 38.8% of consolidated revenue in the year ended December 31, 2019.

For the year ended December 31, 2019, Rare Metals segment revenue was $90.6 million compared to $93.8 million for the same period in the prior year; a decrease of $3.2 million or 3.4%. Rare Metals segment revenue decreased to $21.6 million in the three months ended December 31, 2019 compared to $27.3 million in the same period of the prior year; a decrease of $5.7 million or 21.0%. The Rare Metals segment represented 22.2% of consolidated revenue in the year ended December 31, 2019.

Inter-segment revenue in the twelve and three months ended December 31, 2019 was $15.2 million and $3.4 million, respectively, compared to $14.7 million and $3.4 million in the twelve and three months ended December 31, 2018, respectively. These have been eliminated on consolidation from C&O segment revenue as C&O sold product to Magnequench in the respective periods. The products sold to Magnequench are potential marketable third-party sales and are generally sold at fair market value.

Further commentary on the revenue changes in each segment are included in the discussion under the heading "*Discussion and Analysis of Reportable Segments*" below.

Costs of sales

Consolidated costs of sales, excluding depreciation and amortization was $293.9 million and $66.1 million in the year and three months ended December 31, 2019, respectively, compared to $324.4 million and $81.7 million in the corresponding periods in 2018; a decrease of $30.4 million or 9.4% year-over-year, and a decrease of $15.6 million or 19.1% quarter-over-quarter. Costs of sales, excluding depreciation and amortization decreased as a result of lower revenue in the year and three months ended December 31, 2019, in addition to the impacts of product cost, product mix, and operational changes in the business segments. In the year ended December 31, 2018, the C&O segment was adversely impacted by $4.2 million of premium freight costs related to a previous production change that did not repeat in 2019.

Consolidated depreciation and amortization in costs of sales were $10.0 million and $2.7 million for the year and three months ended December 31, 2019, respectively, compared to $9.7 million and $2.4 million in the corresponding periods in 2018.

Further commentary on the costs of sales changes in each segment are included in the discussion under the heading "*Discussion and Analysis of Reportable Segments*" below.

Selling, general and administrative ("SG&A") expense

Neo's SG&A expense consists primarily of personnel and related costs, including freight, legal, accounting and other professional fees and information technology costs. For the year and three months ended December 31, 2019, SG&A expense was $41.9 million and $12.0 million, respectively, compared to $49.9 million and $13.9 million in the corresponding periods last year. The lower SG&A costs on a year-to-date basis relate primarily to a recovery of $1.9 million for expenses Neo incurred related to the termination of the Luxfer Transaction ($3.5 million receivable from Luxfer less costs incurred in the first quarter), a recovery of value bonus expenses (cumulative expense adjustment based on the termination of the arrangement agreement), as well as lower legal costs associated with outstanding intellectual property disputes.

Share-based compensation

For the year and three months ended December 31, 2019, share-based compensation expense was $0.8 million and $0.4 million, respectively, compared to $3.4 million expense and $0.2 million recovery for the corresponding year and three months ended December 31, 2018. On June 24, 2019, Neo granted 32,783 Deferred Share Units ("**DSU**s") to its directors and recorded a share-based compensation expense of $0.3 million accordingly. On September 18, 2019, Neo granted 60,177 Restricted Share Units ("**RSUs**") and recorded a nominal share-based compensation. The lower share-based compensation expense compared to the corresponding periods in 2018 was primarily due to a revision of the vesting period from the previous estimate for Share Options and RSUs pursuant to the termination of the Luxfer Transaction. Neo subsequently revised and adjusted the recognized share-based compensation expense cost on a cumulative basis, resulting in a share-based compensation recovery in the first three months of 2019.

Depreciation and amortization

Depreciation and amortization unrelated to production for the year and three months ended December 31, 2019 of $8.0 million and $2.1 million, respectively, were slightly higher compared to the $7.0 million and $1.7 million in the corresponding year and three months ended December 31, 2018, primarily due to amortization of the right-of-use assets capitalized under IFRS 16 - Leases, effective January 1, 2019.

R&D

For the year ended December 31, 2019, R&D expense was $14.3 million, compared to $16.8 million in 2018; a decrease of $2.5 million. For the three months ended December 31, 2019, R&D expense was $4.3 million, compared to $3.7 million in the same period of the prior year; an increase of $0.6 million. Neo continues to prioritize making strategic and appropriate investments in R&D to develop new applications for its products and to strategically position Neo to meet customers' needs for technical solutions. Certain R&D costs are project-based and may be higher or lower in any given period.

Impairment

For the year ended December 31, 2019, Neo reported impairment charges of $1.0 million in the Rare Metals segment related to the closure of NRM Utah, which consists of impairment of property, plant and equipment of $1.0 million and a nominal amount of write-off of prepaid expenses that will not be utilized as a result of the closure.

Other income (expense)

For the year and three months ended December 31, 2019, Neo reported consolidated other expense of $1.5 million and $1.0 million, respectively, compared to other income of $10.7 million and $0.7 million for the corresponding periods in 2018. In the year ended December 31, 2019, Neo recorded $0.8 million of restructuring costs related to the closure of NRM Utah. In addition, Neo recorded net increase of $1.0 million in provisions for naturally occurring radioactive materials ("**NORM**"). In the year ended December 31, 2018, Neo recorded $11.8 million of insurance proceeds on claims associated with the 2015 fire at the Silmet facility, offset by a retro-duty charge.

Finance income (cost), net

Finance cost, net, for the year and three months ended December 31, 2019 was $2.3 million and $0.3 million, respectively, compared to finance income $0.6 million and finance cost of $0.9 million in the corresponding periods in 2018. Neo's finance income (cost) in both years were primarily related to the re-measurement of Neo’s derivative liability, which is comprised of a put option issued to the non-controlling interest of a consolidated subsidiary Buss & Buss. This liability is re-measured at each reporting period with the change in fair value recorded to finance costs. Neo had nominal amounts of debt outstanding during the respective periods.

Income tax expense

For the year and three months ended December 31, 2019, Neo had income tax expense of $10.1 million and $1.3 million, respectively, on income from operations before taxes of $32.8 million and $5.8 million. For the year and three months ended December 31, 2018, Neo recorded income tax expense of $12.5 million and $1.9 million, respectively, on income from operations before taxes of $53.6 million and $5.6 million.

Neo's effective tax rate was 30.8% and 22.1% for the year and three months ended December 31, 2019, respectively, and 23.2% and 34.7% for the year and three months ended December 31, 2018.

The increase in Neo’s effective tax rate in the year ended December 31, 2019 is due primarily to changes in the mix and volume of earnings in different tax jurisdictions. In addition, during the year ended December 31, 2018, Neo recorded other income of $11.8 million related to insurance claims affecting its subsidiary in Estonia. As these proceeds are not currently taxable and will not be distributed in the foreseeable future, a tax liability has not been recognized.

The decrease in Neo’s effective tax rate during the three months ended December 31, 2019 is due primarily to a reduction of foreign withholding taxes on undistributed earnings in Asia.

Other Expenditures and Legal Contingencies

Capital Expenditures

Neo capitalized expenditures of $21.0 million and $3.7 million for the year and three months ended December 31, 2019, respectively, as compared to $13.5 million and $4.8 million for the year and three months ended December 31, 2018. For the year ended December 31, 2019, capital expenditures included $9.3 million assets acquired from SAMAG. The majority of the remaining capital expenditures relate to capital projects performed at the Zibo, Tianjin, and Silmet facilities. These capital projects included a combination of maintenance capital (to assist with the continuing development and operations of Neo), growth capital (to assist in adding new capacity or new products) and strategic capital (tied to longer-term strategic planning initiatives).

Environmental Expenditures

Neo's operations are subject to numerous and detailed environmental laws, regulations and permits, including those pertaining to employee health and safety, environmental permitting and licensing, air quality standards, wastewater treatment and pollution control, and handling and disposal of hazardous and radioactive materials and wastes.

Neo's Zibo facility was designed to make use of wastewater treatment and discharge facilities of an adjacent petrochemical complex. There is a variable monthly charge based on the Zibo facility's usage. The facility is also obliged to pay a monthly environmental administration fee to the municipal government of Linzi, China. For the year ended December 31, 2019 and 2018, Neo paid annual administration fees of $0.1 million and $0.2 million, respectively.

As part of the recycling of gallium and indium scrap into saleable metal, waste material is generated during the leaching process. Neo has adequate procedures in place to ensure that these wastes are appropriately contained and disposed of.

Neo's Canadian operations in Ontario are subject to federal, provincial and local regulation and must periodically submit documentation to validate the waste disposal process throughout the year. For the year ended December 31, 2019, waste disposal costs related to the Rare Metals production facilities totaled $0.5 million, compared to $0.3 million in costs in the year ended December 31, 2018.

Neo's NPM Silmet OÜ facility in Estonia and JAMR facility in China, in their normal operation, generates hazardous waste and NORM. These materials are stored at the site. As at December 31, 2019, Neo recorded a provision of $3.1 million for the disposal of the NORM and other related costs in China, and $2.6 million for the disposal and other related costs in Estonia. The total provision for NORM increased by $1.0 million over 2018. With respect to the NORM in Estonia, Neo, in agreement with the government in Estonia, has agreed to set aside $2.6 million in a restricted deposit account. These amounts represent management's best estimate of the costs to be incurred by Neo to settle the obligation. Neo expects the provision for disposing the NORM in Estonia to be settled by March 2021.

Legal contingencies

Neo operates in a high technology and advanced engineering product environment in which many patents have been issued over time. The subsidiaries of Neo are currently, and may in the future become, involved in legal proceedings alleging patent infringement. At present, Neo is defending against patent infringement legal proceedings filed in Germany, the United Kingdom and the People's Republic of China. Additionally, Neo has initiated proceedings to invalidate certain patents of Neo's competitors issued in these same jurisdictions.

There are many factors that make it difficult to estimate the impact of a particular lawsuit on Neo, including, among others, being in the early stage of a proceeding when the claimant is not required to specifically identify the manner in which the patent has allegedly been infringed; damages sought that are unspecified, unsupportable, unexplained or uncertain; discovery not having been started or still incomplete; the complexity of the facts that are in dispute (e.g., the analysis of the patent and a comparison to the activities of Neo is a labor-intensive and highly technical process); the difficulty of assessing novel claims or legal arguments, and; the parties not having engaged in any meaningful settlement discussions. Management is required to apply judgment with respect to estimating the potential impact of the ongoing patent litigation on Neo. Potential impacts to Neo include, but are not limited to, the possibility of an injunction prohibiting Neo from manufacturing, distributing, marketing or selling products that are found to infringe on an unexpired patent; potential damages, attorney's fees and costs that Neo could be ordered to pay if it is found to have infringed on a patent, and; damage to Neo's reputation with key customers, or prospective customers, from a finding of patent infringement.

Of the various lawsuits initiated and underway, in March 2016, the German Courts have ruled that certain of Neo Chemicals & Oxides (Europe) Ltd.'s ("**Neo C&O (Europe)**") products infringed four expired patents of Rhodia Chimie ("**Rhodia**"): European patent #0735984 B1 ("**984**"), European patent #0863846 B1("**846**"), European patent #0605274 ("**274**"), and European patent #0955267 B1 (“**267**”). Neo C&O (Europe) filed an appeal in each of the four infringement actions and the appeals are still pending with respect to 846, 274 and 267. Neo C&O (Europe) withdrew its appeal of the 984 infringement judgment after Rhodia withdrew part of its infringement claim in this case. Neo C&O (Europe) was ordered to provide information related to the calculation of damages, but as yet there has been no determination of damages in any of the German infringement lawsuits.

Neo C&O (Europe) challenged the validity of patents 984, 846 and 274 before the German Federal Patent Court, which upheld patents 984 and 846, but invalidated patent 274. Both Neo C&O (Europe) and Rhodia appealed the rulings of the German Federal Patent Court to the German Supreme Court. The German Supreme Court has upheld the validity of patents 984, 846 and 274 but narrowed the scope of all three patents. Neo C&O (Europe) also filed an action challenging the validity of 267, which is still pending before the German Federal Patent Court.

Rhodia has filed actions in Germany alleging that Neo C&O (Europe) has infringed two unexpired patents, European patent # 1527018 and European patent #2007682. These actions are still pending with a trial date scheduled for July 2, 2020.

In December 2017, the Regional Court of Mannheim (Germany) determined that certain of Neo C&O (Europe)'s products infringed a German patent (European & UK patents #1435338 B1 ("**338**")), and an injunction prohibiting the sale of affected products into Germany was granted. Neo C&O (Europe) has appealed the decision. In January 2019, the Federal Patent Court in Munich revoked the German designation of patent 338. The Higher Regional Court of Karlsruhe granted Neo C&O (Europe)'s request for a stay of the injunction, subject to the requirement that Neo provide financial security. Rhodia has appealed the invalidation of patent 338 by the German Federal Patent Court, and the appeal is pending.

In April 2018, the UK Court determined that certain of Neo C&O (Europe)'s products infringed the equivalent UK patent 338. Neo C&O (Europe) appealed the trial court judgment of infringement but in October of 2019 the judgment of infringement was affirmed. There has been no determination of damages yet in this case.

In January 2018, Neo C&O (Europe) reached a settlement with Magnesium Elektron Limited with respect to UK patent #1444036 whereby Neo is able to continue to sell its products into the UK on a royalty-free basis and without restriction. The terms of the settlement are subject to a confidentiality agreement.

On April 18, 2018, the Patent Reexamination Board of the State Intellectual Property Office of China ("**PRB**") ruled in favor of ZAMR, a Chinese subsidiary of Neo, by invalidating all claims associated with Chinese patent ZL 03817110.4, held by Rhodia Operations S.A.S., an affiliate of Brussels-based Solvay ("**Rhodia Operations**"). On May 23, 2018, the Intermediate People's Court of Zibo, China, dismissed the pending lawsuit by Rhodia Operations alleging infringement of Chinese patent ZL 03817110.4. Rhodia Operations has appealed the decisions of the PRB and the Intermediate People's Court of Zibo concerning Patent ZL 03817110.4.

On September 26, 2018, the PRB again ruled in favor of ZAMR by invalidating all product claims associated with patent ZL 200710146613.6, held by Daiichi Kigenso Kagaku Kogyo Co. ("**DKKK**"). The PRB upheld the validity of Claim 4, which is a method claim. On October 24, 2018, the Intermediate People's Court of Zibo, China, dismissed the pending lawsuit by DKKK and Rhodia Operations alleging infringement of patent ZL 200710146613.6. On November 22, 2019, the Shandong Higher Court reversed the ruling of the Zibo Intermediate Court and ordered that the case be transferred to the Ji'nan Intermediate Court for a trial on alleged infringement of Claim 4.

In January 2019, the PRB ruled in favor of ZAMR by invalidating all patent claims associated with patent ZL 97195463.1. On February 28, 2019, the Intermediate People's Court of Zibo, China, dismissed the pending lawsuit by Rhodia Operations and DKKK alleging infringement of patent ZL 97195463.1. Rhodia Operations and DKKK have appealed these decisions.

On March 4, 2019, the PRB ruled in favor of ZAMR by invalidating all patent claims associated with patent ZL 02822106.0, which is equivalent to European Patent 338. Solvay Japan has appealed this decision.

On May 16, 2019, the Intermediate People's Court of Zibo, China, ruled in favor of ZAMR by finding that ZAMR had not infringed patent ZL 94194552.9. This judgment in ZAMR's favor is final.

On December 13, 2019, Rhodia Operations and DKKK voluntarily withdrew their lawsuit that alleged ZAMR infringed Chinese Patent ZL 96196505.3.

The following infringement proceedings are ongoing. These proceedings are at various stages of court proceeding including being at pre-trial stage, within infringement proceedings, as well as invalidity proceedings.

Patent Reference	Jurisdiction of Claim	Specified Damages by Claimant
Chinese patent ZL 03817110.4	China	$3.0 million
Chinese patent ZL 200710146613.6	China	$2.3 million
European patent 0863846 B1	Germany	$8.0 million
European patent 0735984 B1	Germany	$6.0 million
Chinese patent ZL 97195463.1	China	$0.8 million
European & UK patents 1435338 B1	UK	Not specified
European & UK patents 1435338 B1	Germany	Not specified
European patent 0605274 B1	Germany	Not specified
European patent 0955267	Germany	Not specified
European patent 1527018	Germany	Not specified
European patent 2007682	Germany	Not specified

Management has made an assessment, based on its interpretation of the claims as to the quantum of the appropriate provision for certain claims. Such a provision is based on management's best estimate, as damages are uncertain and are subject to judicial determination. Management's assessment, based on its interpretation of the claims, the limited facts available at this time and independent legal advice, is that for all other claims it is not probable that an outflow of resources will be required in settling these claims and no provision has been made. Future developments in these cases could cause management to change its assessment.

Management does not have sufficient information to comment on the quantum or methodology of the damages sought by the claimants including with respect to potential duplicity of the parts affected. Management's view on specified damages could be materially different than those proposed by the claimant in each case.

Neo intends to defend itself vigorously in all cases. In light of the inherent uncertainties in litigation there can be no assurance that the ultimate resolution of these matters will not significantly exceed the reserves currently accrued for those cases for which an estimate can be made. Losses in connection with any litigation for which management is not presently able to reasonably estimate any potential loss, or range of loss, could be material to Neo's results of operations and financial condition.

7. Non-IFRS Financial Measures

This MD&A makes reference to certain non-IFRS financial measures. 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 MD&A 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, including "Adjusted EBITDA", "Adjusted EBITDA Margin", "Adjusted Net Income or Loss", "Adjusted OIBDA", "Adjusted OIBDA Margin", "EBITDA", "Adjusted Earnings per Share", "Free Cash Flow", "Free Cash Flow Conversion" and "OIBDA" 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, thus highlighting 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. Neo defines such financial measures as follows:

"**Adjusted EBITDA**" is defined as EBITDA before equity income (loss) in associates, other income (expense), foreign exchange (gain) loss, share and value-based compensation, impairment of long-lived assets, and other non-recurring costs (recoveries);

"**Adjusted EBITDA Margin**" is defined as Adjusted EBITDA divided by revenue;

"**Adjusted Net Income or Loss**" is defined as net income or loss before foreign exchange (gain) loss, share and value-based compensation, impairment of long-lived assets, other non-recurring costs (recoveries), and non-recurring items included in other expense (income), net of the related tax effects;

"**Adjusted OIBDA**" is defined as OIBDA before share and value-based compensation, impairment of long-lived assets, and other non-recurring costs (recoveries);

"**Adjusted OIBDA Margin**" is defined as Adjusted OIBDA divided by revenue;

"**EBITDA**" is defined as net income (loss) before finance costs (income), net, income tax expense, depreciation and amortization included in cost of sales, and depreciation and amortization included in operating expenses;

"**Adjusted Earnings per Share**" is defined as Adjusted Net Income or Loss attributable to equity holders of Neo divided by the weighted average number of common shares outstanding;

"**Free Cash Flow**" is defined as Adjusted EBITDA less capital expenditures;

"**Free Cash Flow Conversion**" is defined as Free Cash Flow divided by Adjusted EBITDA; and

"OIBDA" is defined as operating income before depreciation and amortization.

Neo uses references to Adjusted OIBDA and Adjusted EBITDA interchangeably as the adjustments in each measure provides the same calculated outcome of operating performance. Management believes that the use of these adjustments (as defined in Adjusted EBITDA and Adjusted OIBDA) provides a more consistent measure of underlying operating performance, with comparability among periods that investors may find useful. The exclusion of certain adjustments does not imply that they are non-recurring.

The following tables illustrate the comparison of the Adjusted OIBDA for the three months and year ended December 31, 2019 and 2018:

($000s, except volume)	Three Months Ended December 31,				Year Ended December 31,			
	2019	**2018**	**Change**	**%**	**2019**	**2018**	**Change**	**%**
Operating income	**$ 7,014**	**$ 6,224**	**$ 790**	12.7 %	**$ 37,502**	**$ 42,888**	**$ (5,386)**	(12.6)%
Add back:								
Depreciation and amortization included in Costs of Sales	2,655	2,352	303		9,964	9,741	223	
Depreciation and amortization included in operating expenses	2,063	1,716	347		8,033	6,978	1,055	
OIBDA	**11,732**	**10,292**	**1,440**	14.0 %	**55,499**	**59,607**	**(4,108)**	(6.9)%
Impairment of long-lived assets (1)	—	—	—		1,014	—	1,014	
Share and valued-based compensation (2)	443	782	(339)		(830)	5,345	(6,175)	
Other non-recurring costs (recoveries) (3)	305	2,161	(1,856)		(1,927)	2,161	(4,088)	
Adjusted OIBDA	**$ 12,480**	**$ 13,235**	**$ (755)**	(5.7)%	**$ 53,756**	**$ 67,113**	**$ (13,357)**	(19.9)%
Adjusted OIBDA margin	13.2%	12.1%			13.2%	14.8%		
Revenue	$ 94,553	$109,361	$ (14,808)	(13.5)%	$407,464	$454,195	$ (46,731)	(10.3)%
Sales volume (tonnes)	3,371	3,439	(68)	(2.0)%	13,599	14,083	(484)	(3.4)%

__Notes:__

(1) The $1.0 million impairment in the Rare Metals segment represents impairment of property, plant and equipment and other assets related to the closure of NRM Utah that will not be utilized as a result of the closure.

(2) Represents share and value-based compensation expense in respect of the Legacy Plan, the LTIP and the long-term value bonus plan, which has similar vesting criteria to the share-based plan and is settled in cash for non-executives and non-North Americans where implementation of a share settlement plan would have been prohibitively expensive in terms of administration and compliance. Value-based compensation expense/(recovery) of $43 and $(1,606) are included in selling, general, and administration expenses for the three months and year ended December 31, 2019, respectively, and expense of $1,003 and $1,909 are included for the three months and year ended December 31, 2018, respectively. Neo has removed both the share and value-based compensation expense from OIBDA to provide comparability with historic periods and to treat it consistently with the share-based awards that they are intended to replace.

(3) These represents primarily legal, professional advisory fees and other transaction costs incurred/(recovered) with respect to non-operating capital structure related transactions. In 2019, this also includes some restructuring costs related to management team changes in one of Neo's subsidiaries and the purchase price fair value accounting adjustment related to the acquisition of SAMAG. Neo has removed these charges to provide comparability with historic periods.

Adjusted OIBDA was $53.8 million or 13.2% of revenue for the year ended December 31, 2019, compared to $67.1 million or 14.8% of revenue for the year ended December 31, 2018; a decrease of $13.4 million or 19.9%. For the three months ended December 31, 2019, adjusted OIBDA was $12.5 million or 13.2% of revenue compared to $13.2 million or 12.1% of revenue for the corresponding period in 2018; a decrease of $0.8 million or 5.7%.

Further commentary on the operating performance changes in each segment are included in the discussion under the heading "*Discussion and Analysis of Reportable Segments*" below.

Reconciliation of Net Income to EBITDA, Adjusted EBITDA and Free Cash Flow:

($000s)	**Three Months Ended December 31,**		**Year Ended December 31,**	
	2019	**2018**	**2019**	**2018**
Net income	**$ 4,483**	**$ 4,381**	**$ 23,075**	**$ 41,139**
Add back (deduct):				
Finance costs (income), net	266	945	2,310	(649)
Income tax expense	1,278	1,948	10,085	12,465
Depreciation and amortization included in Costs of Sales	2,656	2,352	9,965	9,741
Depreciation and amortization included in operating expenses	2,062	1,716	8,032	6,978
EBITDA	**10,745**	**11,342**	**53,467**	**69,674**
Adjustments to EBITDA:				
Equity loss (income) in associates	10	(709)	(380)	28
Other expense (income) (1)	1,027	(723)	1,492	(10,660)
Foreign exchange (gain) loss (2)	(50)	382	920	565
Impairment of long-lived assets (3)	—	—	1,014	—
Share and value-based compensation expense (recovery) (4)	443	782	(830)	5,345
Other non-recurring costs (recoveries) (5)	305	2,161	(1,927)	2,161
Adjusted EBITDA	**$ 12,480**	**$ 13,235**	**$ 53,756**	**$ 67,113**
Adjusted EBITDA Margins	*13.2%*	*12.1%*	*13.2%*	*14.8%*
Less:				
Capital expenditures (6)	3,742	4,760	20,983	13,511
Free Cash Flow	**$ 8,738**	**$ 8,475**	**$ 32,773**	**$ 53,602**
Free Cash Flow Conversion (7)	70.0%	64.0%	61.0%	79.9%

Notes:

(1) Represents other expenses resulting from non-operational related activities. Other income primarily relates to cost and insurance recoveries as a result of the fire at the Silmet facility. These costs and recoveries are not indicative of Neo's ongoing activities.

(2) Represents unrealized and realized foreign exchange losses (gains) that include non-cash adjustments in translating foreign denominated monetary assets and liabilities.

(3) The $1.0 million impairment in the Rare Metals segment represents impairment of property, plant and equipment and other assets related to the closure of NRM Utah that will not be utilized as a result of the closure.

(4) Represents share and value-based compensation expense in respect of the Legacy Plan, the LTIP and the long-term value bonus plan, which has similar vesting criteria to the share-based plan and is settled in cash for non-executives and non-North Americans where implementation of a share settlement plan would have been prohibitively expensive in terms of administration and compliance. Value-based compensation expense/(recovery) of $43 and $(1,606) are included in selling, general, and administration expenses for the three months and year ended December 31, 2019, respectively, and expense of $1,003 and $1,909 are included for the three months and year ended December 31, 2018, respectively. Neo has removed both the share and value-based compensation expense from EBITDA to provide comparability with historic periods and to treat it consistently with the share-based awards that they are intended to replace.

(5) These represents primarily legal, professional advisory fees and other transaction costs incurred/(recovered) with respect to non-operating capital structure related transactions. In 2019, this also includes some restructuring costs related to management team changes in one of Neo's subsidiaries and the purchase price fair value accounting adjustment related to the acquisition of SAMAG. Neo has removed these charges to provide comparability with historic periods.

(6) Capital expenditures includes $9.3 million related to the assets acquired through a business combination.

(7) Calculated as Free Cash Flow divided by Adjusted EBITDA. Free Cash Flow Conversion excluding capital expenditure on business combination would be 78.2% in 2019.

Reconciliation of Net Income to Adjusted Net Income:

($000s)	Three Months Ended December 31,		Year Ended December 31,	
	2019	**2018**	**2019**	**2018**
Net income	**$ 4,483**	**$ 4,381**	**$ 23,075**	**$ 41,139**
Adjustments to net income:				
Foreign exchange (gain) loss [(1)]	(50)	382	920	565
Impairment of long-lived assets [(2)]	—	—	1,014	—
Share and value-based compensation expense (recovery) [(3)]	443	782	(830)	5,345
Other non-recurring costs (recoveries) [(4)]	305	2,161	(1,927)	2,161
Non-recurring items included in other expense (income) [(5)]	905	(172)	1,661	(9,763)
Tax impact of the above items	31	(37)	186	(524)
Adjusted net income	**$ 6,117**	**$ 7,497**	**$ 24,099**	**$ 38,923**
Attributable to:				
Equity holders of Neo	$ 6,273	$ 7,401	$ 23,944	$ 38,579
Non-controlling interest	$ (156)	$ 96	$ 155	$ 344
Weighted average number of common shares outstanding:				
Basic	37,943,542	39,772,272	38,821,647	39,852,189
Diluted	38,021,176	40,172,359	38,963,015	40,368,007
Adjusted earnings per share attributable to equity holders of Neo:				
Basic	$ 0.17	$ 0.19	$ 0.62	$ 0.97
Diluted	$ 0.16	$ 0.18	$ 0.61	$ 0.96

Notes:

(1) Represents unrealized and realized foreign exchange losses (gains) that include non-cash adjustments in translating foreign denominated monetary assets and liabilities.

(2) The $1.0 million impairment in the Rare Metals segment represents impairment of property, plant and equipment and other assets related to the closure of NRM Utah that will not be utilized as a result of the closure.

(3) Represents share and value-based compensation expense in respect of the Legacy Plan, the LTIP and the long-term value bonus plan, which has similar vesting criteria to the share-based plan and is settled in cash for non-executives and non-North Americans where implementation of a share settlement plan would have been prohibitively expensive in terms of administration and compliance. Value-based compensation expense/(recovery) of $43 and $(1,606) are included in selling, general, and administration expenses for the three months and year ended December 31, 2019, respectively, and expense of $1,003 and $1,909 are included for the three months and year ended December 31, 2018, respectively. Neo has removed both the share and value-based compensation expense from net income to provide comparability with historic periods and to treat it consistently with the share-based awards that they are intended to replace.

(4) These represents primarily legal, professional advisory fees and other transaction costs incurred/(recovered) with respect to non-operating capital structure related transactions. In 2019, this also includes some restructuring costs related to management team changes in one of Neo's subsidiaries and the purchase price fair value accounting adjustment related to the acquisition of SAMAG. Neo has removed these charges to provide comparability with historic periods.

(5) Represents partial settlement of the insurance claims from the fire affecting Silmet in 2015 and other non-recurring transactions. Neo has removed this from net income to provide comparability with historic periods.

8. Discussion and Analysis of Reportable Segments

The analysis of Neo's reportable segments, which follows the discussion of its consolidated results, presents operating results on a gross basis (i.e., before intercompany eliminations).

8.1 Magnequench

($000s, except volume)	Three Months Ended December 31,				Year Ended December 31,			
	2019	**2018**	**Change**	%	**2019**	**2018**	**Change**	%
Operating income	**$ 7,207**	**$ 6,670**	**$ 537**	8.1 %	**$ 28,987**	**$ 41,957**	**$ (12,970)**	(30.9)%
Add back:								
Depreciation and amortization included in costs of sales	735	545	190		2,486	2,320	166	
Depreciation and amortization included in operating expenses	1,432	1,232	200		5,554	5,024	530	
OIBDA	**9,374**	**8,447**	**927**	11.0 %	**37,027**	**49,301**	**(12,274)**	(24.9)%
Share and value-based compensation (1)	96	392	(296)		(267)	970	(1,237)	
Other non-recurring costs (2)	75	212	(137)		293	212	81	
Adjusted OIBDA	**$ 9,545**	**$ 9,051**	**$ 494**	5.5 %	**$ 37,053**	**$ 50,483**	**$ (13,430)**	(26.6)%
Adjusted OIBDA margin	22.3%	19.2%			21.3%	23.6%		
Revenue	$ 42,748	$ 47,210	$ (4,462)	(9.5)%	$173,800	$213,712	$ (39,912)	(18.7)%
Sales volume (tonnes)	1,387	1,446	(59)	(4.1)%	5,584	6,128	(544)	(8.9)%

Notes:

(1) Represents share and value-based compensation expense in respect of the Legacy Plan, the LTIP and the long-term value bonus plan, which has similar vesting criteria to the share-based plan and is settled in cash for non-executives and non-North Americans where implementation of a share settlement plan would have been prohibitively expensive in terms of administration and compliance. Value-based compensation expense/(recovery) of $25 and $(503) are included in selling, general, and administration expenses for the three months and year ended December 31, 2019, respectively, and expense of $322 and $601 are included for the three months and year ended December 31, 2018, respectively. Neo has removed both the share and value-based compensation expense from OIBDA to provide comparability with historic periods and to treat it consistently with the share-based awards that they are intended to replace.

(2) These represents primarily legal, professional advisory fees and other transaction costs incurred with respect to non-operating capital structure related transactions. In addition, for 2019, this includes the purchase price fair value accounting adjustment related to the acquisition of SAMAG. Neo has removed these charges to provide comparability with historic periods.

For the year ended December 31, 2019, revenue in the Magnequench segment was $173.8 million, compared to $213.7 million in the year ended December 31, 2018; a decrease of $39.9 million or 18.7%. For the three months ended December 31, 2019, revenue in the Magnequench segment was $42.7 million, compared to $47.2 million in the three months ended December 31, 2018; a decrease of $4.5 million or 9.5%. For the year ended December 31, 2019, volume decreased to 5,584 tonnes, compared to 6,128 tonnes in the same period in 2018; a decrease of 8.9%. In the three months ended December 31, 2018, volume decreased to 1,387 tonnes compared to 1,446 tonnes; a decrease of 59 tonnes or 4.1%. Generally, the differing rates of change for revenue and volumes are primarily attributed to changes in commodity input material prices and, to a lesser extent, product mix. Magnequench has material pass-through agreements with the vast majority of its customers, which enables Magnequench to pass through changes in material input costs into selling price on a lagged basis.

Operating income for the year ended December 31, 2019 was $29.0 million, a decrease of $13.0 million when compared to the year ended December 31, 2018. For the three months ended December 31, 2019, operating income was $7.2 million compared to $6.7 million in the corresponding period in 2018; an increase of $0.5 million or 8.1%.

For the year ended December 31, 2019, volumes in the Magnequench segment decreased, mostly in its legacy and longer running programs, due to the slowdown in auto sales and slower economic performance in certain sectors. Magnequench continues to see growth related to newer products including traction motors for hybrid and electric vehicles as well as programs that are still ramping up volumes to full production levels. Exclusive of the legacy EPS program, Magnequench volume in automotive applications grew by approximately 9% year-over-year, despite the slowdown of the automotive industry generally. This growth includes the traction motor application, used in hybrid and electric vehicle drivetrains, where volumes grew by approximately 45% year-over-year. Magnequench is benefiting from growth in precision and efficient motors and the increased utilization of its magnetic materials on a per-vehicle basis, a continuing growth trend driven by a larger global macro trend toward increasing electrification of various vehicle systems.

For the three months ended December 31, 2019, Adjusted OIBDA was $9.5 million, an increase of $0.5 million compared to the same period of the prior year. For the year ended December 31, 2019, Adjusted OIBDA in the Magnequench segment was $37.1 million compared to $50.5 million in 2018; a decrease of $13.4 million. Aside from volume (and its impact on margins and overhead absorption), the decrease in Adjusted OIBDA in the year ended December 31, 2019 is primarily attributable to the impact of the timing of pricing pass-through mechanics on material inputs and changes in foreign exchange rates. This pass-through mechanic, which updates selling prices on a lagged basis (generally monthly and quarterly), is a key feature of Neo's strategic focus on value-add margins. A rapid change in material input costs in the latter half of 2017 had a lagging pass-through effect which translated into higher selling prices (and higher margins) in the last quarter of 2017 and into the first six months of 2018. Costs for material inputs that are utilized by Magnequench, and associated pass-through pricing, were relatively stable in the second half of 2018 and have declined through 2019.

On July 15, 2019, Neo, through a newly formed wholly owned subsidiary, MQCZ entered into a definitive agreement to purchase the net assets of SAMAG, a privately-owned manufacturer in Chuzhou, China of compression molded NdFeB bonded magnets, for a purchase price of $9.2 million (RMB 64.8 million), plus working capital of $0.3 million (RMB 2.3 million). The acquisition will further enhance the value that Neo provides to customers and is expected to leverage Neo’s ability to produce high-performance magnetic powders and magnets. The transaction closed on August 26, 2019. The results of MQCZ have been included in Magnequench from the August 26, 2019 acquisition date and are immaterial to the results of Magnequench for the three months and year ended December 31, 2019.

8.2 Chemicals & Oxides

($000s, except volume)	Three Months Ended December 31,				Year Ended December 31,			
	2019	**2018**	**Change**	%	**2019**	**2018**	**Change**	%
Operating income	**$ 2,898**	**$ 3,101**	**$ (203)**	(6.5)%	**$ 18,354**	**$ 12,934**	**$ 5,420**	41.9 %
Add back:								
Depreciation and amortization included in costs of sales	989	749	240		3,517	3,099	418	
Depreciation and amortization included in operating expenses	390	329	61		1,558	1,355	203	
OIBDA	**4,277**	**4,179**	**98**	2.3 %	**23,429**	**17,388**	**6,041**	34.7 %
Share and value-based compensation (1)	25	390	(365)		(672)	1,095	(1,767)	
Other non-recurring cost (2)	115	—	115		115	—	115	
Adjusted OIBDA	**$ 4,417**	**$ 4,569**	**$ (152)**	(3.3)%	**$ 22,872**	**$ 18,483**	**$ 4,389**	23.7 %
Adjusted OIBDA margin	13.1%	12.0%			14.5%	11.5%		
Revenue	$ 33,650	$ 38,207	$ (4,557)	(11.9)%	$158,226	$161,422	$ (3,196)	(2.0)%
Sales volume (tonnes)	1,940	1,843	97	5.3 %	7,841	7,611	230	3.0 %

Notes:

(1) Represents share and value-based compensation expense in respect of the Legacy Plan, the LTIP and the long-term value bonus plan, which has similar vesting criteria to the share-based plan and is settled in cash for non-executives and non-North Americans where implementation of a share settlement plan would have been prohibitively expensive in terms of administration and compliance. Value-based compensation expense/(recovery) of $16 and $(690) are included in selling, general, and administration expenses for the three months and year ended December 31, 2019, respectively, and expense of $430 and $837 are included for the three months and year ended December 31, 2018, respectively. Neo has removed both the share and value-based compensation expense from OIBDA to provide comparability with historic periods and to treat it consistently with the share-based awards that they are intended to replace.

(2) These represents restructuring costs related to management team changes in Neo's subsidiaries. Neo has removed these charges to provide comparability with historic periods.

For the year ended December 31, 2019, revenue in the C&O segment was $158.2 million compared to $161.4 million in 2018; a decrease of $3.2 million or 2.0%. For the three months ended December 31, 2019, revenue in the C&O segment was $33.7 million compared to $38.2 million for the corresponding period in 2018; a decrease of $4.6 million or 11.9%.

Operating income for the year ended December 31, 2019 increased to $18.4 million from $12.9 million in 2018; an increase of $5.4 million or 41.9%. Operating income for the three months ended December 31, 2019 was $2.9 million compared to $3.1 million in the same period in 2018; a decrease of $0.2 million or 6.5%.

In the year ended December 31, 2019, three-way auto catalyst volumes continued to show growth (approximately 8%) year-over-year despite a general slowdown in automotive markets throughout the year. This was offset by a decline in diesel catalyst products, which declined approximately 45% year-over-year. With declining diesel volumes in the past several quarters, overall product mix between three-way and diesel catalysts for Neo is now more reflective of market mix considerations. The C&O segment did not incur premium freight costs in 2019, as opposed to $4.2 million of premium freight costs incurred in 2018.

With respect to C&O's rare earth separation business, the continuing decline of rare earth commodity prices led to a lagging impact of higher cost inventory relative to current selling prices and this has had a negative impact of margins for rare earth separation in the three months and year ended December 31, 2019. Partially offsetting this, C&O benefited from increased spot sales in 2019 compared to 2018.

Since launching its wastewater treatment business several years ago, the C&O segment achieved commercial success in 2019 with sales volumes growing greater than 70% and revenues growing greater than 130% compared to the prior year. While these specialty chemical products made up a small portion of Neo's consolidated revenues, they have potential to grow into a more meaningful business in the future.

For the year ended December 31, 2019, Adjusted OIBDA in the C&O segment was $22.9 million compared to $18.5 million in 2018; an increase of $4.4 million or 23.7%. For the three months ended December 31, 2019, Adjusted OIBDA in the C&O segment was $4.4 million compared to $4.6 million in the three months ended December 31, 2018; a decrease of $0.2 million or 3.3%.

On November 12, 2019, Neo entered into an equity interest transfer agreement to purchase the entire 59.6% equity interest of ZSTC from Mr. Sun for a purchase price of $1.1 million (RMB 7.9 million). ZSTC is a privately-owned holding company in Shandong, China which holds a 5% equity interest in ZAMR, one of Neo's subsidiaries in Shandong, China. The acquisition of the 59.6% equity interest in ZSTC increases Neo's equity interest in ZAMR from 95% to 98%. The transaction closed on December 29, 2019.

8.3 Rare Metals

($000s, except volume)	**Three Months Ended December 31,**				**Year Ended December 31,**			
	2019	**2018**	**Change**	%	**2019**	**2018**	**Change**	%
Operating (loss) income	**$ (15)**	**$ 438**	**$ (453)**	(103.4)%	**$ (384)**	**$ 4,578**	**$ (4,962)**	(108.4)%
Add back:								
Depreciation and amortization included in costs of sales	931	1,058	(127)		3,961	4,322	(361)	
Depreciation and amortization included in operating expenses	156	134	22		583	533	50	
OIBDA	**1,072**	**1,630**	**(558)**	(34.2)%	**4,160**	**9,433**	**(5,273)**	(55.9)%
Impairment of long-lived assets (1)	—	—	—		1,014	—	1,014	
Share and value-based compensation (2)	(6)	72	(78)		(157)	321	(478)	
Other non-recurring costs (3)	115	—	115		115	—	115	
Adjusted OIBDA	**$ 1,181**	**$ 1,702**	**$ (521)**	(30.6)%	**$ 5,132**	**$ 9,754**	**$ (4,622)**	(47.4)%
Adjusted OIBDA margin	5.5%	6.2%			5.7%	10.4%		
Revenue	$ 21,564	$ 27,309	$ (5,745)	(21.0)%	$ 90,622	$ 93,789	$ (3,167)	(3.4)%
Sales volume (tonnes)	128	227	(99)	(43.6)%	534	650	(116)	(17.8)%

Notes:

(1) The $1.0 million impairment in the Rare Metals segment represents impairment of property, plant and equipment and other assets related to the closure of NRM Utah that will not be utilized as a result of the closure.

(2) Represents share and value-based compensation expense in respect of the Legacy Plan, the LTIP and the long-term value bonus plan, which has similar vesting criteria to the share-based plan and is settled in cash for non-executives and non-North Americans where implementation of a share settlement plan would have been prohibitively expensive in terms of administration and compliance. Value-based compensation expense/(recovery) of $(10) and $(167) are included in selling, general, and administration expenses for the three months and year ended

December 31, 2019, respectively, and expense of $95 and $178 are included for the three months and year ended December 31, 2018, respectively. Neo has removed both the share and value-based compensation expense from OIBDA to provide comparability with historic periods and to treat it consistently with the share-based awards that they are intended to replace.

(3) These represents restructuring costs related to management team changes in Neo's subsidiaries. Neo has removed these charges to provide comparability with historic periods.

For the year ended December 31, 2019, revenue in the Rare Metals segment was $90.6 million compared to $93.8 million in the prior year; a decrease of $3.2 million or 3.4%. For the three months ended December 31, 2019, revenue in the Rare Metals segment was $21.6 million, compared to $27.3 million in the prior year period; a decrease of $5.7 million or 21.0%.

Operating loss for the year ended December 31, 2019 was $0.4 million, a decrease of $5.0 million, compared to operating income of $4.6 million in 2018. The operating loss in the year ended December 31, 2019 was driven by the continued decline in pricing for tantalum-based products and by a general slowdown in gallium trichloride-related markets. The Rare Metals segment had considerable material in the production system, so when material prices change, there is a lead-lag impact into current period results as the operation is processing and selling material on hand purchased in a prior period. The inventory in the system at the beginning of 2019 was particularly high and, given the price decline in finished products throughout the year, the lead-lag impact was particularly strong in 2019. As at the end of 2019, there is considerably less inventory in the system and both raw material inputs and finished goods prices have been relatively stable since July 2019. The Rare Metals segment continues to develop new products and focus on value-added margins to mitigate short-term variations in its earnings due to input material price volatility.

The segment recorded a $1.0 million impairment of assets affecting operating income related to the closure of NRM Utah in the year ended December 31, 2019. In addition to this impairment, the segment also had recognized restructuring and other costs of $0.8 million. Subsequent to the closure, a substantial portion of NRM Utah's business will be transferred to the segment’s operation in Peterborough, Ontario, which already houses the balance of the segment's gallium business, resulting in additional synergies and efficiencies. Neo expects to complete the transfer and closure activities around mid-year of 2020 and expects to see immediate operating and financial benefits after the transfer is complete. The NRM Utah facility was a modest-sized facility with $3.2 million in annualized sales and nominal OIBDA.

For the year ended December 31, 2019, Adjusted OIBDA in the Rare Metals segment was $5.1 million, compared to $9.8 million in 2018; a decrease of $4.6 million or 47.4%. For the three months ended December 31, 2019, Adjusted OIBDA in the Rare Metals segment was $1.2 million, compared to $1.7 million in the same period in 2018; a decrease of $0.5 million or 30.6%.

9. Summary of Consolidated Quarterly Results

($000s, except for earnings per share information)	2019				2018			
	Q4	**Q3**	**Q2**	**Q1**	**Q4**	**Q3**	**Q2**	**Q1**
Revenue	**$ 94,553**	**$102,645**	**$101,736**	**$108,530**	**$109,361**	**$114,216**	**$110,433**	**$120,185**
Net income attributable to equity holders of Neo	**4,639**	**3,944**	**2,090**	**12,247**	**4,285**	**8,669**	**19,174**	**8,667**
Basic EPS	0.12	0.10	0.05	0.31	0.11	0.22	0.48	0.22
Diluted EPS	0.12	0.10	0.05	0.31	0.11	0.21	0.47	0.21
Operating income	**7,014**	**8,399**	**5,850**	**16,239**	**6,224**	**10,890**	**12,269**	**13,505**
Add back:								
Depreciation and amortization included in costs of sales	2,656	2,546	2,353	2,410	2,352	2,404	2,475	2,510
Depreciation and amortization included in operating expenses	2,062	1,971	2,014	1,985	1,716	1,658	1,722	1,882
OIBDA	**11,732**	**12,916**	**10,217**	**20,634**	**10,292**	**14,952**	**16,466**	**17,897**
Add back:								
Share and value-based compensation (1)	443	153	773	(2,199)	782	1,780	1,392	1,391
Impairment of long-lived assets (2)	—	—	1,014	—	—	—	—	—
Other non-recurring costs (recoveries) (3)	305	(283)	—	(1,949)	2,161	—	—	—
Adjusted OIBDA	**$ 12,480**	**$ 12,786**	**$ 12,004**	**$ 16,486**	**$ 13,235**	**$ 16,732**	**$ 17,858**	**$ 19,288**
Adjusted OIBDA margin	*13.2%*	*12.5%*	*11.8%*	*15.2%*	*12.1%*	*14.6%*	*16.2%*	*16.0%*

Notes:

(1) Represents share and value-based compensation expense in respect of the Legacy Plan, the LTIP and the long-term value bonus plan, which has similar vesting criteria to the share-based plan and is settled in cash for non-executives and non-North Americans where implementation of a share settlement plan would have been prohibitively expensive in terms of administration and compliance. Neo has removed both the share and value-based compensation expense from OIBDA to provide comparability with historic periods and to treat it consistently with the share-based awards that they are intended to replace.

(2) The $1.0 million impairment in the Rare Metals segment represents impairment of property, plant and equipment and other assets related to the closure of NRM Utah that will not be utilized as a result of the closure.

(3) These represents primarily legal, professional advisory fees and other transaction costs incurred/(recovered) with respect to non-operating capital structure related transactions. In 2019, this also includes some restructuring costs related to management team changes in one of Neo's subsidiaries and the purchase price fair value accounting adjustment related to the acquisition of SAMAG. Neo has removed these charges to provide comparability with historic periods.

10. Liquidity and Capital Resources

Year ended December 31, 2019 compared to year ended December 31, 2018:

	Year Ended December 31,	
($000s)	**2019**	**2018**
Cash flow:		
Cash provided (used in) by operating activities	$ 71,297	$ (8,736)
Cash used in investing activities	(22,893)	(1,932)
Cash used in financing activities	(34,591)	(13,434)
Financial position - as at	**December 31, 2019**	**December 31, 2018**
Cash and cash equivalents	$ 84,735	$ 71,015
Restricted cash	4,185	1,650
Property, plant and equipment	94,490	86,963
Total assets	531,231	543,023
Bank advances and other short-term debt	54	3,970

As of December 31, 2019, Neo had cash and cash equivalents of $84.7 million plus restricted cash of $4.2 million, compared to $71.0 million plus $1.7 million as at December 31, 2018. Neo paid $11.5 million in dividends to its shareholders and purchased $16.9 million of its shares under the Bid program in the year ended December 31, 2019. In addition, Neo has approximately $6.2 million available under its credit facilities with no amount drawn. Neo's financial position and ability to generate cash from its operations in the short and long-term remain sound.

The primary cash inflows and outflows contributing to the change from December 31, 2018 were the following:

Inflows

- $56.6 million cash from operations before net change in working capital; and
- $29.0 million net change in working capital;

Outflows

- $11.5 million of dividends paid;
- $3.9 million repayment of bank advances;
- $8.8 million of capital spending related to a business combination;
- $11.7 million of other capital spending;
- $16.9 million on the repurchase of Neo's common shares; and
- $14.3 million of income taxes paid.

Cash Provided by (Used in) Operating Activities

Net cash provided by operating activities was $71.3 million during the year ended December 31, 2019, compared to net cash used in operating activities of $8.7 million for the year ended December 31, 2018. Higher cash inflow from operating activities mainly resulted from lower cash used to support working capital in the year ended December 31, 2019 compared to the corresponding period in 2018.

The $29.0 million net change in working capital for the year ended December 31, 2019, was primarily attributable to the decrease in inventories offset by a decrease in accounts payable and accrued charges. The decrease in inventory is primarily attributable to operational improvement focused on lowering inventory levels, lower revenue levels and lower material pricing.

Cash Used in Investing Activities

For the year ended December 31, 2019, net cash used in investing activities was $22.9 million, compared to $1.9 million in the year ended December 31, 2018. The cash used in investing activities includes net cash of $8.8 million used to acquire SAMAG. Other cash used in investing activities was primarily related to capital projects performed at the Zibo, Tianjin and Silmet facilities. These capital projects included a combination of maintenance capital (to assist with the continuing development and operations of Neo), growth capital (to assist in adding new capacity or new products) and strategic capital (tied to longer-term strategic planning initiatives). In the prior year period, the capital expenditures of $13.5 million was offset by $11.8 million proceeds received related to the Silmet fire insurance claim.

Cash Used in Financing Activities

Net cash used in financing activities during the year ended December 31, 2019 was $34.6 million, compared to $13.4 million in 2018. Neo spent $16.9 million on the repurchase of common shares, distributed $11.5 million in dividends to its shareholders and $0.9 million to non-controlling interest partners, repaid $3.9 million of bank advances in Germany and spent $1.1 million in lease payments. In the year ended December 31, 2018, Neo distributed $11.7 million in dividends to its shareholders and $1.2 million to non-controlling interest partners and spent $3.8 million on the repurchase of common shares.

($000s)

Cash and cash equivalents by Country as at	**December 31, 2019**	**December 31, 2018**
China (including Hong Kong)	$ 35,234	$ 36,871
Estonia	6,569	9,999
United States	11,698	1,743
Canada	9,687	5,886
Japan	2,501	1,645
United Kingdom	4,546	2,761
Germany	3,587	1,202
Singapore	4,122	3,007
Barbados	1,481	3,976
Thailand	4,021	2,527
Cayman Islands	2	67
Other	1,287	1,331
Total cash and cash equivalents	**$ 84,735**	**$ 71,015**

Approximately $10.2 million of cash on hand held by Neo's foreign operating subsidiaries relate to earnings that are considered indefinitely reinvested in these foreign subsidiaries. Although substantially all of Neo's cash and cash equivalents can be repatriated, a portion may be subject to withholding taxes under current tax laws. While some of Neo's subsidiaries are subject to local governmental restrictions on the flow of capital into and out of their jurisdictions (including in the form of cash dividends, loans or advances), these restrictions have not had a material impact on Neo's ability to meet its cash obligations. Therefore, Neo does not consider this to be a significant risk on its ability to meet ongoing commitments and fund operations.

In addition to cash on hand, the primary sources of liquidity for Neo's domestic and foreign subsidiaries are cash provided by operations and, in the case of the activities in China and Germany, borrowing under certain bank loans. From time to time, the sources of liquidity for Neo's operating subsidiaries may be supplemented by intercompany loans in the form of unsecured promissory notes. Neo's operating subsidiaries' liquidity generally is used to fund their working capital requirements, investments, capital expenditures and third-party debt service requirements.

11. Contractual Obligations

In the normal course of business, Neo is obligated to make future payments. These obligations represent contracts and other commitments that are known and non-cancellable.

	Payments Due by Period				
($000s)	**1 year**	**2 - 3 years**	**4 - 5 years**	**Thereafter**	**Total**
Accounts payable and other accrued charges	56,138	—	—	—	56,138
Derivative liability [(1)]	11,833	—	—	—	11,833
Provisions [(2)]	—	5,670	—	—	5,670
Lease obligations [(3)]	1,660	2,116	676	161	4,613
Other liabilities	85	1,524	—	—	1,609
Total	**$ 69,716**	**$ 9,310**	**$ 676**	**$ 161**	**$ 79,863**

Notes:

(1) Represents the fair value of the put option on shares of the remaining shareholder of Buss & Buss.

(2) Represents management's best estimate of the costs to be incurred by Neo for the disposal of the hazardous NORM currently being stored at the Silmet facility and JAMR facility.

(3) Represents the present value of Neo's lease obligations for office space, land and office equipment.

As at December 31, 2019, Neo had $84.7 million of cash and cash equivalents and approximately $4.2 million of restricted cash held as collateral against Letters of Credit and the Silmet NORM provision. Neo believes that the remainder of its cash, in addition to cash from operating activities, is available (or sufficient) to meet Neo's non-cancelable contractual obligations and other commercial commitments and the capital program for the next twelve months. Neo considers cash to be "available" to the extent it can be utilized in operating activities, for capital expenditures, for intercompany loans or for repatriation. Neo also maintains access to credit facilities and short-term borrowings for its working capital needs, capital expenditures, and general corporate purposes.

12. Normal Course Issuer Bid

On March 19, 2019, Neo announced that the TSX has accepted a notice filed by Neo of its intention to make a Normal Course Issuer Bid for up to 1,982,517 of its issued and outstanding common shares. In connection with the Bid, Neo has entered into an automatic share purchase plan with its designated broker to allow for purchases of its shares (the "**Share Purchase Plan**"). The Share Purchase Plan is considered an "automatic plan" for purposes of applicable Canadian securities laws. Under the Share Purchase Plan, Neo's broker may purchase shares on any trading day during the Bid, including during self-imposed trading blackout periods. The price that Neo will pay for any shares purchased under the Bid will be the prevailing market price at the time of purchase. Any shares purchased by Neo will be canceled.

For the year ended December 31, 2019, Neo repurchased and canceled 1,902,631 shares for a total consideration of $16.9 million. For the year ended December 31, 2018, Neo repurchased and canceled 321,222 shares under a previously announced normal course issuer bid for a total consideration of $3.8 million.

13. Subsequent Events

13.1 Normal Course Issuer Bid

Between January 1 and March 10, 2020, Neo repurchased, for cancellation, 106,200 shares for a total consideration of $0.8 million.

13.2 Dividends payable to equity holders of Neo

On March 10, 2020, the Board of Directors declared a quarterly dividend of Cdn $0.10 per common share payable in cash on March 27, 2020, to common shareholders of record at the close of business on March 18, 2020.

14. Off-Balance Sheet Arrangements

As of December 31, 2019, Neo's only off-balance sheet arrangements are purchase obligations.

15. Significant Management Judgment in Applying Accounting Policies

The preparation of financial statements requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, revenue and expenses. Actual results could differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

Information about the significant judgments, estimates and assumptions that have the most significant effect on the recognition and measurement of assets, liabilities, income and expenses are discussed below.

Income taxes

In the ordinary course of business, there are many transactions for which the ultimate tax outcome is uncertain, and estimates are required for exposures related to examinations by tax authorities. Management reviews these transactions and exposures and records tax liabilities based on its assessment of many factors, including past experience and interpretations of tax law applied to the facts of each matter. The determination of tax liabilities is subjective and generally involves a significant amount of judgment. The final outcome may differ from estimates, and a change to these estimates could impact the income tax provision.

The assessment of the probability of future taxable income in which deferred tax assets can be utilized is based on Neo's expectation of future profitability by legal entity adjusted for significant non-taxable income and expenses as well as limits to the use of loss carryforwards or other tax credits. If a positive forecast of taxable income indicates the probable future use of a deferred tax asset, it is usually recognized in full. Recognition of deferred tax assets that are subject to certain legal or economic limits or uncertainties is assessed individually by management based on the specific facts and circumstances.

Impairment

An impairment loss is recognized for the amount by which an asset's or cash generating unit's ("**CGU**") carrying amount exceeds its recoverable amount, which is the higher of fair value less cost to sell and value-in-use. To determine the value-in use, management estimates expected future cash flows from each asset or CGU and determines a suitable interest rate in order to calculate the present value of those cash flows. In the process of measuring expected future cash flows, management makes assumptions about future operating results. These assumptions relate to future events and circumstances. The actual results may vary, and may cause significant adjustments to Neo's assets in future periods.

In most cases, determining the applicable discount rate involves estimating the appropriate adjustment to market risk and the appropriate adjustment to asset-specific risk factors.

Business combinations

On initial recognition, the identifiable assets and liabilities of the acquired business are included in the consolidated statements of financial position at their fair values. In measuring fair value, management uses estimates about future cash flows and discount rates. Any measurement changes from initial recognition would affect the measurement of goodwill.

Useful lives of depreciable assets

Management reviews the useful lives of depreciable assets at each reporting date. At December 31, 2019, management assessed that the useful lives represented the expected utility of the assets to Neo.

Inventories

Inventories are measured at the lower of cost and net realizable value. In estimating net realizable values, management takes into account the most reliable evidence available at the time the estimates are made. Neo's core business is subject to changes in foreign policies and internationally accepted metal prices which may cause selling prices to change rapidly.

Provisions

A provision is recognized if, as a result of a past event, Neo has a present legal or constructive obligation that can be reliably estimated and it is probable that an outflow of economic benefits will be required to settle the obligation. Timing or amount of the outflow may still be uncertain. Management estimates the expenditure required to settle the present obligation, based on the most reliable evidence available at the reporting date, including the risks and uncertainties associated with the present obligation. Provisions are discounted when the time value of money is significant.

Defined benefit pension liability

Management estimates the defined benefit pension liability annually with the assistance of independent actuaries; however, the actual outcome may vary due to estimation uncertainties. The estimate of the defined benefit pension liability is based on estimated retirement ages, medical cost trends and mortality. It also takes into account Neo's specific anticipation of future salary increases. Discount factors are determined based on matching the plan's projected cash flow with the independent actuaries' discount yield curve. Estimation uncertainties exist particularly with regard to medical cost trends, which may vary significantly in future estimates of Neo's defined benefit pension obligations.

Fair value of financial instruments

Management uses valuation techniques in measuring the fair value of financial instruments, where active market quotes are not available. Details of the assumptions used are given in the notes to the financial statements regarding financial assets and liabilities. In applying the valuation techniques management makes use of market inputs, and uses estimates and assumptions that are, as far as possible, consistent with observable data that market participants would use in pricing the instrument. Where applicable data is not observable, management uses its best estimate about the assumptions that market participants would make. These estimates may vary from the actual prices that would be achieved in an arm's length transaction at the reporting date.

Share-based compensation

Neo measures the cost of equity-settled transactions with employees and directors by reference to the fair value of the equity instruments at the date at which they are granted. Estimating fair value for share-based payment transactions requires determining the most appropriate valuation model, which is dependent on the terms and conditions of the grant. This estimate also requires determining and making assumptions about the most appropriate inputs to the valuation model including the expected life, volatility, dividend yield, forfeiture rate and expectations regarding achievement of market conditions and related timing of such achievement. Such assumptions are inherently uncertain and changes in these assumptions affect the fair value estimates.

16. Related Party Transactions and Balances

Neo's related parties are its joint venture partners, associates, directors and executive officers.

Unless otherwise stated, none of the transactions incorporate special terms and conditions and no guarantees were given or received. Outstanding balances are usually settled in cash.

Transactions with associates

Neo holds a 33% investment in Toda Magnequench Magnetic Materials Co. Ltd. ("**TMT**"), which produces rare earth magnetic compounds with Magnequench Powders supplied by Magnequench's Tianjin facility in its normal course of business. Magnequench's Tianjin facility will then purchase these compounds back from TMT.

Neo holds a 25% ownership interest in Ganzhou Keli Rare Earth New Material Co., Ltd. ("**Keli**"), a company which converts rare earth oxides into metals for use in Magnequench Powders.

Neo also holds a 20% ownership interest in GQD Special Materials (Thailand) Co., Ltd. ("**GQD**"), a company which converts rare earth oxides into metals for use in Magnequench Powders.

On occasion, MQTJ will supply Magnequench Powders to TMT to produce rare earth magnetic compounds. MQTJ will then purchase these compounds back from TMT in its normal course of business. Keli and GQD processes rare earth oxides into metals for inclusion in Magnequench Powders.

For the year ended December 31, 2019, Neo purchased $1.4 million worth of compounds from TMT, purchased metals and received services from Keli amounting to $35.9 million, and received services from GQD amounting to $1.0 million.

For the year ended December 31, 2019, Neo sold Magnequench Powders and performed services, amounting to $4.0 million to TMT. For the year ended December 31, 2019, Neo sold oxides to Keli amounting $1.2 million.

For the year ended December 31, 2018, Neo purchased $1.8 million worth of compounds from TMT, purchased metals and received services from Keli amounting to $64.7 million, and received services from GQD amounting to $0.9 million.

For the year ended December 31, 2018, Neo sold Magnequench Powders and performed services amounting to $2.7 million to TMT, and sold oxides to Keli amounting to $4.1 million.

Transactions with joint venture partners

Neo, through its sales company in Japan, Neo Japan Inc., has occasionally purchased Gallium from Beijing Jiya Semiconductor Material Co., Ltd. ("**Beijing Jiya**") for resale to third party customers. No purchases were made in the year ended December 31, 2019. For the year ended December 31, 2018, these purchases were $0.7 million.

Neo also has occasionally purchased and sold products from and to Ganzhou Qian Dong Rare Earth Group Co. Ltd. ("**Qian Dong**") and Toda Kogyo Corp. ("**Toda**"). For the year ended December 31, 2019, purchases from Qian Dong were $0.4 million. Sales to Toda for the year ended December 31, 2019 were $0.5 million.

For the year ended December 31, 2018, purchases from Qian Dong were $0.4 million. Sales to Toda for the year ended December 31, 2018 were $1.0 million.

Transactions between Neo and its related parties are summarized in the table below:

	Year Ended December 31,	
	2019	**2018**
Sale of goods and services to related parties	$ 5,785	$ 7,804
Purchase of goods and services from related parties	38,724	68,585

($000s)	**December 31, 2019**	**December 31, 2018**
Trade balances:		
from related parties	$ 348	$ 327
due to related parties	(5,215)	(5,102)
Total	**$ (4,867)**	**$ (4,775)**

Directors and Key Management Compensation

Key management personnel consist of those persons having authority and responsibility for planning, directing and controlling the activities of Neo, directly or indirectly. Key management personnel include Neo's executive officers, vice-presidents and members of its board of directors. Neo's key management compensation expenses include short-term benefits and share-based compensation expenses.

Neo's short-term employee benefits are as follows:

	Year Ended December 31,	
	2019	**2018**
Directors	$ 309	$ 282
Key Executive Management	3,806	4,389
Total	$ 4,115	$ 4,671

Neo's share-based compensation expenses are as follows:

	Year Ended December 31,	
	2019	**2018**
Directors	$ 298	$ 405
Key Executive Management	850	3,093
Total	$ 1,148	$ 3,498

Neo granted 32,783 DSUs on June 24, 2019 to the directors, and 60,177 RSUs on September 18, 2019 to a key member of executive management.

In the first quarter of 2019, there was a revision of the vesting period from the previous estimate for Options and RSUs pursuant to the termination of the Luxfer Transaction. Neo subsequently revised and adjusted the recognized share-based compensation expense cost on a cumulative basis, which resulted in a recovery of share-based compensation expense being recorded in the unaudited interim condensed consolidated statements of profit or loss in the first quarter.

17. Financial Instruments and Risk Management

The following table presents financial assets and liabilities measured at fair value in the consolidated statements of financial position in accordance with the fair value hierarchy. It does not include financial assets and liabilities not measured at fair value if the carrying amount is a reasonable approximation of fair value. This hierarchy groups financial assets and liabilities into three levels based on the significance of inputs used in measuring the fair value of the financial assets and liabilities. The fair value hierarchy has the following levels:

- Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e., as prices) or indirectly (i.e., derived from prices); and
- Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

The level in which the financial asset or liability is classified is determined based on the lowest level of significant input to the fair value measurement. The financial assets and liabilities measured at fair value in the consolidated statements of financial position as at December 31, 2019, are grouped into the fair value hierarchy as follows:

($000s)	**Level 1**	**Level 2**	**Level 3**
Financial Liabilities:			
Put option issued to non-controlling interest of Buss & Buss.	$ —	$ —	$ 11,833

Neo's derivative liability classified in Level 3 uses the discounted cash flow method to determine the fair value based on significant inputs that are not based on observable market data.

Changing inputs to the Level 3 valuations to reasonably possible alternative assumptions would not significantly change amounts recognized in net income, total assets, total liabilities or total equity.

There have been no transfers between levels for the period ended December 31, 2019.

Neo is exposed to a number of risks in the normal course of business that have the potential to affect its performance. These risk factors include commodity price risk, foreign currency risk, credit risk and liquidity risk.

Commodity price risk

A portion of Neo's current business is conducted in the spot market; therefore, prices can vary with the transaction and individual bids received. Neo's products are primarily marketed to manufacturers as component materials. Prices will vary based on the demand for the end products being produced with the raw materials Neo processes.

Neo's sales and profitability are determined principally by the pricing of the advanced industrial materials it produces, and, to a lesser extent, by the price of natural gas and other supplies used in its production process. The prices of the rare earth products are influenced by the price and demand of the end products that Neo's products support, including automotive, electronics and clean energy technologies. A significant decrease in the global demand for these products may have a material adverse effect on Neo's business. Neo does not have hedging contracts for revenue and costs in place.

Neo's costs and capital investments are subject to market movements in other commodities such as natural gas and chemicals. Neo may enter into derivative contracts for a portion of the expected usage of these products, but it does not currently have any derivative contracts on these commodities, and it does not currently anticipate entering into derivative agreements on commodities.

Foreign currency risk

Neo is exposed to fluctuations of the U.S. dollar against the functional currencies of its foreign subsidiaries, including the Euro, the Canadian dollar, the Renminbi, the Thai baht and the Japanese Yen, when Neo translates its foreign subsidiaries' financial statements into U.S. dollars for inclusion in its consolidated financial statements. Cumulative translation adjustments are recorded in accumulated other comprehensive income (loss) and a separate component of equity. Any increase (decrease) in the value of the U.S. dollar against those foreign currencies results in unrealized foreign currency translation losses (gains) with respect to assets acquired in, liabilities assumed from, intercompany balances with and results of operations from the foreign subsidiaries. Therefore, Neo may experience a negative impact on its comprehensive income (loss) and stockholders' equity with respect to its holdings in those subsidiaries as a result of foreign currency translation. Neo generally does not hedge against the risk that it may incur non-cash losses upon the translation of the financial statements of its foreign subsidiaries into U.S. dollars.

Credit risk

Credit risk refers to the possibility that a customer or counterparty will fail to fulfill its obligations under a contract and as a result, create a financial loss for Neo. Neo has a credit policy that defines standard credit practice. This policy dictates that all new customer accounts are reviewed prior to approval and establishes the maximum amount of credit exposure per customer. Credit worthiness and financial well-being of the customer is monitored on an ongoing basis.

Under IFRS 9 - Financial Instruments ("**IFRS 9**"), Neo establishes a loss allowance using the expected credit losses ("**ECL**") impairment model; therefore, the carrying amount of accounts receivable generally represents the maximum credit exposure. As at December 31, 2019, the loss allowance was nominal. The estimated credit losses, if any, is included in selling, general and administrative expenses in the consolidated statements of profit or loss and is net of any recoveries that were provided for in prior periods.

Counterparties to financial instruments may expose Neo to credit losses in the event of non-performance. Counterparties for derivative and cash transactions are limited to high credit quality financial institutions, which are monitored on an ongoing basis. Counterparty credit assessments are based on the financial health of the institutions and their credit ratings from external agencies. As at December 31, 2019, Neo does not anticipate non-performance that would materially impact Neo's financial statements.

Liquidity risk

Neo is exposed to the possibility that it may not be able to meet its financial obligations as they fall due. Neo manages liquidity risk by continuously monitoring actual and projected cash flows, taking into account its sales and receipts and matching the maturity profile of financial assets and liabilities. Neo continues to maintain sufficient cash and certain credit facilities which can be drawn upon to meet its operating and capital expenditure obligations as needed. The Board reviews and approves the annual operating and capital budgets, as well as any material transactions out of the ordinary course of business, including proposals on acquisition and other major investments.

As at December 31, 2019, Neo is able to meet its financial obligations as they fall due.

18. Changes in Accounting Policies

Neo adopted the following accounting standards and amendments to accounting standards, effective January 1, 2019:

18.1 Leases

18.1.1 Adjustments recognized on adoption of IFRS 16

On January 13, 2016, the IASB issued IFRS 16 - Leases ("**IFRS 16**"). IFRS 16 supersedes IAS 17 - Leases ("**IAS 17**"), IFRIC 4 - Determining whether an Arrangement contains a Lease ("**IFRIC 4**"), SIC-15 - Operating Leases – Incentives, and SIC-27 - Evaluating the Substance of Transactions Involving the Legal Form of a Lease. IFRS 16 contains a single lessee accounting model, which eliminates the distinction between operating and finance leases from the perspective of the lessee. All contracts that meet the definition of a lease, other than short term leases and leases of low-value items for which a lessee has the option not to apply the measurement and presentation requirements of IFRS 16, are recorded in the statement of financial position with a right-of-use asset and a corresponding liability. The asset is subsequently accounted for as property, plant and equipment or investment property and the liability is unwound using the rate implicit in the lease or, if that rate cannot be readily determined, the lessee's incremental borrowing rate. The accounting requirements from the perspective of the lessor remain largely in line with previous IAS 17 requirements.

Previously, Neo determined at contract inception whether an arrangement is or contains a lease under IFRIC 4. Under IFRS 16, Neo assesses whether a contract is or contains a lease based on the definition of a lease, as explained in Note 18.1.2 below. On transition to IFRS 16, Neo elected to apply the practical expedient to grandfather the assessment of which transactions are leases. It applied IFRS 16 only to contracts that were previously identified as leases. Contracts that were not identified as leases under IAS 17 and IFRIC 4 were not reassessed for whether there is a lease. Therefore, the definition of a lease under IFRS 16 was applied only to contracts entered into or modified on or after January 1, 2019.

Neo has adopted IFRS 16 using the modified retrospective approach under which the right-of-use asset is equal to the lease liability as at January 1, 2019. As a result, comparative information has not been restated and continues to be reported under IAS 17, IFRIC 4, SIC-15, and SIC-27.

On adoption of IFRS 16, Neo recognized lease liabilities in relation to leases which had previously been classified as "operating leases" under the principles of IAS 17. These liabilities were measured at the present value of the remaining lease payments, discounted using the lessee's incremental borrowing rate as of January 1, 2019. The weighted average lessee's incremental borrowing rate applied to the lease liabilities on January 1, 2019 was 6.15%.

	January 1, 2019
Operating lease commitment at December 31, 2018 as disclosed in Neo's consolidated financial statements	$ 6,234
Discounted using the incremental borrowing rate at January 1, 2019	5,457
Recognition exemption for:	
- Short-term leases	(32)
- leases of low-value assets	(19)
Non-lease components (such as common area maintenance fees for office buildings)	(1,179)
Extension and termination options reasonably certain to be exercised	808
Lease liabilities recognized on January 1, 2019	**$ 5,035**

Right-of-use assets were measured at the amount equal to the lease liabilities, adjusted by the amount of any prepaid or accrued lease payments relating to that lease recognized in the balance sheet as at December 31, 2018.

The change in accounting policy affected the following items in the consolidated statements of financial position on January 1, 2019:

		January 1, 2019
Increase in right-of-use assets		5,066
Decrease in other current assets		(34)
Increase in lease liabilities		(5,032)
Net impact to the consolidated statements of financial position	**$**	**—**

Adjusted OIBDA, segment assets and liabilities for the period ended December 31, 2019 all increased as a result of the change in accounting policy. As a result of the adoption of IFRS 16, earnings per share was decreased by $0.002 for the year ended December 31, 2019.

The following practical expedients were applied upon transition to IFRS 16:

- the use of a single discount rate to a portfolio of leases with reasonably similar characteristics;
- the treatment of operating leases with a remaining lease term of less than 12 months at January 1, 2019 as short-term leases;
- the exclusion of initial direct costs for the measurement of the right-of-use asset at the date of initial application; and
- the use of past experience in determining the lease term where the contract contains options to extend or terminate the lease

18.1.2 Revised accounting policy

At the inception of a contract, Neo assesses whether a contract is, or contains a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, Neo assesses whether:

- The contract involves the use of an identified asset - this may be specified explicitly or implicitly, and should be physically distinct or represent substantially all of the capacity of a physically distinct asset. If the supplier has a substantive substitution right, then the asset is not identified;
- Neo has the right to obtain substantially all of the economic benefits from use of the asset throughout the period of use; and
- Neo has the right to direct the use of the asset. Neo has this right when it has the decision-making rights that are most relevant to changing how and for what purpose the asset is used. In rare cases where the decision about how and for what purpose the asset is used is predetermined, Neo has the right to direct the use of the asset if either:
    - Neo has the right to operate the asset; or
    - Neo designed the asset in a way that predetermines how and for what purpose it will be used.

Neo recognizes a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at cost, and subsequently at cost less any accumulated depreciation and impairment losses, and adjusted for certain remeasurements of the lease liability. Right-of-use assets are depreciated over their lease terms, ranging from 2 to 50 years for land and 2 to 10 years for building, machinery, vehicle, and office equipment.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, Neo's incremental borrowing rate. Generally, Neo uses its incremental borrowing rate as the discount rate.

The lease liability is subsequently increased by the interest cost on the lease liability and decreased by lease payments made. It is remeasured when there is a change in future lease payments arising from a change in an index or rate, a change in the estimate of the amount expected to be payable under a residual value guarantee, or as appropriate, changes in the assessment of whether a purchase or extension option is reasonably certain to be exercised or a termination option is reasonably certain not to be exercised.

Neo has applied judgment to determine the lease term for some lease contracts, in which it is a lessee, that include renewal options. The assessment of whether Neo is reasonably certain to exercise such options impacts the lease term, which significantly affects the amount of lease liabilities and right-of-use assets recognized.

Neo has elected not to recognize right-of-use assets and lease liabilities for short-term leases that have a lease term of 12 months or less and leases of low-value assets.

18.2 IFRIC 23 - Uncertainty over income tax treatments

On June 7, 2017, the IASB issued IFRIC Interpretation 23 - Uncertainty over income tax treatments ("**IFRIC 23**"). IFRIC 23 clarifies how to apply the recognition and measurement requirements in IAS 12 - Income taxes ("**IAS 12**") when there is uncertainty over income tax treatments. The interpretation is effective for annual periods beginning on or after January 1, 2019, with earlier adoption permitted. Neo has adopted IFRIC 23 on January 1, 2019 and there was no impact on these consolidated financial statements resulting from the adoption of this interpretation for the year ended December 31, 2019.

19. Recent Accounting Pronouncements

There are no recent accounting pronouncements issued by the IASB that are expected to have a material impact on the financial statements of Neo.

20. Internal Control Over Financial Reporting and Disclosure Controls and Procedures

Disclosure controls and procedures

Neo's Chief Executive Officer ("**CEO**") and Chief Financial Officer ("**CFO**") are responsible for establishing and maintaining disclosure controls and procedures for Neo. Neo maintains a set of disclosure controls and procedures designed to provide reasonable assurance that information required to be publicly disclosed is recorded, processed, summarized and reported on a timely basis. The CEO and CFO have evaluated the design and operating effectiveness of Neo's disclosure controls and procedures ("**DC&P**") as at December 31, 2019 and based on the evaluation, the CEO and CFO have concluded that the DC&P were effective.

Internal controls over financial reporting

Neo's internal controls over financial reporting ("**ICFR**") are designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS. Neo's management is responsible for establishing and maintaining adequate ICFR for Neo. National Instrument 52-109 of the Canadian Securities Administrators requires the CEO and CFO to certify that they are responsible for establishing and maintaining ICFR for Neo and that those internal controls have been designed and are effective in providing reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with IFRS. The CEO and CFO are also responsible for disclosing any changes to Neo's internal controls during the most recent period that have materially affected, or are reasonably likely to materially affect, its internal control over financial reporting. There have been no material changes during the quarter ended December 31, 2019. Neo's management under the supervision of the CEO and CFO has evaluated the design and operating effectiveness of Neo's ICFR based on the Internal Control - Integrated Framework issued in 2013 by the Committee of Sponsoring Organizations of the Treadway Commission. As at December 31, 2019, management assessed that Neo's ICFR were effective.

In designing such controls, management, including the CEO and CFO, recognized that due to inherent limitations, any controls, no matter how well designed and operating effectively, can provide only reasonable assurance of achieving the desired control objectives and may not prevent or detect all errors and fraud with respect to the financial statement preparation and presentation. Additionally, management is required to use judgment in evaluating controls and procedures.

On August 26, 2019, Neo's newly formed wholly owned subsidiary, MQCZ had acquired the assets of SAMAG. As of the date of this report, Neo management has not formally documented and evaluated the new entity's internal controls over financial reporting, as Neo is exempt for the first year of acquisition under Part 3.3 of National Instrument 52 - 109. Therefore, management has excluded from their scope a review of the controls, policies and procedures of MQCZ in relation to its certification of Interim Filings, FORM 52-109F2, paragraph 5(b), for the year ended December 31, 2019. Management expects to complete its formal documentation and evaluation of both the design and operating effectiveness of internal controls over financial reporting of MQCZ by June 30, 2020.

21. Business Risks and Uncertainties

Neo's business activities exposes Neo to both risks and opportunities. Risk oversight and management processes are integral elements of Neo's approach to risk management and strategic planning initiatives to address both risks and opportunities.

Numerous risks and uncertainties could cause Neo's actual results or shareholder returns to differ materially from those expressed or implied, including those in the Forward-Looking Information, Financial Statements, other areas of this MD&A and Neo's 2019 Annual Information Form ("**AIF**") for the year ended December 31, 2019. Such risks and uncertainties include:

- COVID-19
- Volatility in the price of Neo's Common Shares related to price or volume that may be unrelated to Neo's operating results;
- Payment of future dividends, which is at the discretion of the Board and may be subject to future restrictions or strategic initiatives;
- Difficulty in enforcing judgments in the jurisdictions in which Neo operates;
- The existence of a significant shareholder that may be able to direct a significant amount of voting power;
- The variability in quarterly results particularly as it relates to commodity price changes and the inability to pass-through cost changes;
- Failure to adapt to new products and technologies that may impact the sales of Neo's products;
- Disruptions to manufacturing processes and supply related to internal or external factors;
- Risks associated with the international nature of the business, including foreign legal requirements and differences in business practices;
- Changes to the general economic, industry and market conditions, both domestically and in foreign markets;
- Potentially adverse tax consequences in various jurisdictions, including the repatriation of cash to other jurisdictions;
- The inability to maintain permits and operating licenses in the jurisdictions and segments in which Neo operates;
- The inability to continue to procure cost effective material, including rare earths as well as material subject to conflict materials regulations;
- Trade barriers, exchange controls, export restrictions and other matters related to the export of materials from the manufacturing locations;
- The inability to maintain technical advantages through continuous development, protecting know-how and trade secrets as well as enforcing intellectual property rights in the various jurisdictions;
- The inability to defend against various intellectual property rights and applications currently asserted or potentially asserted in the future, including the inability to continue to supply parts to Neo's customers without significant economic penalty;
- The management and expiry of the Joint Ventures that form part of Neo's operations;
- Changes in other regulations related to operating in the various jurisdictions, including changes with respect to the regulated rare earth industry in China;
- The inability to manage risks associated with the potential unauthorized use of Company Chops in China or any other unauthorized use of authority;

- Customers and supplier dependence, including the inability to continually develop new products that meet changing standards and requirements;
- The inability to manage environmental liability exposure and continue to operate in environmentally sensitive areas with respect to legal requirements that may continue to change over time;
- The inability to maintain the services of key personnel including senior management, key technical people and other key employees;
- The inability to protect Neo's information technology systems and protect against cybersecurity attacks or any other situations that may cause disruption to Neo's inability to access its data and manage its business;
- The entrance of other competitors or substituted technologies into the markets in which Neo operates.

In addition to other information contained in this MD&A, readers should carefully consider the preceding factors before making an investment in Common Shares. All risk factors should be considered because they could cause Neo's actual results or financial condition to differ materially from those discussed in forward-looking statements contained elsewhere in this MD&A. The preceding risk factors are not an all-inclusive listing of risks. Risks and uncertainties that are either not known to Neo or that Neo considers at this time to be immaterial or insignificant could also be detrimental to the ongoing affairs of Neo. If any of these risks occur, Neo's business, financial position, results of operations or cash flows could be materially adversely affected. Further discussion of the risk factors set out above can be found in Neo's AIF.

22. Outstanding Shares Data

Class of Equity Security	Numbers Outstanding
Common Shares	37,798,956
Stock Options*	1,158,712
Restricted Share Units & Performance Stock Units	1,018,847

*Each stock option can be exercised to purchase one common share.

The number of common shares outstanding as at March 11, 2020 is 37,692,756.

23. Legal Proceedings and Regulatory Actions

Legal Proceedings

From time to time, Neo and its subsidiaries are subject to litigation claims arising in the ordinary course of business, most of which involve alleged violations of the intellectual property rights of others. Neo manufactures and sells many products that use scientific formulations and processes, and its competitors may from time to time allege that they hold a patent on such formulations or processes that Neo has infringed. Neo generally believes that it has meritorious defenses to the actions that have been brought against it and vigorously pursues the defense of each such action, including but not limited to initiating legal proceedings to revoke or invalidate the patents Neo is alleged to have infringed. However, litigation outcomes are inherently unpredictable and may be even harder to predict for patent litigation since patents are issued separately by each country or applicable jurisdiction with different standards for infringement or invalidation, as well as differing levels of damages, including as a result of the number of customers and level of activity of Neo in a given country or jurisdiction.

If many or most of the proceedings initiated against Neo in respect of the patents held by others, described under *"Other Expenditures and Legal Contingencies"*, are finally determined in a manner adverse to Neo, there can be no assurance that such determinations would not have a material adverse effect upon Neo or upon its operations, cash flows, prospects or financial condition, and in some countries (or jurisdictions) listed in *"Other Expenditures and Legal Contingencies"*, management expects that an injunction or other remedy imposed for infringement will be materially adverse to Neo. It is not possible at this time to predict with any degree of certainty the impact upon Neo's operations in the event of such final adverse determinations. If injunctions were granted against it, Neo would be prohibited from manufacturing and distributing certain products in those jurisdictions subject to those injunctive orders. Neo could, in such event, re-establish its manufacturing capability for such products in jurisdictions not prohibited by any such orders, and thus would expect to encounter interruptions in its manufacturing of such products and in its ability to distribute such products to customers in jurisdictions not subject to such orders. The litigation proceedings described in this section affect certain products manufactured by Neo's C&O segment for use in auto catalysts. Neo manufactures a wide variety of products that are used in the production of auto catalysts, which accounted for approximately 18% of total revenue in the year ended December 31, 2018. These products include multiple formulations in multiple jurisdictions to a number of different customers. We note; however, these claims do not affect all of the products manufactured by Neo's C&O segment, for use in auto catalysts nor do these claims pertain to all markets where such products are sold. Neo is not currently restricted with respect to the manufacture or distribution of any of its products as a result of ongoing litigation. However, in the event of final adverse determinations, Neo expects to take all available actions to mitigate the impacts of such rulings, including but not limited to continuing to pursue invalidation of the applicable patent (if not already decided) appealing the adverse rulings, obtaining licensing rights and finding new customer outlets. The geographically diverse nature of Neo's operations and that of certain of its customers potentially provides Neo with a measure of flexibility to manufacture the same products in certain other jurisdictions and continue to supply certain of its customers with the same products in certain other jurisdictions. Neo also has the ability to work with customers to develop new products that may have a lower risk of potentially falling within the scope of existing patent claims.

Where appropriate, accruals are made in accordance with accounting standards for contingencies to provide for matters that are probable of resulting in an estimated loss. Based upon the status of the various cases, management's assessments of the likelihood of damages, and the advice of counsel, Neo has made accruals, as of December 31, 2019, for some of the proceedings outlined in *"Other Expenditures and Legal Contingencies"*, where Neo believes it would be more likely than not be liable for damages and other outflows of resources. Neo considers some of the other outstanding litigation as currently being too uncertain to result in accruals. Several of these actions are at a preliminary stage and have not gone to trial.

As mentioned above the laws concerning patents differ from country to country. Damages for patent infringement in Europe and China may include lost profits or a reasonable royalty, but enhanced damages for wilful infringement are generally not available, unlike the case in the United States.

See section entitled "*Legal Proceedings and Regulatory Actions*" in Neo's AIF.

Regulatory Actions

There have been no penalties or sanctions imposed against Neo by a court relating to provincial and territorial securities legislation or by a securities regulatory authority since incorporation.

24. Additional Information

Additional information is included in Neo's AIF available on Neo's website at www.neomaterials.com and on SEDAR at www.sedar.com.