BUCHANS RESOURCES LIMITED

PLAN OF ARRANGEMENT
under Section 182 of the *Business Corporations Act* (Ontario), R.S.O. 1990, c. B16, as amended

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INFORMATION CONCERNING

CANADIAN MANGANESE COMPANY INC.

IMPORTANT NOTE:

This document is intended to provide disclosure in accordance with Canadian securities laws concerning Canadian Manganese Company Inc. ("**Canadian Manganese**") to Canadian resident holders of shares of Buchans Resources Limited ("**Buchans**") who will receive, among other things, common shares of Canadian Manganese upon the approval and implementation of the proposed plan of arrangement (the "**Plan**") involving Buchans, Canadian Manganese and Minco Exploration Limited ("**Minco**") pursuant to the *Business Corporations Act* (Ontario), R.S.O. 1990, c. B16, as amended.

This document should be read in conjunction with the document dated November 8, 2019 entitled:

"**Annual and Special Meeting of Shareholders to be held December, 10, 2019**

Management Information Circular*"*
(the "**Circular**")

To which this document is attached as Schedule B.

The disclosure contained in this document supplements the disclosure contained in the Circular.

Capitalized terms used herein and not otherwise defined shall have the meanings ascribed to them in the Circular.

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CORPORATE STRUCTURE

Canadian Manganese Company Inc. ("**Canadian Manganese**" or the "**Company"**) is an exploration and development company currently engaged in evaluating a manganese project in New Brunswick, Canada.

The head office of the Company is located at 55 University Avenue, Suite 1805, Toronto, Ontario, Canada M5J 2H7.

Canadian Manganese was incorporated by Articles of Incorporation dated June 13, 2011 under the Canada Business Corporations Act, is currently a wholly-owned subsidiary of Buchans Resources Limited ("**Buchans**")

THE BUSINESS OF THE COMPANY

Canadian Manganese holds mineral assets located in New Brunswick, Canada.

Further information on these mineral properties and interests can currently be found on Canadian Manganese's parent corporation's website at www.BuchansResources.com. Further corporate, financial and other publicly available information on the Company can be found under Buchans' profile at www.sedar.com.

Buchans proposes to reorganize its mineral assets and investments by way of a plan of arrangement involving Buchans, Canadian Manganese and Minco Exploration Limited pursuant to section 182 of the Business Corporations Act (Ontario), R.S.O. 1990, c. B16, as amended, under the supervision and subject to the sanction of the Ontario Superior Court of Justice – Commercial List.

Upon the Plan becoming effective, Canadian Manganese will have 59,868,716 common shares issued which will then be held by the current shareholders of Buchans.

Upon the Plan becoming effective, and subject to obtaining any necessary approvals, Canadian Manganese has agreed to use its respective, reasonable commercial efforts to either (i) make an application to list the its shares on a Canadian stock exchange, or (ii) complete another transaction whereby Canadian Manganese will acquire or be acquired by a third party which third party shall itself be listed on a Canadian stock exchange, as soon as reasonably practicable, subject to market and trading conditions, provided however that neither Buchans nor Canadian Manganese can guarantee that such a listing or acquisition will be obtained or completed.

As at the date hereof, neither Buchans nor Canadian Manganese has any of its securities listed or quoted, has not applied to list or quote any of its securities and does not intend to apply at this time to list or quote any of its securities, on the Toronto Stock Exchange, Aequitas NEO Exchange Inc., a U.S. marketplace, or a marketplace outside of Canada and the United States of America.

MINERAL EXPLORATION PROPERTIES

Canadian Manganese's principal exploration and development project is the **Woodstock Manganese Project**, located in west-central New Brunswick, Canada.

The following technical disclosure discussion of the mineral properties currently held by Canadian Manganese and the exploration activities carried out on these properties is derived from public disclosure documents prepared and published by Buchans, its subsidiary, Buchans Minerals Corporation or Buchans' predecessor corporation, Minco plc. These documents include the following technical report prepared in accordance with National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* of the Canadian Securities Administrators ("**NI 43-101**"):

- Technical report dated July 10, 2014 and entitled *"Preliminary Economic Assessment on the Woodstock Manganese Property, New Brunswick Canada"* (the "**Woodstock Technical Report**") by Dharshan Kesavanathan, P.Eng., Laszlo Bodi, P.Eng., Michael Cullen, M.Sc., P.Geo, Mike McLaughlin, P.Eng. and Wenchang Ni, P.Eng.

The Woodstock Technical Report can be found under Buchans' profile at www.sedar.com.

Woodstock Manganese Project

The Woodstock Project, which contains the Plymouth Mn-Fe deposit, is located in Carleton County, west-central New Brunswick, Canada, approximately 5 km west of the town of Woodstock, New Brunswick.

The Woodstock Project consists of Mineral Claim 5472 comprising 232 mineral claims that cover approximately 5,800 ha of surface area. The Plymouth Mn-Fe deposit is located in the southwestern area of the northernmost claim block, less than one km north of Highway 95 to Houlton, Maine, and is accessed by the Plymouth Road, which is located just west of the deposit.

In July 2014, a preliminary economic assessment ("**PEA**") of the Woodstock electrolytic manganese metal ("**EMM**") project was completed by Tetra Tech WEI Inc. ("**Tetra Tech**"), the results of which are contained in the Woodstock Technical Report.

The results of the PEA show that the Plymouth deposit has good potential to become an economically attractive future mining and processing operation, and that a prefeasibility-level study should be completed to further define and optimize this potential.

The information relating to the Woodstock property and Plymouth deposit in the following sections has been largely extracted from the Woodstock Technical Report dated July 10, 2014 that was prepared by Dharshan Kesavanathan, P.Eng., Laszlo Bodi, P.Eng., Michael Cullen, M.Sc., P.Geo, Mike McLaughlin, P.Eng. and Wenchang Ni, P.Eng., Qualified Persons defined by NI 43-101, as filed on SEDAR on July 22, 2014.

The Woodstock Technical Report is intended to be read as a whole document, and sections should not be read or relied upon out of context. The technical information is subject to the assumptions and qualifications contained in the Woodstock Technical Report. For readers to understand the technical information on Woodstock in this document, they should read the Woodstock Technical Report filed under Buchans' profile on www.sedar.com in its entirety, including all qualifications, assumptions and exclusions that relate to the technical information set out in this document.

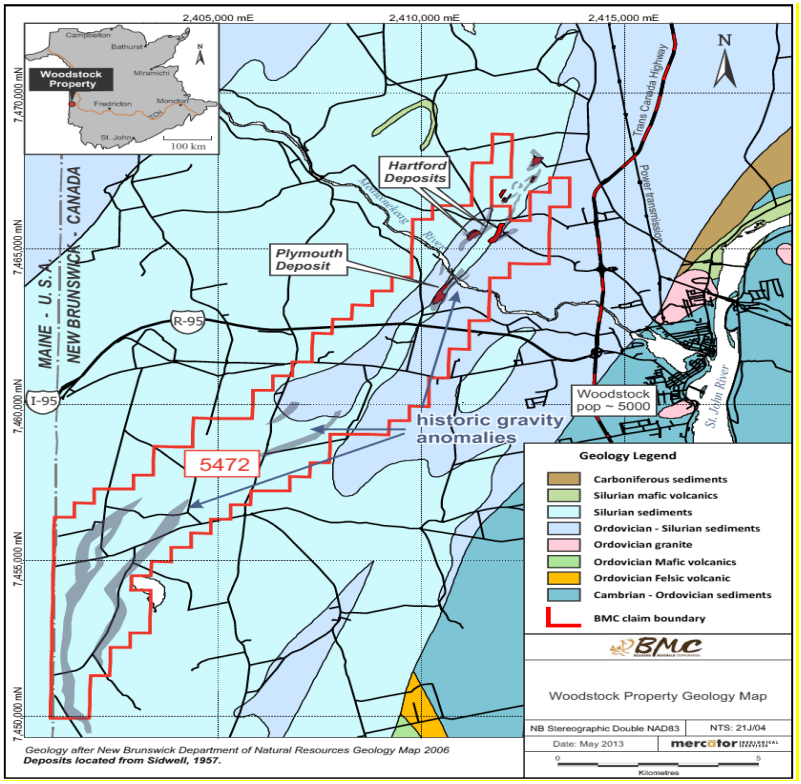
Accessibility, Climate, Local Resources, Infrastructure and Physiography:

Canadian Manganese has the exclusive right to explore for minerals within the Woodstock Project boundaries, and has acquired the surface rights over an area measuring 52 hectares in size that covers the northern portion of the Plymouth deposit. Land access with surface right holders has been secured, as and when necessary, for the purpose of mineral exploration on those areas where Canadian Manganese does not already own the surface rights. The

portion of the property for which Canadian Manganese purchased surface rights is subject to a 1% gross sales royalty payable upon commencement of commercial production, with Canadian Manganese retaining certain rights to buy back one half of the royalty.

The mineral rights were acquired by purchasing the original claim block of 21 claim units covering the Plymouth Mn-Fe deposit and most of the Hartford Mn-Fe deposit on August 4, 2010 from Mineral Resource Research Ltd. ("**MRR**"), a private company based in Fredericton, New Brunswick. After acquiring the initial MRR property, additional mineral claims were staked in 2010 and 2011 to cover previously documented Mn-Fe occurrences plus extensions of associated gravity and magnetic anomalies that extend for up to 20 km along strike to the southwest. Extending the land position provided coverage of a 20 km long corridor extending from the known deposits to the border with the State of Maine (USA). Mineral Claim 5472 is in good standing with sufficient excess assessment credits to retain mineral rights without additional property expenditures required before November 14, 2024. The Mineral Claims requires annual renewal fees that increase periodically. Renewal fees in 2016 were $4,640.

The Woodstock Project is easily accessible, with the Trans-Canada Highway being located approximately 4 km to the east and Highway 95 in Canada, which extends westward to the U.S. border, being located less than 1 km north of the Plymouth Road that crosses the property.



The property is well-positioned with respect to infrastructure. A railway line is accessible in Houlton, Maine, 16 km to the west, and electrical grid power is readily available within the limits of the Woodstock Project. The town of Woodstock is located approximately 5 km to the east, accessible year-round by paved roads, and has a population of approximately 5,000. It offers basic amenities and is a regional hub of commerce. The city of Fredericton is located 105 km along the Trans-Canada Highway to the south and is a large centre that has a population of 56,224 people which could supply a trained workforce, and has a university, hospital and all amenities and supplies necessary to support a potential mining operation.

The climate in northern New Brunswick is characterised by relatively cool, northern Atlantic temperate conditions with a short summer season from July through early September and a long winter period from November through

late March or early April. Environment Canada records show the daily mean temperature during the winter months to be -5° C, ranging from 0° C to -11.5°C, and daily mean temperature from May to October is 10° C, range from 6.4° C to 19.3° C. Daily winter minimums can exceed -30° C and summer daily maximum values in the 25° C or higher range also occur. Average annual precipitation ranges from 77 cm to 107 cm with much of this occurring as snow. Exploration activities can be carried out in all seasons in this area, assuming that appropriate allowances are made for heavy snow conditions during winter months and thawing ground during spring break-up. The latter period can present substantial challenges due to wet and soft ground conditions that can make certain less developed roads temporarily impassable.

For the most part, the terrain is gently rolling with wooded hills covered by stands of predominantly mixed deciduous and evergreen trees being present, and the elevation of the property is approximately 124 m above mean sea level. Low-lying and low relief areas are commonly cleared and used for farming. While most residential properties are limited to homesteads established prior to the mid-1900s, there are also local housing developments comprised of modern suburban housing, particularly within the most northern portions of the property near Hartford. Several rivers transect the properties and typically have incised gorges in the otherwise gently rolling topography, the largest of these is the Meduxnekeag River that flows east to the St. John River.

History:

The history of exploration and mining at the Woodstock Project was poorly recorded for the period prior to 1970, but historical operations at Iron Ore Hill and in the Woodstock area included development and production of approximately 70,000 tons (63,497 tonnes) of iron ore between 1848 and 1884. It is understood that this ore was locally smelted. The Mn potential of these occurrences may not have been fully appreciated until 1936, when the Geological Survey of Canada ("**GSC**") published geological mapping for the area. This work highlighted several occurrences of Fe formation including some of the main deposits in the Moody Hill and Iron Ore Hill areas. This work included chemical analyses of several of the Fe formations and highlighted the high Mn contents of the material with reported ranges between 10.48% and 15.0% Mn. In 1943, the ores were assessed by Noranda Mines Limited using flotation technology to produce a Mn and Fe concentrate. Also in that year, regional scale mapping was completed in (1943) for the State of Maine and in 1947, the Maine Geological Survey published a review of the Mn deposits of Aroostook County.

In 1952, the New Brunswick Resources Development Board completed a review of New Brunswick Mn occurrences and in 1954, the GSC completed a preliminary review of the Woodstock area Mn occurrences. The United States Bureau of Mines and Maine Geological Survey also initiated studies of similar Mn deposits in Aroostook County, Maine in 1952 and work undertaken between 1952 and 1962 included metallurgical studies on mineralization from the Maple Mountain-Hovey Mountain deposits, description of ores from the Littleton Ridge Mn deposit, bulk sampling of the Dudley Mn deposit, investigation of various Aroostook County occurrences, and detailed geological investigation of the Maple and Hovey Mountain area deposits.

Between 1953 and 1960, the deposits were held by Strategic Manganese Corporation, a subsidiary of Stratmat Limited ("**Stratmat**"). While conducting a gravity survey southwest from the Iron Ore Hill area to the Maine border, Stratmat discovered the North and South Hartford deposits, as well as the Plymouth Mn-Fe Deposit. Over the period of 1953 to 1957, Stratmat completed various metallurgical investigations and geological and magnetic surveys, and 34,021 feet (10,370 m) of drilling, including 17,388 feet (5,300 m) on the Plymouth Mn-Fe Deposit. From this exploration, Stratmat produced a historical resource estimate for the Plymouth deposit of 51,000,000 tons (46,266,421 tonnes) of 13.3% Fe and 10.9% Mn. They also estimated the Woodstock deposits to a depth of 500 feet (152.4 m) to contain 214 million tons (194,137,534 tonnes) of 13% Fe and 9% Mn. See "*Historical Estimates*" below.

Over the period 1965 to 1968, the Chemical Engineering Department of the University of New Brunswick undertook three investigations of the Mn ores. These investigations included examination of possible chemical processing techniques of the ore that included chemical leaching with sulfuric acid and sulfidation, as well as upgrading by agglomeration as an alternative to flotation.

In 1968, the Geological Survey published a Memoir on the Woodstock area that included a regional geological map showing locations of the various Mn-Fe prospects in the area. This report provides detailed descriptions of the main Woodstock Property deposits and documents the location of several Mn-Fe occurrences located southwest of the Plymouth deposit and extending to the Maine border.

In the early 1970's, Mandate Refining Company held the claims and worked towards development of a method of roasting pyritic waste and Mn-Fe ore. This was unsuccessful and the claims were abandoned.

In 1972, the New Brunswick Department of Natural Resources published a geological report on the stratigraphy and structure of the area. This report included several geological maps showing locations of Mn-Fe occurrences throughout the area, including those covered by the current Woodstock Project held by Buchans.

Between 1976 and 1980, Minuvar Limited held the claims and undertook geological mapping and geochemical sampling of available trenched and outcropping bedrock exposures in 1976. It also subsequently conducted magnetometer and very low frequency electromagnetic ("**VLF-EM**") ground geophysical surveys over the Plymouth deposit. In 1978 and 1979, one inch to quarter mile geology maps for the area were published by the New Brunswick Geological Survey.

In 1984, MRR staked the Mn-Fe deposits and in 1985, completed detailed geological mapping and trenching over the Plymouth deposit and drilled one hole to test the known deposit. This hole missed the zone as it was drilled sub-parallel to strike.

In the fall of 1985, the NBDNRE collected samples from the Plymouth deposit for submission to the New Brunswick Research and Productivity Council ("**RPC**") for mineralogy studies and chemical analysis.

In 1986, a sampling program was completed over the Plymouth and Hartford deposits funded by the Canada-New Brunswick Mineral Development Agreement. Work was completed by Atlantic Analytical Services ("**Atlantic Analytical**") and the RPC. Five samples from Plymouth and three samples from South Hartford were collected for mineralogy and grade determinations, including five 200 kg samples collected from five trenches excavated and sampled in January of 1986. The "original trench" previously sampled by the NBDNRE in 1985 was not sampled during this sampling campaign. This work was reportedly undertaken during a period of "heavy snow fall" that hindered the program.

Results showed that all of the Plymouth samples were of inferior quality, assaying an average of only 5.13% Mn, and one of the samples assayed as low as 0.46% Mn and "contained substantial quantities of mud and soil". These same samples were used in a follow-up study by the Process Studies Group of the Mineral Resources Branch of NBDNRE that included various leach tests. The reported head grade of the sample was 7.29% Mn and 11.3% Fe (O'Donnell, 1988).

In 1986, funded by the Canada-New Brunswick Mineral Development Agreement, Witteck Development Inc. ("**Witteck**") of Mississauga, Ontario was contracted by the Department of Supply and Services of the Government of Canada to undertake a detailed processing study using the Atlantic Analytical samples collected from the Plymouth deposit. Witteck completed a detailed investigation that included metallurgical test work and an economic evaluation of selected processing options. Head assays for the Plymouth samples were determined to range from 6.27% to 8.41% Mn and averaged 7.2% Mn.

In 1987, MRR also completed a ground magnetometer and VLF-EM survey over the Plymouth deposit. The magnetometer survey was successful in outlining the Plymouth deposit with results obtained being comparable to those of earlier surveys.

In 1988, MRR undertook a comprehensive technical program to evaluate the Plymouth deposit in an attempt to establish an accurate description of the deposit, including potential grade and tonnage aspects. This program included bulk sampling, trenching, core drilling and geochemical analyses. Highlights include excavation of two

trenches across the deposit and drilling of two drill holes beneath each trench to allow interpretation of sections across the deposit at depth.

A total of five holes (DDH-87-1 to DDH-87-5) were drilled, totaling 2,086 feet (636 m). Based on this work, MRR completed a resource estimate for part of the deposit that totaled 10,078,875 tons (9.1 million tonnes) averaging 11.89% Mn (Roberts and Prince, 1988).

In 1991, an interim report was prepared on an investigation to evaluate the use of microwave-hydrochloric acid digestion processing of the Woodstock ores. In 1991, MRR contracted Industrial Research and Development Company Ltd. to evaluate the use of microwave-hydrochloric acid digestion processing of the Woodstock ores.

In 2007, a thesis study of the Woodstock deposits was initiated by Mr. Bryan Way in pursuit of a Master of Science degree in geology at the University of New Brunswick under the supervision of Dr. David Lentz. This research lead MRR to reacquire claims over the Plymouth and Hartford deposits by staking in 2008 and MRR made various archived samples and drill cores available to Mr. Way for sampling and study.

The project was acquired by Canadian Manganese in August 2010. The mineral rights were acquired by purchasing the original claim block of 21 claim units covering the Plymouth Mn-Fe deposit and most of the Hartford Mn-Fe deposit on August 4, 2010 from Mineral Resource Research Ltd. ("MRR"), a private company based in Fredericton, New Brunswick.

Historical Estimates: The above summary of the history of the Woodstock Project contains historical estimates, including estimates of the quantity and grade of deposits on the Woodstock Project.

Readers are cautioned that the historical estimates contained in the above summary are based on data obtained and prepared by previous operators and neither Canadian Manganese nor its predecessors have located original assay sheets or details of the estimation methodology, nor the key assumptions or parameters, underlying the estimates. A qualified person has not done sufficient work to verify or classify the historical estimates as current mineral resources. Canadian Manganese is not treating the historical estimates as current mineral resources in accordance with NI 43-101, and these estimates should not be relied upon.

Geological Setting, Mineralization and Deposit Types:

Government mapping in the area of the Woodstock Project shows it to be underlain by a belt of Ordovician and Silurian siltstones and slates collectively referred to as the Aroostook-Perce belt. Late Ordovician to Early Silurian sediments of the Matapedia Group's Whitehead Falls Formation are overlain by Early Silurian sediments of the Perham Group's Smyrna Falls Formation and are laterally extensive throughout the property and over much of western and northwestern New Brunswick and Maine.

The Woodstock Project Mn-Fe deposits are interpreted to represent a series of Early Silurian manganiferous banded iron formations ("BIFs"). Six main Mn-Fe deposits were identified by gravimetric survey results from the mid-1950s and are defined as being large, lenticular-shaped bodies within the Silurian Smyrna Mills Formation. These deposits are interpreted to have formed in a shallow marine basin during the Taconic Orogeny and are in sharp contact with units of red or green shale. Stratigraphic lensing and compositional variation of the manganiferous BIFs has been interpreted to indicate that the deposits are stratigraphically separated and not one continuous unit. The current orientation of bedrock units is primarily a function of two folding generations. F1 folds trend northeast, are slightly overturned south of the Plymouth Mn-Fe Deposit and have axial planes ranging from nearly vertical to 85° northwest. Fold axes plunge shallowly (less than 5 degrees) to the northeast or southwest. F2 folds overprint F1 structures and have axial planes trending northwest (approximately 320°) and dipping steeply (approximately 80°) north. Both sets of folds were generated during the mid-Devonian Acadian Orogeny and were affected by associated regional sub-greenschist metamorphism.

The White Head Formation consists of dark grey to bluish-grey fine-grained argillaceous limestone with interbedded calcareous shale. The Smyrna Mills Formation is composed of dark grey non-calcareous silty shale with minor layers of green and red mudstone, and associated ferro-manganiferous siltstone. There is great variation in shale and/or siltstone in the Smyrna Mills Formation and this is interpreted to indicate variable ocean redox conditions during deposition of the host sequence. This is evidenced by the occurrences of BIFs at Plymouth, Iron Ore Hill, South Hartford, and Green Road that are commonly in sharp contact with units of red or green shale, or a combination of the two.

The Plymouth Mn-Fe Deposit has been described as an assemblage of Fe and Mn oxide and carbonate-silicate-oxide facies rocks that formed within a shallow marine basin, an interpretation supported by the presence of asymmetrical ripple marks within the surrounding strata initially described the Plymouth BIF as a series of sedimentary-volcanic units, but alternative hypotheses suggest the Mn-Fe could have originated from a variety of sources including oceanic Mn-Fe hydroxides and/or the weathering of terrestrial bedrock.

Historical interpretation of the mineralization of the Plymouth Mn-Fe Deposit indicated that the Mn-Fe mineralization can be subdivided into Mn-Fe oxide, silicate-carbonate-oxide, and carbonate facies. These stratiform deposits are analogous to the Type IIA deposits of bedded Mn oxides and carbonates. The Fe-Mn oxide facies present on the Woodstock Property is represented by red to maroon siltstone and red chert and is characterized by the mineral assemblage magnetite, hematite, braunite (Mn+2Mn+36[O8SiO4]) and bixbyite ([Mn,Fe]2O3) and ranges between 30% and 80% Fe-Mn oxides. Fe and Mn mineralization is also present in the form of rhodochrosite (MnCO3) and minor sursassite (Mn2Al3[(SiO4)(Si2O7)(OH)3]) crosscuts syngenetic Fe-Mn mineralization in the Plymouth deposit. Layers of Fe-Mn mineralization are also locally observed to be crosscut by veins of quartz, quartz-carbonate, chlorite, and sulfide.

Following the work completed by Canadian Manganese and consultants on the Plymouth deposit since 2011, it has been found that the manganese mineralization in both the red and grey siltstones is dominated by manganese carbonate in the form of rhodochrosite. The iron mineralization in both the red and grey siltstones was found to be different, with the dominant iron minerals in the red siltstone found to be predominantly oxides, in the form of hematite, magnetite and ilmenite; whilst the dominant iron mineral in the grey siltstone was found to be predominantly carbonate, in the form of siderite.

The manganese contained in the Plymouth deposit is predominantly in the form of a carbonate (rhodochrosite) whilst the iron exists in both oxide (hematite, magnetite and ilmenite) and carbonate minerals (siderite). The deposit type is sedimentary in origin and of the stratiform, banded Mn-Fe formation (BIF) type. The host sequence consists of Silurian red and grey siliciclastic to calcareous siltstones and shales that have been metamorphosed under lower greenschist facies conditions. In addition to the main oxide, silicate and carbonate facies Mn-Fe concentrations, host rocks contain minor magnetite and traces pyrite in grey siltstone and black shale intervals. The Mn rich iron formation deposits occur in stratiform bodies and represent spatially distinct deposits that accumulated contemporaneously with surrounding sedimentary strata. Fe and Mn are considered to have been deposited from seawater in an oxidising environment and host strata have subsequently been structurally thickened through Mid-Devonian folding and faulting related to the Acadian Orogeny. Some subsequent remobilization of Mn has occurred and resulted in re-deposition of Mn oxides in fracture zones.

Exploration and Drilling

In 2011, Canadian Manganese carried out a five-hole (1,040 m) core drilling program on the project in 2011 consisting of five holes.

These holes were designed to assess the historic Plymouth deposit, as identified by a magnetic survey carried out by MRR in 1987, and to confirm assay results reported by MRR in 1988. The program was managed by employees of BMC with logging and sampling conducted by a Canadian Manganese geologists and technicians.

Assays from the initial three holes demonstrated grade and continuity over large widths. Significant intercepts of the program included 11.41% manganese over 45.0 m in Hole 11-006, 11.43% manganese over 89.0 m in Hole PL-11-007, and 9.22% manganese over 63.0 m in Hole PL-11-008. Additional drill results included results for two intersections in Hole PL-11-009. The upper intercept from a depth of 10 m to 54 m returned 8.61% manganese over 44.0 m and the lower intercept from 69 m to 147 m returned 12.51% manganese over 78.0 m. Hole PL-11-010 also included two intersections with an upper intercept from 10 m to 111 m returning 11.27% manganese over 101.0 m and a lower intercept from 153 m to 231 m returning 11.67% manganese over 78.0 m.

True widths of the mineralized intercepts are estimated to be approximately 87% of the reported drill core lengths. Drilling was completed on two sections spaced approximately 100 m apart and was designed to confirm the deposit's grade and thickness and to collect fresh core samples for metallurgical testing.

In 2013, Canadian Manganese completed 15 diamond drillholes totaling 4,082 m along 7 sections transecting the mineralization, spaced at approximately 100 m intervals over the length of the deposit across the deposit as a basis for resource estimation of the Plymouth deposit to the Inferred category. The program was planned by Mercator with input from BMC technical staff to provide drill hole information sufficient for the purposes of completing a NI43-101 compliant resource estimate.

The resulting 2014 resource estimate was compiled from available verifiable historic data, including data collected by previous trenching and drilling by MRR in 1987 (5 holes totaling 636 m) as well as drilling data collected by Canadian Manganese in 2011 (5 holes totaling 1,040 m) and during 2013 (4,082 m).

Canadian Manganese staff was responsible for management and supervision of all aspects of the Woodstock drilling programs in both 2011 and 2013.

Sample Preparation, Analyses, and Security

Various levels of documentation were available for the historic programs, the most useful being sourced in the Government of New Brunswick assessment reporting archives. Detailed information is not consistently present for work carried out prior to 2011, with respect to the reporting of drill logs, sample records, laboratory assay certificates, verifiable location data, sample preparation, analysis and security. Detailed support documentation for historic drilling during the 1950s is largely absent and only rudimentary information is available for the small programs carried out in 1985 and 1987. In contrast, BMC and BMC-Minco programs, carried out in 2011 and 2013 respectively, include good descriptions of procedures and associated protocols.

In 2011 Canadian Manganese completed five NQ drill holes and in 2013 Canadian Manganese completed an additional 15 NQ holes. All core from both programs was logged and sampled by Canadian Manganese staff at rented facilities located in Woodstock, New Brunswick. Core sample intervals were marked by the logging geologist and core was then cut by staff technicians to create half core splits. One split was retained in the wooden core box for archival purposes, with a sample tag affixed at each sample interval and the other was placed in a labelled plastic bag along with a corresponding sample number tag and placed in the shipment queue. Quality control samples were inserted at this time and sample batches were then shipped by commercial courier to the Sudbury preparation laboratory operated by ALS Limited (ALS). After preparation in Sudbury, sample pulps were analysed at the ALS laboratory in Vancouver, BC. ALS is an independent, commercial analytical firm with operations throughout the world. ALS is ISO 9001: 2008 and ISO/International Electrotechnical Commission (IEC) 17025:2005 certified.

Each sample was crushed to ≥70% at 6 mm size, followed by a 250 g riffle split which was pulverized, such that ≥85% of the material passed through a 75 μm sieve. ALS inserted blanks (one per 20 samples) and certified standards (nominally one per 20 samples) for preparation and assay. In addition, BMC submitted blank samples, (nominally one per 20 samples) and certified reference standards (one per 20 samples) for preparation and assay in keeping with QA/QC protocols. The 2011 samples were analyzed by ALS in Vancouver using its ME-ICP06 analytical package, while sulphur and specific gravity determinations were carried out using the Leco (S-IR08) and pycnometer (OG-GRA08B) methods, respectively. ALS's ME-ICP06 analytical package employs the use of a

lithium metaborate, or tetraborate, fusion followed by acid digestion and ICP-AES analysis. In addition to the ICP analyses, ALS also re-assayed all samples using the XRF (ALS code ME-XRF06) method as a check on the ICP method. The latter dataset reflects slightly higher extraction of both manganese and iron from the sample matrix and was chosen for all future core analysis, as well as incorporation into the current resource estimation described here in.

Drilling during 2011 and 2013 was contracted to Maritime Diamond Drilling of Stewiacke, Nova Scotia, Canada and was completed using a Longyear 38 drilling rig supported by bulldozer and Timberjack equipment for drill moves and day to day support. NQ sized core (47.6 mm diameter) was recovered and drilling was carried out on a two shifts per-day basis. Site supervision, logging, sampling and project record keeping were the responsibility of BMC personnel in accordance with BMC field operations and quality assurance (QA) and quality control (QC) protocols that are discussed below. Drill core was descriptively logged on site, aligned, marked for sampling, and then longitudinally split in half using a diamond saw blade. Samples consisted of half NQ sized core. The remaining half of the core was preserved in core boxes for future reference. In accordance with BMC protocols, half core samples were placed in numbered plastic bags, along with a sample record tag, and were sealed. After insertion of QA/QC materials in the sample stream, bagged samples were shipped by commercial carrier to ALS's preparation laboratory in Sudbury, Ontario, Canada. Samples were typically collected using a nominal three metre core length, except where specific geologic parameters required lesser length samples be collected. Sample lengths were determined and marked by the logging geologist.

The 2013 samples were logged, sampled, and prepared in the same manner as those in 2011 but the XRF method (ALS code ME-XRF06) was the primary analytical method applied. Additionally, sulphur and specific gravity determinations were carried out using Leco (S-IR08) and pycnometer (OG-GRA08B) methods, respectively. An independent check sample pulp was prepared for every 20th sample and analysed at SGS Canada Inc. (SGS) using XRF methods (SGS XRF-76 code). Security and quality control and assurance programs were integral to both the 2011 and 2013 drilling campaigns.

Security

Security for core, samples, and related documentation during both field programs was the responsibility of Canadian Manganese site staff, under overall direction of Paul Moore, P. Geo., Vice-President of Exploration for BMC. BMC staff was responsible for transport of core boxes by pick-up truck from drill sites to Canadian Manganese's secure logging facility located in Woodstock, where clean up, tag checking, logging and sampling were carried out. Complete photographic records of core from all drill holes were created prior to logging and half-core sampling, using diamond saws. Sampling was carried out after lithologic, geotechnical and magnetic susceptibility logging procedures were completed.

Mineralized zones encountered in the 2011 and 2013 drilling were additionally assessed, in 2013, through collection of qualitative manganese and iron values at 1.5 to 3.0 m intervals using a hand-held XRF unit (Niton XL3t-950 XRF Analyzer) to establish sampling intervals.

In addition to the standard logging procedures described above, BMC staff also quantitatively logged assayed intervals according to their colour with respect to percentage of red coloured mineralization compared to non-red mineralization, as it was deemed to have potential implications to future mineral processing. This was done by measuring the combined core length of preserved red coloured core and dividing by the combined length of total preserved core. This allowed calculation of a percentage of red per each assayed interval. The red percentage measurement was also recorded in the assay database used for resource estimation. All logging data were recorded digitally in the project drill hole database, which was subject to scheduled off-site backup.

After insertion of quality control samples in the sample stream, the bagged samples were grouped in batches of six to 10 and placed in a plastic mesh bags for shipment to the ALS preparation laboratory in Sudbury, Ontario. All samples bagged for shipment remained in the locked, logging facility, until shipment by commercial carrier to ALS. Sample shipment forms were used to list all samples in each shipment and laboratory personnel cross-checked samples received against this list and reported any irregularities by fax, or email, to Canadian Manganese.

Based on the above, Mercator is of the opinion that sample preparation, security and analytical procedures used in the 2011 and 2013 drilling programs are acceptable and consistent with industry standards.

Quality Control and Assurance Programs

Canadian Manganese applied an internal QA/QC program in 2011 that consisted of insertion of certified reference materials and blank samples. ALS was the primary laboratory used for the programs. A modified approach was used for the 2013 drilling program, which included addition of a ¼ core field duplicate and duplicate pulp split components, analysis of check samples at an independent, third party laboratory, and modification of some sampling frequencies. SGS provided independent check sample analysis services in 2013. Duplicate splits, blanks, certified reference materials and in-house standard samples were routinely analyzed by both laboratories for their own internal QA/QC purposes. As noted previously, both ALS and SGS are independent, fully accredited, ISO registered firms that provide analytical services domestically and internationally.

The 2011 internal QA/QC for Woodstock drill core samples included the following components:

- certified reference materials: 1 in every 20 samples
- blanks samples: 1 in every 20 samples.

The 2013 internal QA/QC for Woodstock drill core samples included the following, nominally applied components:

- certified reference materials: 1 in every 20 samples
- blanks samples: 1 in every 20 samples
- field ¼ core duplicate: 1 in every 20 samples
- pulp duplicate: 1 in every 20 samples
- check assay pulp: 1 in every 20.

Mineral Resource Estimate

The Mineral Resource Estimate described in the Woodstock Technical Report is based on validated results of the 2011 and 2013 drilling programs, plus validated results of five drill holes and two trenches completed by MRR in 1987.

On the basis of poor support documentation, Mercator did not include results from 1950s era drilling programs in the project database used in the current resource estimate reported in the Woodstock Resource Report. Only data from the MMR programs in 1985 and 1987, plus the Canadian Manganese programs in 2011 and 2013 are included in the current resource estimate database, which is addressed below.

The Plymouth deposit was modeled as a folded, stratiform manganese-iron deposit occurring within a northeast striking, steeply dipping host sequence of red and grey siliciclastic sedimentary rocks using GEOVIA (formerly Gemcom) Surpac™ (Surpac™) v. 6.4.1 deposit modeling software. Drilling-defined mineralization within the resource estimate block model occurs along a 700 m strike length and reaches a maximum width of approximately 200 m in the central deposit area. Inverse Distance Squared ("**ID2"**) interpolation methods and 3 m downhole assay composites were used to assign manganese, iron, and specific gravity values within the block model, with block dimensions of 10 m (x) by 10 m (y) by 10 m (z). The predominant manganese compound in the Plymouth deposit is manganese carbonate (MnCO3). Metal grade assignment was peripherally constrained by two separate wireframed solid models based on sectional geological interpretations for the Plymouth deposit and a minimum included grade of 5% manganese over 12 m in the respective downhole direction of each drill hole.

The main resource solid defines a folded geometry, with near vertical to steeply dipping eastern and western limbs, and a broad interpreted closure zone. The eastern fold limb is recognizable for only 400 m of block model strike length. The second resource solid was developed along the peripheral limits of the western limb of the main solid to constrain additional stratiform mineralization that shows less continuity and lower average manganese grade than that of the main solid. To assess the distribution of reduced and oxidized host stratigraphy an Inverse Distance Cubed ("**ID3"**) interpolated model was developed from logged BMC numeric values for a percentage of red rock. Results from 639 separate laboratory determinations of specific gravity were composited at a 3-m downhole support

length and were then used to develop the interpolated specific gravity model. The resource estimate and supporting block model were checked by comparison with geological and assay sections, as well as against results of grade interpolation using Ordinary Kriging ("**OK"**) methods. A very good correlation exists between results of the two interpolation methods and the results of section checking showed good model correlation to drill hole datasets.

The Mineral Resource Estimate for the Plymouth deposit, contained in the Woodstock Technical Report, reflects a 3.5% manganese cut-off value and has an effective date of July 10, 2014. The 3.5% cut-off, updated from the 5% manganese cut-off used in a previous May 6, 2013 Plymouth deposit resource statement (Cullen 2013), is based on parameters established by the Woodstock PEA and reflects a reasonable expectation of economic viability based on market conditions and open pit mining methods.

Plymouth Manganese-Iron Deposit Resource Estimate – July 10, 2014

Mn Cut-off (%)	Resource Category	Rounded Tonnes	Mn (%)	Fe (%)
3.5	Inferred	44,770,000	9.85	14.15

Notes: Tonnages have been rounded to the nearest 10,000 t.
Mineral resources that are not mineral reserves do not have demonstrated economic viability.
This estimate of mineral resources may be materially affected by environmental permitting, legal, title, taxation, sociopolitical, marketing, or other relevant issues.

Total Contained Manganese at the 3.5% Inferred Resource Statement Cut-off Value

Mn Cut-off (%)	Resource Category	Rounded Tonnes	Mn (%)	Mn (Blb)
3.5	Inferred	44,770,000	9.85	9.72

The Plymouth deposit, as currently defined by a 3.5% manganese cut-off value, remains open, both along strike and down dip. Further core drilling to assess deposit extensions along strike and down dip in these areas is warranted. Infill drilling within current resource model limits, at a 50-m intercept spacing, would be necessary to upgrade much of the currently defined Inferred Mineral Resource to Indicated Mineral Resource status.

An earlier mineral resource estimate of Inferred Resources was issued by Mercator on May 6, 2013 comprising 43.7 Mt, grading 9.98% manganese, and 14.29% iron at a 5% manganese cut-off in the inferred category (or 9.62 Blb of contained manganese). This estimate was superseded by the Mineral Resource Estimate contained in the Woodstock Technical Report. The only difference between the 2013 estimate and the 2014 estimate is that a 3.5% manganese cut-off value was used to define the 2014 estimate contained in the Woodstock Technical Report.

Mining Methods

In the 2014 PEA, TetraTech evaluated two mining operation scenarios—1,500 t/d mill throughput and 3,000 t/d mill throughput—based on the same resource model and overall slope angle. The 3,000 t/d scenario was utilized as the base case for this study.

The mining operation will use a conventional open pit mining method, off-highway haul trucks, and hydraulic excavator. The waste rock and Mineral Resource will be drilled and blasted using typical grade-control methods and blast hole sampling. The open pit has been designed using a two-stage approach. The first stage identified the optimum pit shell using the Lerchs-Grossman pit optimization algorithm in GEOVIA (formerly Gemcom) Whittle™ v.4.5 software (Whittle™). The second stage involved developing the preliminary ultimate pit design, phase planning, and production schedule; selecting equipment; and estimating the capital and operating costs.

A buffer stockpile strategy has been proposed as an effective solution to improve the economic outcomes for both operational scenarios. A total of eight separate stockpiles are included in the mine plan and consist of four red mineralized stockpiles and four grey mineralized stockpiles, both varying by grade range. In Years 1 to 13 the most

economical mineralized material available, either from direct mining activity during mine Phase 1 to 3 or from stockpile depletion, is utilized to supply the mill. In the post-mining years beyond Year 13, only stockpile depletion material is used to supply the mill. The most economical mineralized material is prioritized as defined by the mine schedule. In general, the red mineralized material stockpiles are depleted first until their grade drops to a level which permits the introduction of grey mineralized stockpile material depletion to begin.

3,000 t/d Throughput (Base Case)

Feed will be provided to the mill at a rate of 3,000 t/d (1.05 Mt/a). A total of 96.96 Mt of material will be mined at an average strip ratio of 1.34 over a 13-year life-of-mine (LOM). The total material to be moved includes 41.41 Mt of Inferred Mineral Resources with an average manganese grade 9.92%, 51.61 Mt of waste rock, and 3.94 Mt overburden.

The following major equipment will be used for the proposed open pit operation:

- two, 152 mm diameter down-the-hole (DTH) track drills for Mineral Resource material and waste rock
- two, 6.0 m3 (bucket capacity) hydraulic excavators
- a fleet of eight, 56 t, off-highway hauls trucks.

The Project would have a life of up to 40 years in this scenario, and the mill would continue to process mineral resource reclaimed from the stockpiles once the pit is depleted.

1,500 t/d Throughput

Feed will be provided to the mill at a rate of 1,500 t/d (0.525 Mt/a). A total of 57.1 Mt of material will be mined at an average strip ratio of 0.78 over a 20-year LOM. The total material to be moved will include 32.01 Mt of Inferred Mineral Resources with an average manganese grade of 10.12%, 22.43 Mt of waste rock, and 2.66 Mt of overburden.

The following major equipment will be used for the proposed open pit operation:

- one, 152 mm diameter DTH track drill for Mineral Resource material and waste rock
- one, 4.6 m3 (bucket capacity) hydraulic excavator
- a fleet of six, 38 t, off-highway hauls trucks.

The Project would have a life of up to 61 years in this scenario, and the mill would continue to process mineral resource reclaimed from the stockpiles once the pit is depleted.

Metallurgical Testing

Metallurgical and hydrometallurgical testing was carried out on core samples from the 2011 drilling program for the Plymouth deposit. From the 2011 drill core samples, a weighted average composite sample of all five drill holes was split and blended to represent the general properties of the Plymouth deposit has been carried out. This sample is referred to as the "bulk" composite sample. Two additional weighted average composite samples were split and blended to generate a brick-red siltstone hosted composite sample, referred to as the "red" sample and a green-grey siltstone hosted composite sample, referred to as the "grey" sample. Along with the bulk composite sample, the red and grey composite samples were tested to assess the variability of certain process parameters with respect to these sections of the Plymouth deposit.

X-ray diffraction ("**XRD"**) analysis was completed on each of the composite samples to identify major and minor mineral phases present in each of the samples. Rhodochrosite or manganese carbonate was the only manganese mineral detected by the scan in all three samples, indicating that manganese in the Plymouth deposit exists in the reduced manganese (II) carbonate state. Iron was also reported as having a strong presence in all composite samples and was found to be present in both oxide form (hematite, magnetite, ilmenite) and as a carbonate (siderite). Oxide forms of iron minerals were generally dominant in the red composite sample, while the grey composite sample contained a higher proportion of siderite. Gangue minerals generally include quartz, dolomite, hydroxylapatite, and various phyllosilicate type minerals.

Metallurgical Test Program Samples

The occurrence of manganese in the Plymouth deposit primarily as manganese carbonate (manganese occurs as manganese II valance state) represents an economic advantage for the project as a reduction step to convert manganese as manganese IV to manganese II (e.g. high-temperature reduction roast or addition of a reducing agent such as sulphur dioxide in hydrometallurgical processing) is not required and direct sulphuric acid leaching may be employed to generate a manganese sulphate solution for electrolysis.

Iron mineral speciation varied between the red and grey composite samples and is an important characteristic for hydrometallurgical processing. Oxide forms of iron minerals were generally dominant in the red composite sample, while the grey composite sample contained a higher proportion of siderite (iron carbonate). Carbonate forms of iron are more readily soluble in sulphuric acid than oxides, which affect the extent of iron leaching and reagent consumption for hydrometallurgical processing of the red and grey mineralization types. Due to the lower solubility of iron in the red mineralization type, the specific sulphuric acid consumption for leaching and neutralization requirements for iron precipitation are lower, reducing the overall operating cost for processing of the red mineralization type.

The range of manganese and iron head assays compiled throughout various phases of the bench scale test program for the bulk, red, and grey composite samples are considered to be suitably representative of the average life-of-project head grades defined by the mine production schedule for the 3,000 t/d processing scenario as 9.86% manganese and 14.20% iron (average over 40-year project life) and for the 1,500 t/d processing scenario as 10.11% manganese and 14.45% iron (average over 61-year project life).

As an alternative to conventional pyro-metallurgical processing methods, which are typically applied to higher-grade (i.e. greater than 40% manganese) oxide-type manganese mineralization, test programs have focused on development of more economic and commercially proven hydrometallurgical processing methods for processing of carbonate-type manganese mineralization for production of EMM.

As a result of bench scale test programs completed to date, a block diagram has been developed for processing mineralized material from the Plymouth deposit that includes pre-concentration by magnetic separation, direct leaching of manganese with sulphuric acid, multiple stages of manganese sulphate solution purification, and electrolysis of manganese from the purified solution for product recovery in the form of EMM.

Preliminary bench scale testing for pre-concentration of manganese and rejection of acid consuming gangue minerals through a combination of low-gradient magnetic separation (LGMS) and high-gradient magnetic separation (HGMS) techniques was completed on the bulk composite sample and showed that 85.7% recovery of manganese into a concentrate product containing 15.6% manganese was achievable at a grind specification of approximately 80% passing 20 μm. A net rejection of acid consuming gangue minerals such as iron, aluminum, magnesium, and silica was also achieved, with an overall sample mass rejection of 34% being reported across the high-gradient portion of the magnetic separation circuit. Furthermore, the magnetic product from the single pass low-intensity magnetic separation stage (LIMS) assayed 54.6% iron, indicating that there is potential for minor production of a saleable grade iron ore product from the LIMS circuit.

Hydrometallurgical process development test programs completed to date have identified appropriate process conditions and operating parameters for operation of the sulphuric acid leach, primary and secondary iron precipitation stages, tertiary solution purification by sulphide precipitation and carbon adsorption, and electrowinning. Bench scale flowsheet simulation tests have been completed on each of the bulk, red, and grey composite samples for assessment of overall manganese recovery and reagent consumption rates, the key results of which are summarized the following table.

Key Results of Leach-Primary Iron Precipitation Flowsheet Run-through Tests on Bulk, Red, and Grey Composite Samples

Sample Description	Sulphuric Acid Consumption (g/g Mn Recovered)	Pulverized Limestone Consumption (g/g Mn Recovered)	Solid Residue Generation Ratio (g Residue/g Feed)	Manganese Recovery (wt%)
Red Composite	4.59 (range of 4.54 to 4.62)	1.64 (range of 1.60 to 1.73)	1.06 (range of 1.05 to 1.07)	86.51 (range of 86.25 to 86.69)
Bulk Composite	5.34 (range of 5.27 to 5.39)	2.67 (range of 2.37 to 3.01)	1.20 (range of 1.15 to 1.25)	87.99 (range of 86.94 to 88.84)
Grey Composite	6.21 (range of 6.15 to 6.26)	5.59 (range of 5.40 to 5.84)	1.65 (range of 1.62 to 1.69)	89.09 (range of 88.39 to 90.10)

In addition to the bench scale flowsheet tests, a bulk flowsheet run-through on a blend of the red and grey composite samples was completed to generate a sufficient volume of advance electrolyte representative of the process flowsheet for preliminary bench scale testing of the manganese electrowinning unit operation. The bulk flowsheet run through test included leaching, primary and secondary iron precipitation, and tertiary solution purification unit operations and resulted in the production of approximately 25 L of purified advance electrolyte that met the maximum tolerable impurity concentrations defined as target specifications for electrowinning of manganese based on operating data from commercial EMM operations.

Bench scale electrowinning tests consistently produced EMM with a metallic manganese content (based on trace metal impurity analysis) of greater than 99.99% (greater than 4N grade) and with a total manganese content (based on trace metal and non-metallic trace element analysis) ranging from 99.70 to 99.76% manganese, which complies with typical end-user EMM product specifications.

For the purpose of the PEA, reagent consumptions in the hydrometallurgical circuit for processing of a HGMS concentrate product have been estimated based on the process chemistry (stoichiometry) relative to the rejection of acid consuming gangue as defined by the bench scale HGMS testing completed by Metso Minerals Process Engineering Laboratory (Metso). Leach extraction of manganese for this study is based on preliminary bench scale test program results for leaching of red and grey HGMS concentrate samples, which demonstrated leach extractions of 89.75% and 91.11%, respectively, for manganese. The overall manganese recovery in the hydrometallurgical portion of the process block diagram has therefore been defined as 90% for the PEA, and accounts for internal recycle and recovery of waste streams containing manganese as identified in the block diagrams.

Combining the manganese recovery rate of 85.7% defined for pre-concentration by magnetic separation with an estimated recovery of 90.0% in the hydrometallurgical portion of the process, an overall process recovery of manganese of 77.1% has been defined for the PEA.

Mineral Processing and Recovery Methods

The production of highly-purified manganese sulphate solution using hydrometallurgical processing technologies provides alternative production options for the primary production of EMM from the Plymouth deposit, with opportunities for co-production of alternative manganese products such as electrolytic manganese dioxide ("**EMD**"), chemical manganese dioxide ("**CMD**"), manganese sulphate and other manganese chemicals.

The selection of EMM as the final product from hydrometallurgical processing of the Plymouth deposit for the PEA is based on manganese product market factors; however, it is noted that the hydrometallurgical block diagram developed for recovery of EMM from processing of material from the Plymouth deposit is readily amendable to reconfiguration for production or co-production of alternative manganese products as listed above with limited impact on the overall operating and capital costs for the Project.

The presence of manganese predominately as manganese (II) carbonate in the Plymouth deposit precludes the requirement, as in the case of manganese oxide feedstocks, for a reduction step to convert manganese (IV) to manganese (II) using high-temperature pyrometallurgical systems, which are subject to significant operating costs associated with fuel and environmental controls, or hydrometallurgical methods involving the addition of a reducing

agent into the leaching stage, which increases operating costs and generates dithionate ions in the leach solution, requiring advanced treatment methods for effluent disposal.

The hydrometallurgical process proposed for the production of EMM from the Plymouth deposit is similar to that used by commercial plants in China for hydrometallurgical processing of manganese carbonate feedstocks; however, the proposed process incorporates improved measures for environmental sustainability and a novel arrangement of unit operations for iron precipitation to accommodate the high iron content of the Plymouth deposit. Pre-concentration of the Plymouth deposit using magnetic separation technology to upgrade the manganese content and selectively reject acid-consuming gangue minerals has been included as an integral part of the preliminary process block diagram. For the base case on average over the life of the project, the manganese content of the mill feed is upgraded from 9.86% to 13.35% at 85.7% recovery while rejecting just over 35% of the overall mass.

An overview of the proposed hydrometallurgical process for production of EMM from the Plymouth deposit is as follows:

- conventional two-stage crushing circuit
- conventional two-stage grinding circuit to meet target grind specification for preconcentration of 80% passing 20 μm
- dual-stage wet LIMS circuit to remove ferromagnetic iron from the HGMS circuit feed and concentrate it into a saleable iron ore fines product
- filtering, drying, and packaging of the iron ore product for shipment to an end user
- dual-stage (rougher and cleaner) HGMS circuit for pre-concentration of manganese and rejection of acid-consuming gangue
- dewatering of the HGMS concentrate product prior to hydrometallurgical processing
- sulphuric acid leaching of the HGMS concentrate product in heated, continuously stirred tank reactors
- two-stage leach solution neutralization/iron precipitation unit operations conducted in heated, continuously stirred tank reactors
- solid-liquid separation, dewatering, washing and neutralization of the combined leach/primary iron precipitation solid residue prior to disposal within the tailings disposal area
- tertiary solution purification by sulphide precipitation followed by adsorption of excess reactive sulphides using activated carbon
- recovery of manganese by electrolysis of the purified manganese sulphate solution to produce EMM
- washing, drying, and packaging of the EMM product for shipment to an end user
- unit operations for recovery of soluble manganese from process effluent streams by precipitation
- unit operations for process wastewater treatment and removal and recovery of ammonia from both liquid process effluent and process off-gas streams
- fully-integrated limestone calcination and pulverizing facility for on-site production of powdered limestone and quicklime
- fully-integrated facility for on-site production of sulphuric acid from elemental sulphur and co-production of low-pressure steam and electricity to offset process heating and power requirements (base case and alternate case “A” only – alternate cases “B” and “C” are based on direct purchase of sulphuric acid)
- dust collection systems for crushing, limestone processing, and EMM packaging circuits
- reagent make-up, distribution and metering systems
- compressed natural gas (CNG) fired boiler for steam production to satisfy process and building heat loads
- water treatment systems to satisfy process water, boiler feed water, and cooling water requirements.

Pre-Concentration of Mill Feed

On this basis, pre-concentration of the Plymouth deposit using a combination of low intensity and high gradient magnetic separation was demonstrated as being technically viable and has been included as an integral part of the mineral processing block diagram that forms the basis for preliminary economic assessment of the project.

Based on preliminary bench scale testing of the proposed magnetic separation circuit, a manganese recovery rate of 85.7% has been defined for the pre-concentration portion of the mineral processing plant. On average for the base case over the life of the project, the manganese content of the mill feed is upgraded from 9.86 to 13.35% through the pre-concentration circuit, reducing the overall mass flow of material to be treated in the hydrometallurgical circuit by over 35%.

Sulphuric Acid Leach Economics Relative to Acid Consumption

The hydrometallurgical testing has consistently demonstrated that high recoveries of manganese in excess of 95% (up to 99%) are achievable with direct sulphuric acid leaching.

Combining the pre-concentration recovery of manganese with the 90% manganese recovery rate defined for the hydrometallurgical portion of the block diagram, an overall process recovery of manganese of 77.1% has been selected as the basis for the PEA.

Iron Removal from Hydrometallurgical Solutions

Development of the hydrometallurgical process to achieve an optimum removal of iron from the leach solution is based on dual stage selective precipitation of iron. The selection of a dual stage system for iron removal is unique to the Project and is designed to accommodate the relatively high iron content of the Plymouth deposit to maximize iron removal efficiency and optimize on the cost of neutralization reagents by employing low cost pulverized limestone in the primary iron precipitation stage. Bench scale testing has consistently demonstrated the ability to reduce iron concentrations from several thousand parts per million in the leach solution to less than five ppm in the secondary iron precipitation stage filtrate.

Heavy Metal Impurity Removal from Hydrometallurgical Solutions

A multi-stage approach for purification of manganese sulphate solution produced from direct sulphuric acid leaching of the Plymouth deposit has been developed that includes primary and secondary iron precipitation stages and tertiary solution purification by sulphide precipitation followed by activated carbon adsorption for removal of excess reactive sulphides from the final advance electrolyte solution. The technical viability of the proposed solution purification processes has been demonstrated for each of the bulk, red and grey test program samples through bench scale, batch flowsheet simulation tests in which the solution generated from each stage of processing is passed to the subsequent stage to produce a purified advance electrolyte solution that is representative of processing the alternative mineralization types using the CMC hydrometallurgical process. The final purified solutions generated from bench scale simulation of the CMC hydrometallurgical process meet typical guidelines for advance electrolyte solution quality used by commercial EMM producers. The multi-stage solution purification process is considered to be robust and has been successfully tested at the bench scale under a wide variety of process conditions and operating parameters. The proposed solution purification circuit has a high degree of process flexibility and has been consistently demonstrated to produce high quality advance electrolyte solution under differing conditions of impurity loading, which are characteristic of the red and grey mineralization types.

Electrowinning of EMM

The bench scale electrowinning tests were based on a preliminary assessment of operating parameters using a standard cell design for EMM electrowinning. The results of the bench scale tests, process conditions and operating parameters for manganese electrowinning were similar to commercial scale operations.

Bench scale electrowinning tests provide an indication of EMM plate quality relative to the electrowinning cell operating conditions and typical quality of the purified manganese sulphate solution (produced by the bench flowsheet simulation at optimum process conditions). Several tests completed using advance electrolyte solution representative of the proposed CMC hydrometallurgical process have defined operating conditions to achieve a metallic manganese content (based on trace metal impurity analysis) of greater than 99.99% (greater than 4N grade) and with a total manganese content (based on trace metal and non-metallic trace element analysis) ranging from 99.70 to 99.76% manganese, which complies with typical end-user EMM product specifications.

Semi-continuous bench scale electrowinning tests over an eight hour duration have consistently produced EMM with a metallic manganese content (based on trace metal impurity analysis) of greater than 99.99% (greater than 4N grade) and with a total manganese content (based on trace metal and non-metallic trace element analysis) ranging from 99.70% to 99.76% manganese. Typical specifications for commercially produced EMM state the minimum total manganese content as 99.70%. Commercial specifications for maximum trace element concentrations can vary widely based on the intended end use of the EMM product and are often tailored to suit a specific end user's requirements. Analysis of the EMM flake product produced from the final eight-hour duration bench scale electrowinning tests are given in the Table below.

Table 1 - Analysis of Final EMM Flake Products Produced from Bench Scale Electrowinning Tests

Element	EMM Flake Product #1	EMM Flake Product #2	EMM Flake Product #3	EMM Flake Product #4
Carbon (wt%)	0.013	0.013	0.010	0.001
Sulphur (wt%)	0.043	0.037	0.047	0.041
Oxygen (wt%)	0.197	0.195	0.148	0.155
Nitrogen (wt%)	0.008	0.005	0.007	0.005
Hydrogen (wt%)	0.0302	0.0339	0.0275	0.0305
Copper (wt%)	<0.0005	<0.0005	0.0017	<0.0005
Iron (wt%)	0.0030	0.0020	0.0028	0.0010
Total Metallic Manganese (wt%)	99.99	99.99	99.99	99.99
Total Manganese (wt%)	99.70	99.71	99.75	99.76

EMM Product Purity

The target quality of the EMM was based on standard EMM market quality specifications and was not end-user specific. The bench scale tests produced high-quality metal with trace impurities equivalent to a 4N grade metal (99.99%). Based on electrochemical principles of EMM production, the elimination of certain non-metallic elements such as oxygen, hydrogen, sulphur and nitrogen to meet end-use specific or customer specific quality requirement may require specialized add-on treatment unit operations such as degassing of the plate. Preliminary EMM degassing tests reduced the non-metallic content; however, conditions were not optimized relative to specific end-user quality requirements.

Iron By-Product

Pre-concentration of the manganese content of the Plymouth deposit using magnetic separation results in the production of a relatively small tonnage of iron ore, which represents less than 1.5% of the total revenue for the Project and less than 10% of the total contained iron in the feed to the processing plant. A significant portion of the iron in the Plymouth deposit is present as iron carbonate and is a major consumer of sulphuric acid in the leach, forming iron sulphate in solution. The removal of the soluble iron from solution is based on precipitation methods and the conversion of the hydrometallurgical iron residues into a high value end use product has not been studied to date. The add-on production of high purity iron chemicals and/or synthetic iron oxides is subject to further review to improve on the earning potential of the proposed process flowsheet.

Manganese Chemical and/or EMD By-Product

The technical viability of co-production of manganese chemicals has been assessed based on a preliminary assessment of flowsheet add-on technologies. The production of a high-purity manganese sulphate product would require slip-stream treatment of the purified leach solution through a crystallizer circuit and is noted as a technically viable opportunity.

It is noted that further purification of the manganese sulphate solution by add-on unit operations and subsequent production of EMD from the ultra-pure manganese sulphate solution is also subject of further review.

Opportunities to optimize on throughput rates include the co-production of alternative manganese products such as EMD, CMD, manganese sulphate and other manganese chemicals.

In general, the process technology developed for production of EMM is easily adaptable to capitalize on co-production opportunities to meet changing market conditions with limited impact on the overall operating and capital costs for the Project.

Infrastructure, Permitting and Compliance Activities

Project Infrastructure

Surface infrastructure and service requirements to support the mining and processing operations were assessed on both the 3,000 t/d and 1,500 t/d production rate scenarios.

At the Project site, buildings to support the administrative and operational functions of the Project include the administration building, change facility, truck shop, and warehouse fueling facilities, guardhouse, and an explosives storage area. Approximately 5 km of on-site access and secondary roads as well as 3.5 km of haul roads are included to provide access around the open pit, material stockpiles, overburden stockpile, waste rock stockpile, tailing management facility ("**TMF**"), and site facilities.

Power supply to support the Project's anticipated production load, for both the 3,000 t/d and 1,500 t/d scenarios, is proposed to be obtained from the New Brunswick Power Transmission Corp. (NB Power) existing transmission system. Under the 1,500 t/day scenario, an interconnection is proposed at the Woodstock Terminal site, which will entail local upgrades at the Woodstock Terminal site and the construction of a new 10 km, 138 kV transmission line to the Project substation. For the 3,000 t/d scenario, the Project will be serviced from the Woodstock Terminal, similar to the description for the 1,500 t/d scenario; however, reinforcement of the 138 kV system from the Keswick Terminal will be required. This is expected to require the construction of a new 50 km, 138 kV transmission line from the Keswick Terminal to the Woodstock Terminal.

Site services to support operations include a fresh water supply to be drawn from local groundwater sources. The fresh water drawn from the intake system will be collected in an above-grade storage water tank and distributed for potable water feed, process makeup, firewater, and general use water. Other ancillary site services include treatment of sewage at the plant, on-site communication infrastructure, collection, and treatment of surface water runoff on site, management of domestic waste, as well as a service vehicle fleet for the maintenance of roads and other surface infrastructure components.

As part of the PEA, a trade-off evaluation was conducted on material transport alternatives during the post-mining years, when the reclaim of stockpiles will be used exclusively to feed the primary crusher and process mill. The use of overland conveyors was compared against the use of haul trucks, and based on the evaluation, material transport by conveyor was determined to be more cost-efficient than hauling material by truck to the mill.

The conveyor system will be implemented in Year 20 for the 1,500 t/d scenario and Year 13 for the 3,000 t/d scenario.

Tailings Management Facility

The proposed Woodstock Mine will produce approximately 38.5/50.5 Mt of tailings and 22.3/51.6 Mt of waste rock (by dry mass), during the anticipated LOM. Based on two potential processing rates (1,500 t/d and 3,000 t/d) the mining/processing operation may take 61 or 40 years, respectively. It is proposed to utilize most of the excavated waste rock to build a cross-valley type tailings dam—located immediately west of the open pit—and in order to create an on-land TMF. The seismic activity around the mine site is low-to-moderate, representing low earthquake hazard for the design and construction of the dam.

The capacity of the on-land disposal area is approximately 14 Mm^3. The remaining approximately 18 Mm^3/27 Mm3 of tailings will be deposited into the open pit, once the on-land TMF has been filled and the excavation of the open pit had been completed. The capacity of the open pit will be approximately 19 Mm^3/32.4 Mm^3 (for 1,500 t/d and 3,000 t/d production rates, respectively). Based on limited space available for tailings disposal, and in order to meet

environmental requirements, it is proposed to produce dewatered/thickened tailings at the process plant and convey that material to the TMFs through a pipeline.

Based on initial evaluations of the acid generating potential of 2011 drill core samples, the waste rock is considered to have low potential for acid generation; however additional acid-base accounting and metal leaching tests will be required on the waste rock during the next phase of the Project. At present, it is assumed that potential leachates from the tailings material may be anticipated and therefore, the TMFs (on land and open pit) will be lined. At the end of mining operation both facilities will be capped and re-graded, with natural drainage re-established across the site.

Environmental

The Project will be subject to both the provincial and federal environmental assessment ("**EA"**) processes prior to the issuance of any permits necessary to allow the Project to proceed. There is no formal EA cooperation agreement between New Brunswick and Canada, but the EA requirements are often combined for both jurisdictions, which makes it possible to streamline the processes. An environmental impact statement ("**EIS**"), prepared following further requirements under the *Canadian Environmental Assessment Act* (CEAA 2012), can be submitted to satisfy both EA processes.

The Project will require Approval to Construct and Approval to Operate certificates from the New Brunswick Department on Environment and Local Governments ("**NBDELG"**). Other project related approvals may include a Mining Lease, License of Occupation, Crown Land Lease, Harvest Permit, Quarry Permit, Development and Building Permit, Approval and License for Petroleum Storage, Approval to Install an On-site Sewage Disposal System, and a Watercourse and Wetland Alteration Permit. In order to proceed with the EA process, a registration document, similar to an EIS, must be developed and submitted to NBDELG.

Site-specific environmental baseline studies have not yet been initiated for the Project. Adequate, updated environmental baseline information and community engagement will be required for the alternatives assessment during the prefeasibility stage of mine design and for environmental impact assessment ("**EIA**") during the development of the registration document and EIS. Formal community engagement programs should be scheduled along with the environmental baseline studies.

The Woodstock Project is expected to have a major positive socio-economic impact on the surrounding communities and on the Province of New Brunswick. The Project is expected to create employment for 223 people during the mining period and 110 people thereafter, for a total project life to 40 years. During the construction phase, levels of employment will be considerably higher.

Market Studies and Contracts

The primary focus for development of the Plymouth deposit is the production of EMM, which is a commercially important industrial metal commonly used as a steel additive particularly in the production of 200-series stainless steels. Manganese has been defined by the Canadian and US governments as a strategic metal that is essential for national defense, aerospace, technology and energy that is highly susceptible to supply interruptions due to the lack of domestic production. Currently, 100% of the EMM that is consumed in North America and Europe is imported from other countries, most notably from China which controls over 95% of the global supply of EMM, and from South Africa—the only other producer outside of China.

Pre-concentration of the manganese content of the Plymouth deposit using magnetic separation also results in the production of a relatively small tonnage of iron ore, which represents less than 1.5% of the total revenue for the Project and less than 10% of the total contained iron in the feed to the processing plant. To date, process development studies have focused solely on the production of EMM and moving forward opportunity studies are planned to identify processing methods and potential product markets for the balance of the iron within the Plymouth deposit and for production of other manganese chemicals.

Economic Analysis

The PEA reported in the Woodstock Technical Report is preliminary in nature and includes Inferred Mineral Resources that are considered too speculative geologically, on which to apply economic considerations to categorize them as mineral reserves. There is no certainty that this PEA will be realized.

The Woodstock Technical Report is effective as of July 10, 2014. The economic analysis in the PEA reported in the Woodstock Technical Report was based on market studies, commodity prices, costs, sales, revenue, and other assumptions, parameters and projections as at the effective date of the PEA in 2014. Such assumptions and parameters may have changed over the intervening period and consequently the economic analysis does not reflect subsequent changes in the economic assumptions used in the PEA and may no longer be current. The changes include, but are not limited to, changes in commodity prices, costs, sales, revenue and currency exchange rates. The economic analysis in the PEA should not be relied on.

Recent Exploration and Development Activity

Since the date of the Woodstock Technical Report (2014), Canadian Manganese has undertaken limited further evaluation work on the Plymouth property. The results from these programs conducted since the date of the Woodstock Technical Report are not considered material to the Mineral Resource Estimate contained in the Woodstock Technical Report. The Mineral Resource Estimate is still considered relevant and reliable. The inferred mineral resources reported in the Woodstock Technical Report are still considered as current mineral resources.

Canadian Manganese initiated an internal screening level study to assess potential for reducing the capital investment required for the project by processing lower tonnages. In addition, possible alternative measures to improve the project at lower processing rates: have been identified, including:

- The use of sulphur dioxide for leaching of the pre-concentrate material as a means of potentially reducing the capital investment associated with installation of a fully-integrated sulphuric acid plant;
- Production of EMD as an alternative to EMM as a means of potentially reducing the operating cost and/or improving on the revenue to operating cost ratio at lower processing rates;
- Co-production of iron oxide pigment with EMM as a means of increasing the project revenue by recovering a high-value product from the iron associated with the resource, and;
- Assessment of process equipment purchase cost saving that could potentially be realized by procuring the majority of the process equipment from Chinese equipment suppliers.

Given the large capital investment required to build an EMM plant at Woodstock, Canadian Manganese has focused its efforts on attracting a development partner from one of the existing EMM producers in China.

Metallurgical development programs for Woodstock to date have focused on the production of high-grade electrolytic manganese metal and the intermediate production of purified manganese sulphate solution as an interim step, enabling the add-on production of manganese chemicals, manganese catalyst, battery grade manganese dioxide and high-purity manganese metal for electronics. Electrowinning tests described in the Woodstock Technical Report consistently produced electrolytic manganese metal with a metallic manganese content of greater than 99.99% and a total manganese content ranging from 99.70% to 99.76% Mn.

Advancements in electric vehicle manufacturing are transforming the entire global automobile industry driving increased battery demand and NMC (nickel-manganese-cobalt) batteries are becoming increasingly important for next-generation automotive and industrial uses. Manganese is a key component in the formulations of the cathode material used in high-performance lithium-ion batteries and in utility bulk energy storage facilities, which are expected to create strong demand for high-purity manganese products.

AVAILABLE FUNDS

At June 30, 2019, Canadian Manganese has approximately $4,609 available to it and had estimated consolidated working capital of $4,609 as at June 30, 2019.

Buchans has agreed to pay and discharge all of Canadian Manganese's costs and expenses (including professional fees and outlays) in connection with the Plan.

Canadian Manganese's working capital after the completion of the Arrangement is dependent upon the successful closing of a proposed private placement of Canadian Manganese Shares to be completed as soon as possible after completion of the Arrangement. There is no assurance that the Canadian Manganese Financing will be completed. If the Canadian Manganese Financing is not completed, the Canadian Manganese Shares will not be listed for trading on any stock exchange.

DIVIDEND RECORD AND POLICY

Canadian Manganese has not, since the date of its incorporation, declared or paid any dividends on its common shares and does not currently have a policy with respect to the payment of dividends. The payment of dividends will depend on the earnings, if any, and Canadian Manganese's financial condition and other factors as the directors of Canadian Manganese consider appropriate.

MANAGEMENT'S DISCUSSION AND ANALYSIS

The following management discussion and analysis ("MD&A") of financial condition and results of operations, provides information that Management believes is relevant to an assessment and understanding of the results of operations and the financial condition of Canadian Manganese.

This MD&A should be read in conjunction with the audited carve-out financial statements of Canadian Manganese for the financial year ended December 31, 2018 and the unaudited condensed interim carve-out financial statements for the three and six months ended June 30, 2019, all of which accompany this document as Schedule C to the Circular. The financial information contained in the discussion of results and operations was prepared in accordance with International Financial Reporting Standards ("**IFRS**"). All amounts in this discussion are expressed in Canadian dollars, unless identified otherwise.

The discussion contains forward-looking statements that involve numerous risks and uncertainties, including those risks set forth herein under the heading "*RISK FACTORS*" elsewhere in this document. Actual results of Canadian Manganese could differ materially from those discussed in such forward-looking statements as a result of these risks and uncertainties.

Company Overview

Canadian Manganese was incorporated under the *Canada Business Corporations Act* on June 13, 2011 for the purpose of acquiring the Woodstock Manganese Project and to pursue the exploration and development of same. Canadian Manganese is a wholly-owned subsidiary of Buchans.

Canadian Manganese holds the Woodstock manganese property containing the Plymouth manganese- iron deposit that hosts an Inferred Resource of 44,770,000 tonnes grading 9.85% manganese as reported in the *Woodstock Technical Report*. The Plymouth Mn-Fe deposit is located 5 km west of the town of Woodstock, in west-central New Brunswick, near the junction of the Trans Canada and US Interstate I-95 highways, and approximately 9 km from the border with the state of Maine, USA.

Details of the exploration activities and results of Canadian Manganese are set out in this document under the section *The Business of the Company – Woodstock Manganese Project"*

Metallurgical development programs for Woodstock have focused on the production of high-grade electrolytic manganese metal and the intermediate production of purified manganese sulphate solution as an interim step, enabling the add-on production of manganese chemicals, manganese catalyst, battery grade manganese dioxide and high-purity manganese metal for electronics.

Advancements in electric vehicle manufacturing are transforming the entire global automobile industry driving increased battery demand and NMC (nickel-manganese-cobalt) batteries are becoming the rechargeable battery of choice for next-generation automotive and industrial uses. Manganese is a key component in the formulations of the cathode material used in high-performance lithium-ion batteries and in utility bulk energy storage facilities, which are expected to create strong demand for high-purity manganese products.

Since the date of the *Woodstock Technical Report* (2014), Canadian Manganese has undertaken limited further evaluation work on the Plymouth property. Given the large capital investment required to build an electrolytic manganese metal plant at Woodstock, Canadian Manganese has focused its efforts on attracting a development partner from one of the existing electrolytic manganese metal producers in China

EXPLORATION AND EVALUATION ASSETS

	June 30 2019	Additions	Dec. 31 2018	Additions	Dec. 31 2017	Additions	Dec. 31 2016
	$	**$**	**$**	**$**	**$**	**$**	**$**
Woodstock	4,641,940	4,607	4,637,333	14,447	4,622,886	184,657	4,438,229

RESULTS OF OPERATIONS

The Company recorded no revenue in the years ended December 31, 2018 or December 31, 2017 or in the periods ended June 30, 2019 and June 30, 2018.

For the year ended December 31, 2018, the Company recorded a loss of $219,880, compared to a loss of $175,451 for the year ended December 31, 2017.

For the six-month period ended June 30, 2019, the Company recorded a loss of $81,165, compared to a loss of $109,986 for the six-month period ended June 30, 2018.

For the three-month period ended June 30, 2019, the Company recorded a loss of $41,074, compared to a loss of $54,904 for the three-month period ended June 30, 2018.

Management and administration of the Company was provided by Buchans. The carve-out financial statements include an allocation of general and administrative expenses estimated to relate to the Company and presented as management fees in the statement of loss.

During the year ended December 31, 2018, Canadian Manganese invested $14,447 (2017 - $184,657) on exploration of its mineral properties.

SELECTED ANNUAL INFORMATION

The following selected annual information has been derived from the financial statements of the Company, which have been prepared in accordance with International Financial Reporting Standards.

Expressed in Canadian dollars Except for per share amounts	Year ended Dec. 31, 2018 $	Year ended Dec. 31, 2017 $	Year ended Dec. 31, 2016 $
Loss before taxation and other items	(219,880)	(175,451)	(203,979)
Net loss for the period	(219,880)	(175,451)	(203,979)
Net loss per common share	(0.04)	(0.04)	(0.04)
Total assets	4,642,127	4,627,840	4,440,517
Cash and cash equivalents	4,682	4,657	2,020
Shareholders equity	4,642,127	4,627,650	4,440,327

SUMMARY OF QUARTERLY RESULTS

Expressed in $000's, Except for per share amounts	June 30 2019 $	March 31 2019 $	Dec. 31 2018 $	Sept 30 2018 $	June 30 2018 $	March 31 2018 $	Dec. 31 2017 $	Sept 30 2017 $	June 30 2017 $	March 31 2017 $
Net (loss) gain	(41)	(41)	(55)	(55)	(55)	(55)	(43)	(43)	(43)	(43)
Net (loss) gain per share - basic and diluted	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Total assets	4,647	4,642	4,642	4,633	4,633	4,628	4,628	4,581	4,529	4,487
Working capital	5	2	5	2	4	2	5	7	2	5

LIQUIDITY AND CAPITAL RESOURCES

At June 30, 2019, Canadian Manganese held $4,384 in cash and cash equivalents and had a working capital surplus of $4,609, compared to a working capital surplus of $4,794 at December 31, 2018.

At December 31, 2018 and June 30, 2019, Canadian Manganese held mineral properties with a combined book value of $4,641,940. The balance sheet values for these assets may not represent that which could be obtained if the assets were to be offered for sale.

At December 31, 2018 and June 30, 2019, the Company had a working capital deficiency, had not achieved profitable operations, had an accumulated deficit since inception and expects to incur further losses in the development of its business. The Company has relied on equity financing and/or advances from its parent Buchans to fund its working capital requirements. The Company will need to generate additional financial resources in order to fund its planned programs. There is a risk that additional financing will not be available to the Company on a timely basis or on acceptable terms.

Canadian Manganese's working capital after the completion of the Arrangement is dependent upon the successful closing of a proposed private placement of Canadian Manganese Shares to be completed as soon as possible after completion of the Arrangement. There is no assurance that the Canadian Manganese Financing will be completed.

RELATED PARTY TRANSACTIONS

No fees were paid by the Company to directors for their services as directors of Buchans in the years ended December 31, 2017 or December 31, 2018, or in the six months ended June 30, 2019.

CRITICAL ACCOUNTING ESTIMATES

Canadian Manganese's financial statements are prepared in accordance with IFRS and require management to make estimates and assumptions about future events that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities, if any, at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Such estimates and assumptions affect the carrying value of assets, impact decisions as to when exploration and development costs should be capitalized or expensed and affect estimates for asset retirement obligations and reclamation costs. Other significant estimates made by the Company include factors affecting valuation of tax accounts. Canadian Manganese regularly reviews its estimates and assumptions, however, actual results could differ from these estimates and these differences could be material.

Adoption of New Accounting Standards

The standards and interpretations within IFRS are subject to change. For further details, please refer to Note 3 of the December 31, 2018 audited carve-out financial statements.

PRINCIPAL RISKS AND UNCERTAINTIES

The realization of mineral exploration assets is dependent on the development of economic ore reserves and is subject to a number of significant potential risks, see under the heading "*RISK FACTORS*" elsewhere in this document, including.

Exploration, Development and Operating Risk

Resource exploration and development is a speculative business, characterized by a number of significant risks including, among other things, unprofitable efforts resulting not only from the failure to discover mineral deposits but also from finding mineral deposits that, though present, are insufficient in quantity and quality to return a profit from production. The marketability of minerals acquired or discovered by Canadian Manganese may be affected by numerous factors that are beyond the control of Canadian Manganese and that cannot be accurately predicted, such as market fluctuations, the proximity and capacity of milling facilities, mineral markets and processing equipment, and such other factors as government regulations, including regulations relating to royalties, allowable production, importing and exporting minerals and environmental protection, the combination of which factors may result in Canadian Manganese not receiving an adequate return of investment capital. Many of the properties in which Canadian Manganese holds an interest are in the exploration stage only and are without a known body of commercial ore. Development of the subject mineral properties would follow only if favourable exploration results are obtained and a positive feasibility study is completed.

The business of exploration for minerals and mining involves a high degree of risk. Few properties that are explored are ultimately developed into producing mines. There is no assurance that Canadian Manganese' mineral exploration and development activities will result in any discoveries of commercial bodies of ore. The long-term profitability of Canadian Manganese' operations will in part be directly related to the costs and success of its exploration and development programs, which may be affected by a number of factors.

Substantial expenditures are required to establish reserves through drilling and to develop the mining and processing facilities and infrastructure at any site chosen for mining. Although substantial benefits may be derived from the discovery of a major mineralized deposit, no assurance can be given that minerals will be discovered in sufficient quantities to justify commercial operations or that funds required for development can be obtained on a timely basis and at an acceptable cost.

In addition to the above, there can be no assurance that current exploration programs will result in profitable mining operations. The recoverability of the carrying value of interests in mineral properties and Canadian Manganese' continued existence is dependent upon the preservation of its interests in the underlying properties,

the discovery of economically recoverable reserves, the achievement of profitable operations, or the ability of Canadian Manganese to raise additional financing, if necessary, or alternatively upon Canadian Manganese's ability to dispose of its interests on an advantageous basis. Changes in future conditions could require material write- downs of the carrying values.

No Assurance of Production

Canadian Manganese has limited experience in placing resource properties into production, and its ability to do so will be dependent upon using the services of appropriately experienced personnel or entering into agreements with other major resource companies that can provide such expertise. There can be no assurance that Canadian Manganese will have available to it the necessary expertise when and if Canadian Manganese places its resource properties into production and whether it will produce revenue, operate profitably or provide a return on investment in the future.

Fluctuating Mineral Prices

Metal prices are subject to significant fluctuation and are affected by a number of factors which are beyond the control of Canadian Manganese. The principal factors include: diminished demand which may arise if economic growth in North America, Europe and/or China are not sustained; supply interruptions due to changes in government policies in base and precious metals, war, or international trade embargos; increases in supply resulting from the alleviation of professional and skilled labour shortages experienced by the world's largest producers; and, increases in supply resulting from the discovery and the development of new sources of metals. The effect of these factors on Canadian Manganese' operations cannot be predicted.

Factors beyond Canadian Manganese's Control

The exploration and development of mineral properties and the marketability of any minerals contained in such properties will be affected by numerous factors beyond the control of Canadian Manganese. These factors include government regulation, high levels of volatility in market prices, availability of markets, availability of adequate transportation and refining facilities and the imposition of new or amendments to existing taxes and royalties. The effect of these factors cannot be accurately predicted.

Failure to Obtain Additional Financing

Canadian Manganese expects to have sufficient financial resources necessary to undertake its currently planned activities, subject to completion of the Canadian Manganese financing. There can be no assurance that Canadian Manganese will be successful in obtaining any additional required funding necessary to conduct additional exploration or evaluation, if warranted, on Canadian Manganese's current exploration properties or any properties that may be acquired or to develop mineral resources on such properties, if commercially mineable quantities of such resources are located thereon. Failure to obtain additional financing on a timely basis could cause Canadian Manganese to forfeit its interest in such properties. If additional financing is raised through the issuance of equity or convertible debt securities of Canadian Manganese, the interests of shareholders in the net assets of Canadian Manganese may be diluted.

Environmental Risks and Hazards

Canadian Manganese's operations are subject to environmental regulations in the various jurisdictions in which it operates. Environmental legislation provides for restrictions and prohibitions on spills, releases or emissions of various substances produced in association with certain mining industry operations, such as seepage from tailings disposal areas, which would result in environmental pollution. A breach of such legislation may result in the imposition of fines and penalties. In addition, certain types of operations require the submission

and approval of environmental impact assessments. Environmental legislation is evolving in a manner that means standards are stricter, and enforcement, fines and penalties for non-compliance are more stringent. Environmental assessments of proposed projects carry a heightened degree of responsibility for companies and directors, officers and employees. The cost of compliance with changes in governmental regulations has a potential to reduce the profitability of operations.

Competition

The mining industry is intensely competitive in all its phases, and Canadian Manganese competes with other mining companies in connection with the acquisition of properties producing or capable of producing metals. Many of these companies have greater financial resources, operational experience and technical facilities than Canadian Manganese. Competition could adversely affect Canadian Manganese' ability to acquire suitable properties or prospects in the future. Consequently, Canadian Manganese's operations and financial condition could be materially adversely affected.

FINANCIAL RISK MANAGEMENT

Fair value

The carrying amounts for cash and cash equivalents, marketable securities amounts receivable and accounts payable and accrued liabilities on the carve-out consolidated statements of financial position approximate fair value because of the limited term of these instruments.

Liquidity risk

Canadian Manganese' liquidity exposure is confined to meeting obligations under short term trade creditor arrangements. This exposure is financed from a combination of cash, additional issues of ordinary equity shares and other financing arrangements.

Further details of Canadian Manganese' financial risk management policies are set out in Note 9 of the December 31, 2018 audited carve-out financial statements.

OFF-BALANCE SHEET ARRANGEMENTS

There are no off-balance sheet arrangements.

FINANCIAL INSTRUMENTS

The Company has no interest-bearing debt. The Company's current policy is to invest excess cash in investment-grade short-term deposit certificates issued by major banks. The Company periodically monitors the investments it makes and is satisfied with the credit ratings of its banks.

The Company has designated its cash and cash equivalents as held-for-trading, which are measured at fair value. Fair value estimates of financial assets and liabilities are made at the balance sheet date, based on relevant market information and information about the financial instrument. These estimates involve uncertainties and are subjective in nature. Other financial instruments included in current assets are classified as loans and receivables, which are measured at amortized costs. Accounts payable and accrued liabilities are classified as other financial liabilities, which are measured at amortized cost. As at December 31, 2018 and June 30, 2019, the carrying and fair value amounts of the Company's financial instruments were the same.

OUTSTANDING SHARE CAPITAL

Canadian Manganese has an authorized capital consisting of an unlimited number of common shares.

At the date hereof, a total of 59,868,716 common shares were issued and outstanding.

FORWARD-LOOKING STATEMENTS

This management's discussion and analysis contains certain forward-looking statements relating to, but not limited to, Canadian Manganese' expectations, intentions, plans and beliefs. Forward-looking information can often be identified by forward-looking words such as "anticipate", "believe", "expect", "goal", "plan", "intend", "estimate", "may" and "will" or similar words suggesting future outcomes, or other expectations, beliefs, plans, objectives, assumptions, intentions or statements about future events or performance. Forward-looking information may include reserve and resource estimates, estimates of future production, unit costs, costs of capital projects and timing of commencement of operations, and is based on current expectations that involve a number of business risks and uncertainties. Factors that could cause actual results to differ materially from any forward-looking statement include, but are not limited to, failure to establish estimated resources and reserves the grade and recovery of ore which is mined varying from estimates, capital and operating costs varying significantly from estimates, delays in obtaining or failures to obtain required governmental, environmental or other project approvals, delays in the development of projects changes in exchange rates, fluctuations in commodity prices, inflation and other factors. Forward-looking statements are subject to risks, uncertainties and other factors that could cause actual results to differ materially from expected results. Shareholders and prospective investors should be aware that these statements are subject to known and unknown risks uncertainties and other factors that could cause actual results to differ materially from those suggested by the forward-looking statements. Shareholders are cautioned not to place undue reliance on forward-looking information. By its nature, forward-looking information involves numerous assumptions, inherent risks and uncertainties, both general and specific, that contribute to the possibility that the predictions, forecasts, projections and various future events will not occur. Canadian Manganese undertakes no obligation to update publicly or otherwise revise any forward-looking information whether as a result of new information, future events or other such factors which affect this information, except as required by law.

DESCRIPTION OF SECURITIES

Common Shares

Canadian Manganese is authorized to issue an unlimited number of Common Shares without par value, of which 59,868,716 common shares are issued and outstanding as at the date hereof. All of such shares are currently held by Buchans.

Holders of common shares are entitled to dividends if, as and when declared by the directors, to one vote per common share at meetings of shareholders and to receive the remaining property of Buchans upon the liquidation, dissolution or winding-up of Canadian Manganese, whether voluntary or involuntary.

As at the date hereof, Canadian Manganese does not have any of its securities listed or quoted, and has not applied to list or quote any of its securities, on the Toronto Stock Exchange, Aequitas NEO Exchange Inc., a U.S. marketplace, or a marketplace outside of Canada and the United States of America.

Following the Plan becoming effective, and subject to obtaining any necessary approvals, Canadian Manganese has agreed to use its reasonable commercial efforts to make an application to list the Canadian Manganese Shares on the TSXV or CSE as soon as reasonably practicable, subject to market and trading conditions, provided however that Canadian Manganese does not guarantee that such a listing will be obtained or completed.

CONSOLIDATED CAPITALIZATION

The following table sets forth the consolidated capitalization of Canadian Manganese as at the dates indicated before and after giving effect to the Arrangement. This table should be read in conjunction with the consolidated financial statements of Canadian Manganese included in the Circular.

Designation of Security	Outstanding as at December 31, 2018 (audited)	Outstanding as at the date hereof (unaudited)	Outstanding as of the date hereof after giving effect to the Plan (unaudited)
Long-term Debt	$Nil	$Nil	$Nil
Shareholders' Equity Owners Net Investment	$4,642,127	$4,646,549	$4,646,549
Common Shares (Authorized – unlimited)	$500,000 5,000,000 Common Shares	$5,706,339 59,868,716 Common Shares	$5,706,339 59,868,716 Common Shares
Retained Earnings (Deficit)	$4,142,127	($1,059,790)	($1,059,790)

OPTIONS TO PURCHASE SECURITIES

Incentive Stock Option Plan

Canadian Manganese does not currently have a stock option plan.

Outstanding Options

As at the date hereof, no options to purchase securities of Canadian Manganese have been issued or are outstanding.

PRIOR SALES

On October 28, 2019 an aggregate of 54,868,716 Canadian Manganese Shares were issued to Buchans in consideration for the cancellation of $5,206,339 of intercompany debt owed to Buchans.

ESCROWED SECURITIES

As at the date hereof, there are no securities of Canadian Manganese held in escrow or that are subject to a contractual restriction on transfer.

PRINCIPAL HOLDERS OF COMMON SHARES

As at the date hereof, to the knowledge of the directors and officers of Canadian Manganese, no person beneficially owns, directly or indirectly, or exercises control or direction over, Common Shares carrying more than 10% of the voting rights attaching to all outstanding Common Shares, except as follows:

Name	Designation of Class	Type of Ownership	Number and Percentage of Common Shares owned before the Scheme	Number and Percentage of Common Shares owned after giving effect to the Plan
Buchans Resources Limited	Common Shares	Direct	59,868,716 100%	Nil 0.0%

DIRECTORS AND OFFICERS

Canadian Manganese currently has two directors, namely John F. Kearney and Danesh Varma, and three executive officers. The following table sets out, for each of Canadian Manganese's directors and executive officers, the individual's name, municipality of residence, positions with Canadian Manganese, principal occupation, and, if a director, the month and year in which such individual became a director. Directors hold office for a term of one (1) year until the next annual meeting of shareholders of Buchans or until their successors are duly elected or appointed.

Following completion of the Arrangement it is intended to invite at least two independent directors to join the Board.

Name and Municipality of Residence	Offices with Buchans	Principal Occupation	Director/Officer Since	Shares held Directly or Indirectly or over which control or direction is exercised	
				Pre-Plan	Post Plan
John F. Kearney Ontario, Canada	Chairman, Chief Executive Officer and Director	Mining Executive Chairman and CEO of Labrador Iron Mines Holdings Limited, Buchans Resources Limited	December 31, 2017	Nil	2,546,969
Danesh Varma Kingston United Kingdom	Chief Financial Officer and Director	Chartered Professional Accountant Company Director	October 28, 2019	Nil	2,505,548
Neil J. F. Steenberg Ontario, Canada	Secretary	Lawyer	December 31, 2017	Nil	Nil

As of the date hereof, the directors and executive officers of Canadian Manganese as a group do not beneficially own, directly or indirectly, any Canadian Manganese Shares. Following completion of the Plan, directors and executive officers of Canadian Manganese as a group will beneficially own, directly or indirectly, 5,239,017 Canadian Manganese Shares representing approximately 8.8% of the issued and outstanding Canadian Manganese Shares.

The following relates to the directors and officers of Canadian Manganese. Each of Canadian Manganese directors and executive officers has been engaged for more than five years in his or her present principal occupation.

John F. Kearney – Mr. Kearney, Chairman, is a mining executive with over 45 years of experience in the mining industry. He is currently a director or senior officer of numerous mineral ventures including, Labrador Iron Mines Holdings Limited, Anglesey Mining Plc, and is also Chairman of Xtierra. He holds degrees in law and economics from the University College Dublin and a Masters in Business Administration from Trinity College Dublin. He is a member of the Law Society of Ireland.

Danesh Varma – Mr. Varma, Chief Financial Officer is a Chartered Professional Accountant with over 31 years of experience in the mining finance industry, having been a director of American Resource Company, Northgate Exploration Ltd. and Westfield Minerals Ltd. Mr. Varma holds directorships with Labrador Iron Mines Holdings Limited, Brookfield Infrastructure Partners L.P. and Anglesey Mining Plc.

Neil J. F. Steenberg – Mr. Steenberg, is a lawyer with more than 42 years' experience in securities and mineral exploration law. He is a director and Secretary of Xtierra Inc. and Conquest Resources Limited and Secretary of Labrador Iron Mines Holdings Limited.

Penalties or Sanctions

No director, officer, promoter or other member of Management has, during the ten years prior to the date hereof, been subject to any penalties or sanctions imposed by a court or securities regulatory authority relating to trading in securities, promotion, formation or management of a publicly traded company, or involving fraud or theft.

Cease Trade Orders, Bankruptcies, Penalties or Sanctions

No proposed director is, or within the ten years prior to the date hereof has been, a director, or executive officer of any company that, while that person was acting in the capacity of a director or executive officer of that company or within a year of that of person ceasing to act in that capacity, was the subject of a cease trade order or similar order or an order that denied the issuer access to any statutory exemptions for a period of more than thirty consecutive days, or became bankrupt or made a voluntary assignment in bankruptcy, made a proposal under any legislation relating to bankruptcy or insolvency or has been subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets, except as follows:

> John F. Kearney, Danesh Varma and Neil J.F. Steenberg are directors and/or officers of Labrador Iron Mines Holdings Limited which on April 2, 2015, instituted proceedings in the Ontario Superior Court of Justice for a financial restructuring by means of a plan of arrangement under the Companies' Creditors Arrangement Act which plan was approved on December 6, 2016 and sanctioned by the Court on December 14, 2016.

Personal Bankruptcies

No proposed director has within the ten years prior to the date hereof become bankrupt or made a proposal under any legislation relating to bankruptcy or insolvency or been subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold the assets of the proposed director.

Conflicts of Interest

The transactions in which directors, senior officers, promoters or principal holders of Canadian Manganese securities have had an interest in are described herein under the headings "*Interest of Management and Others in Material Transactions*" and "*Executive Compensation*". Other than as described under these headings, there are no material transactions with or involving the directors, senior officers, promoters or principal holders of securities of Canadian Manganese that have occurred since incorporation. Some of the directors and officers of Canadian Manganese are engaged and will continue to be engaged in the search for additional business opportunities on behalf of other corporations, and situations may arise where these directors and officers will be in direct competition with Canadian Manganese. Certain of Canadian Manganese's directors and officers also serve as directors and/or officers of companies which may enter into contracts with Canadian Manganese in the future. In the event that this occurs, a conflict of interest will exist. Directors in a conflict of interest position are required to disclose such conflicts to Canadian Manganese.

The directors of Canadian Manganese are required by law to act honestly and in good faith with a view to the best interests of Canadian Manganese and to disclose any interests that they may have in any material contract or material transaction. If a conflict of interest arises at a meeting of the board of directors, any director in a conflict is required to disclose his interest and abstain from voting on such matter.

The directors and officers of Canadian Manganese are aware of the existence of laws governing accountability of directors and officers for corporate opportunity and requiring disclosures by directors of conflicts of interest in respect of Canadian Manganese and are required to comply with such laws in respect of any directors' and officers' conflicts of interest or in respect of any breaches of duty by any of its directors or officers.

EXECUTIVE COMPENSATION

Named Executive Officers

During the year ended December 31, 2018, Canadian Manganese had two Named Executive Officers ("NEOs") as defined under applicable Canadian securities regulations; namely, John F. Kearney; Chief Executive Officer and Danesh Varma, Chief Financial Officer.

Summary of Executive Compensation

The NEOs have received no compensation of any kind from Canadian Manganese during the financial year ended December 31, 2018, and subsequently until the date hereof. Canadian Manganese does not plan to provide regular compensation to its executive officers during the next 12 months, however, it is anticipated that certain of its officers will be engaged from time to time to provide services as consultants to Canadian Manganese and they will be compensated at standard industry rates on the basis of the actual time spent and the nature of the services provided.

Canadian Manganese does not have a formal annual incentive bonus plan in place. Any award of a bonus to executive officers would be entirely at the discretion of the Board.

Stock Options and Other Compensation Securities

Canadian Manganese does not currently have an incentive stock option or stock appreciation right plan

During the financial year ended December 31, 2018, there were no incentive stock options and SARs (stock appreciation rights) granted to or exercised by the Directors or NEO's.

Defined Benefit or Actuarial Plan

Canadian Manganese does not have a defined benefit or actuarial pension plan.

Compensation Governance

Canadian Manganese does not have a Compensation Committee. Compensation matters will be reviewed by the full Board of Directors when required. An interested board member is required to abstain from voting on matters concerning his or her own compensation. Currently, the directors of Canadian Manganese do not receive fees in their capacities as directors.

The Board will rely on the general knowledge and experience of its members, and recommendations from the Chief Executive Officer, in reviewing appropriate levels of compensation for Named Executive Officers and the implementation of, or amendment to, any other aspects of compensation that the Board may review from time to time. The current Board has relevant general, but not direct, experience in executive compensation and compensation policies and practices in the mineral resources business gained through current and prior experience in business and in the minerals industry. Canadian Manganese has not had any contractual arrangement with any compensation consultant at any time since incorporation.

The Board as a whole will be responsible for considering the risks associated with Canadian Manganese compensation policies and practices and has not yet identified any specific risks associated with Canadian Manganese compensation policies and practices that are reasonably likely to have a material adverse effect.

Because of the current scale and scope of Canadian Manganese's operations, and the limited number of senior management and employees, and the oversight by the Board of all significant activities, including risk management, the Board does not believe that Canadian Manganese's compensation policies and practices would encourage any executive officer to take inappropriate or excessive risk.

Canadian Manganese NEOs or Directors are not prohibited from purchasing financial instruments, including, prepaid variable forward contracts, equity swaps, collars, or units of exchange funds that are designed to hedge or offset a decrease in market value of equity securities granted as compensation or held, directly or indirectly, by the Named Executive or Director.

Termination and Change of Control Benefits

Canadian Manganese has no compensatory plan or arrangement in respect of compensation received, or that may be received, by a NEO since incorporation or in Canadian Manganese's current financial year to compensate such NEO in the event of the termination of employment (whether voluntary, involuntary or constructive), resignation, retirement, a change of control of Canadian Manganese or a change in responsibilities of the NEO following a change in control.

INDEBTEDNESS OF DIRECTORS AND EXECUTIVE OFFICERS

None of the Directors, officers, or associates of such persons have been indebted to Canadian Manganese at any time since incorporation of Canadian Manganese. No such person has been indebted to any other entity where such indebtedness is the subject of a guarantee, support agreement, letter of credit or similar arrangement or understanding provided by Canadian Manganese in respect of the purchase of securities or otherwise.

INTERESTS OF INFORMED PERSONS IN MATERIAL TRANSACTIONS

No informed person of Canadian Manganese, proposed Director of Canadian Manganese, or associate or affiliate of any informed person or proposed Director of Canadian Manganese has or has had any material interest, direct or indirect, in a transaction since the commencement of Canadian Manganese's most recently completed financial year or in any proposed transaction which has materially affected or would materially affect Canadian Manganese.

INDEMNIFICATION OF DIRECTORS AND OFFICERS

The by-laws of Canadian Manganese provide that Canadian Manganese is required to indemnify a director or officer, or former director or officer, or a person who acts or acted at the request of Canadian Manganese as a director or officer of a body corporate of which Canadian Manganese is or was a shareholder or creditor, and his or her heirs and legal representatives, against all costs, charges and expenses, including an amount paid to settle an action or satisfy a judgment, reasonably incurred by him or her in respect of any civil, criminal or administrative action or proceeding to which he or she is made a party by reason of having been a director or officer of such body corporate if (a) he or she acted honestly and in good faith with a view to the best interests of Canadian Manganese, and (b) in the case of a criminal or administrative action or proceeding that is enforced by a monetary penalty, he or she had reasonable grounds for believing that his or her conduct was lawful.

Canadian Manganese has not, as yet, purchased insurance for the benefit of Canadian Manganese's directors and officers against liability incurred by them in their capacity as directors and officers. The purchase of such insurance will be considered by the Board following completion of the Arrangement.

AUDIT COMMITTEE AND RELATIONSHIP WITH AUDITORS

Audit Committee

As a wholly-owned subsidiary of Buchans, Canadian Manganese does not have an Audit Committee at present but intends to appoint one as soon as possible following implementation of the Arrangement. Such Audit Committee will be constituted in accordance with all applicable legal and regulatory requirements including Multinational Instrument 52-110 – *Audit Committees* of the Canadian Securities Regulators.

The Audit Committee, when constituted, will adopt a written Charter which will comply with applicable legal and regulatory requirements.

CORPORATE GOVERNANCE

The Directors of Canadian Manganese are committed to maintaining high standards of corporate governance and to managing Buchans in an honest and ethical manner. The Board believes that its corporate governance policies and procedures are appropriate in light of the size, nature and stage of development of Buchans. The Board is accountable to shareholders for good corporate governance and has adopted the following procedures in this regard.

Board of Directors

The Board currently comprises two members, none of whom are "independent" within the meaning of Canadian National Instrument 58-101, Disclosure of Corporate Governance Practices (the "NI 58-101").

A Director who has no direct or indirect material relationship with the Company is independent within the meaning of NI 58-101. A "material relationship" is defined as a relationship which could, in the view of the Board, be reasonably expected to interfere with the exercise of a director's independent judgment.

The Chairman of the Board, John F. Kearney, is not considered independent in that he is also Chief Executive Officer of the Company. Danesh Varma, Chief Financial Officer is also considered non-independent.

Canadian Manganese intends to recruit at least two more independent directors as soon as practicable following implementation of the Arrangement.

Directorships

The following Directors of Canadian Manganese are at present directors of reporting issuers (or equivalent):

Buchans Director	Name of Reporting Issuer
John Kearney	Anglesey Mining Plc (LSE:AYM) Conquest Resources Limited (TSXV:CQR) Labrador Iron Mines Holdings Limited (OTC: LBRMF) Xtierra Inc. (TSXV: XAG)
Danesh Varma	Anglesey Mining Plc (LSE:AYM) Conquest Resources Limited (TSXV:CQR) Labrador Iron Mines Holdings Limited (OTC: LBRMF) Xtierra Inc. (TSXV: XAG)

Orientation and Continuing Education

The Board recognizes the importance of continuing education to ensure that members of the Board maintain the skill and knowledge for them to meet their obligation as directors. Canadian Manganese currently has no formal orientation and education program for Board members. Information (such as recent reports, technical reports and various other operating, property and budget reports) is provided to Board members to ensure that they are familiarized with Canadian Manganese's business and the procedures of the Board. In addition, directors are encouraged to visit Canadian Manganese's properties at least once per year. Canadian Manganese also encourages continuing education of its Directors by distributing information on industry and regulatory matters and by facilitating attendance at industry conferences, seminars or courses.

Ethical Business Conduct

After consideration, the Board has decided not to adopt a written code of business conduct and ethics due to Canadian Manganese's small size and limited scale of operations.

In addition, Directors of Canadian Manganese may also serve as Directors and officers of other companies engaged in similar business activities, the Directors must comply with the conflict of interest provisions under applicable corporate legislation, as well as the relevant securities regulatory instruments, in order to ensure that Directors exercise independent judgment in considering transactions and agreements in respect of which a Director or officer has a material interest. Any interested Director is required to declare the nature and extent of his or her interest and is not entitled to vote at meetings of Directors where such a conflict arises.

The Board believes that the fiduciary duties placed on individual directors by Canadian Manganese's governing corporate legislation and the common law and the restrictions placed by applicable corporate legislation on an individual director's participation in decisions of the Board in which the Director has an interest are sufficient to ensure that the Board operates in the best interests of Canadian Manganese.

Nomination of Directors

The Board does not have a separate nominating committee. The Board performs the functions of a nominating committee with responsibility for the appointment and assessment of Directors. In view of the current size of Buchans and the current scale of its operations, the composition of the current Board and the service of the current members of the Board, a separate nominating committee has not as yet been considered necessary by Canadian Manganese.

While there are no specific criteria for Board membership, Canadian Manganese will attempt to attract and maintain Directors with business experience and a particular knowledge of mineral exploration, project development and mining or other areas such as finance which would assist Canadian Manganese. Nominations to the Board will be the result of recruitment efforts by Canadian Manganese and discussions among the Directors prior to the consideration by the Board as a whole.

Compensation

Given the current stage of development of Canadian Manganese, the Directors of Canadian Manganese do not currently receive fees in their capacities as Directors.

No cash compensation has been paid to directors since incorporation. Directors who also provide professional or consulting services to the Company may be compensated based upon the invoiced value of the services provided. Directors are entitled to be reimbursed for all reasonable expenses incurred in attending meetings of the board or any committee of the board.

Other Board Committees

The Board has not established any other committees.

Assessments

Given the size of Canadian Manganese and its current stage of development and scale of operations, the Board believes that its structure and composition is appropriate and that the Board is functioning effectively at the current time. The Board will assess the contributions and effectiveness of the Board as a whole, and each individual Director, in order to determine whether each is functioning effectively.

RISK FACTORS

Canadian Manganese at Exploration Stage Only- Limited Operating History

Canadian Manganese has no history of earnings. Canadian Manganese's properties are in the exploration stage and there are no known commercial quantities of mineral reserves on the properties. There can be no assurance that Canadian Manganese will place its resource properties into production or generate revenue, operate profitably or provide a return on investment in the future.

Additional Financing

Canadian Manganese does not currently have sufficient financial resources necessary to undertake all of its currently planned activities. There can be no assurance that Canadian Manganese will be successful in obtaining any required funding necessary to conduct exploration on Canadian Manganese's exploration properties or to develop mineral resources on such properties, if commercially mineable quantities of such resources are located thereon. Failure to obtain additional financing on a timely basis could cause Canadian Manganese to forfeit its interest in such properties. If additional financing is raised through the issuance of equity or convertible debt securities of Canadian Manganese, the interests of shareholders in the net assets of Canadian Manganese will be diluted.

Absence of Public Trading Market

The Canadian Manganese Shares will not be listed or quoted on any stock exchange in the short term. There is no certainty that such a listing or admission will be obtained. There can be no assurance that an active market for Canadian Manganese Shares will develop or be sustained after the Effective Date. If an active public market for Canadian Manganese Shares does not develop, the liquidity of an investor's investment may be limited. In the absence of an active and liquid trading market, holders of Canadian Manganese Shares may have difficulty selling their shares.

Since the Canadian Manganese Shares have not been traded on a market or stock exchange their value is and may remain uncertain. There can be no assurance that Canadian Manganese Shares can be sold in the future at the same price as that at which they have been valued for the purposes of the Arrangement.

As the Canadian Manganese Shares will not be subject to any market or exchange rules pending the future listing of Canadian Manganese on a stock exchange, holders of Canadian Manganese Shares will not be afforded the same level of protections and disclosures of material information, or the publication of financial information and compliance with certain corporate governance standards that they currently benefit from.

If the Canadian Manganese Shares are, at some time in the future, listed on a stock exchange, it should be noted that securities of exploration companies have experienced substantial volatility in the past, often based on factors unrelated to the financial performance or prospects of the companies involved. These factors include macroeconomic developments in North America and globally, and market perceptions of the relative attractiveness of particular industries. The value of Canadian Manganese shares is also likely to be significantly affected by short-term changes in metal prices or in Canadian Manganese's financial condition or results of operations as reflected in quarterly earnings reports. Other factors unrelated to Canadian Manganese' performance that may have an effect on the price of the Canadian Manganese Shares include the following:

- the extent of analytical coverage available to investors concerning Canadian Manganese's business may be limited if investment banks with research capabilities do not follow its securities;
- the limited trading volume and general market interest in Canadian Manganese's securities may affect an investor's ability to trade the Canadian Manganese Shares;
- the relatively small size of the publicly held shares will limit the ability of some institutions to invest in Canadian Manganese' securities; and
- As a result of any of these factors, the market price of Canadian Manganese Shares at any given point in time may not accurately reflect the long-term value of Canadian Manganese.

Title Risks

Although Canadian Manganese has exercised the usual due diligence with respect to determining title to and interests in its properties, there is no guarantee that such title to or interests in the properties will not be challenged or impugned and title insurance is generally not available. Canadian Manganese's mineral property interests may be subject to prior unregistered agreements or transfers or native land claims and title may be affected by, among other things, undetected defects. Surveys have not been carried out on any of Canadian Manganese's properties in accordance with local laws; therefore, their existence and area could be in doubt. Until competing interests in the mineral lands have been determined, Canadian Manganese can give no assurance as to the validity of title of Canadian Manganese to those lands or the size of such mineral lands.

Exploration, Development and Operating Risk

Resource exploration and development is a speculative business, characterised by a number of significant risks including, among other things, unprofitable efforts resulting not only from the failure to discover mineral deposits but also from finding mineral deposits that, though present, are insufficient in quantity and quality to return a profit from production. The marketability of minerals acquired or discovered by Canadian Manganese may be affected by numerous factors that are beyond the control of Canadian Manganese and that cannot be accurately predicted, such as market fluctuations, the proximity and capacity of milling facilities, mineral markets and processing equipment, and such other factors as government regulations, including regulations relating to royalties, allowable production, importing and exporting minerals and environmental protection, the combination of which factors may result in Canadian Manganese not receiving an adequate return of investment capital. All of the claims to which Canadian Manganese has a right to acquire an interest are in the exploration stage only and are without a known body of commercial ore. Development of the subject mineral properties would follow only if favourable exploration results are obtained and a positive feasibility study is completed.

The business of exploration for minerals and mining involves a high degree of risk. Few properties that are explored are ultimately developed into producing mines. There is no assurance that Canadian Manganese mineral exploration and development activities will result in any discoveries of commercial bodies of ore. The long-term profitability of Canadian Manganese operations will in part be directly related to the costs and success of its exploration and development programs, which may be affected by a number of factors.

Substantial expenditures are required to establish reserves through drilling and to develop the mining and processing facilities and infrastructure at any site chosen for mining. Although substantial benefits may be derived from the discovery of a major mineralized deposit, no assurance can be given that minerals will be discovered in sufficient quantities to justify commercial operations or that funds required for development can be obtained on a timely basis.

No Assurance of Production

Mineral exploration is highly speculative in nature, involves many risks, and frequently does not lead to the discovery of commercial reserves of minerals. While the rewards can be substantial if commercial reserves of minerals are found, there can be no assurance that Canadian Manganese past or future exploration efforts will be successful, that any production therefrom will be obtained or continued, or that any such production which is attempted will be profitable.

Factors Beyond Canadian Manganese's Control

The exploration and development of mineral properties and the marketability of any minerals contained in such properties will be affected by numerous factors beyond the control of Canadian Manganese. These factors include government regulation, high levels of volatility in market prices, availability of markets, availability of adequate transportation infrastructure and related facilities and the imposition of new or amendments to existing taxes and royalties. The effect of these factors cannot be accurately predicted.

Insurance and Uninsured Risks

Canadian Manganese's business is subject to a number of risks and hazards generally, including adverse environmental conditions, industrial accidents, labour disputes, unusual or unexpected geological conditions, ground or slope failures, cave-ins, changes in the regulatory environment and natural phenomena such as inclement weather conditions, floods and earthquakes.

Such occurrences could result in damage to mineral properties or production facilities, personal injury or death, environmental damage to Canadian Manganese's properties or the properties of others, delays in development or mining, monetary losses and possible legal liability.

Although Canadian Manganese will purchase insurance to protect against certain risks in such amounts as it considers reasonable, such insurance may not cover all the potential risks associated with a mining company's operations. Canadian Manganese may also be unable to maintain insurance to cover these risks at economically feasible premiums. Insurance coverage may not continue to be available or may not be adequate to cover any resulting liability. Moreover, insurance against risks such as environmental pollution or other hazards as a result of exploration and production is not generally available to Canadian Manganese or to other companies in the mining industry on acceptable terms. Canadian Manganese might also become subject to liability for pollution or other hazards which may not be insured against or which Canadian Manganese may elect not to insure against because of premium costs or other reasons. Losses from these events may cause Canadian Manganese to incur significant costs that could have a material adverse effect upon its financial performance and results of operations.

Environmental Risks and Hazards

Canadian Manganese's operations may be subject to environmental regulations in the various jurisdictions in which it operates. Environmental legislation provides for restrictions and prohibitions on spills, releases or emissions of various substances produced in association with certain mining industry operations, such as seepage from tailings disposal areas, which would result in environmental pollution. A breach of such legislation may result in the imposition of fines and penalties. In addition, certain types of operations require the submission and approval of environmental impact assessments. Environmental legislation is evolving in a manner that means standards are stricter, and enforcement, fines and penalties for non-compliance are more stringent. Environmental assessments of proposed projects carry a heightened degree of responsibility for companies and directors, officers and employees. The cost of compliance with changes in governmental regulations has a potential to reduce the profitability of operations. Canadian Manganese intends to comply fully with all applicable environmental regulations.

Government Regulation and Permitting

The current or future operations of Canadian Manganese, including development activities and commencement of production on its properties, require permits from various federal, provincial or territorial and local governmental authorities, and such operations are and will be governed by laws and regulations governing prospecting, development, mining, production, exports, taxes, labour standards, occupational health, waste disposal, toxic substances, land use, water use, environmental protection, land claims of local people, mine safety and other matters.

Such operations and exploration activities are also subject to substantial regulation under applicable laws by governmental agencies that will require Canadian Manganese to obtain permits, licences and approvals from various governmental agencies. There can be no assurance, however, that all permits, licences and approvals that Canadian Manganese may require for its operations and exploration activities will be obtainable on reasonable terms or on a timely basis or that such laws and regulations will not have an adverse effect on any mining project which Canadian Manganese might undertake.

Failure to comply with applicable laws, regulations, and permitting requirements may result in enforcement actions thereunder, including orders issued by regulatory or judicial authorities causing operations to cease or be curtailed, and may include corrective measures requiring capital expenditures, installation of additional equipment or remedial actions. Parties engaged in mining operations may be required to compensate those suffering loss or damage by

reason of mining activities and may have civil or criminal fines or penalties imposed for violations of applicable laws or regulations and, in particular, environmental laws.

Amendments to current laws, regulations and permits governing operations and activities of mining companies, or more stringent implementation thereof, could have a material adverse impact on Canadian Manganese and cause increases in exploration expenses, capital expenditures or production costs or reduction in levels of production at producing properties or require abandonment or delays in development of new mining properties.

Infrastructure

Mining, processing, development and exploration activities depend, to one degree or another, on adequate infrastructure. Reliable roads, bridges, power sources and water supply are important determinants which affect capital and operating costs. There can be no assurance that Canadian Manganese will be successful in obtaining access to such infrastructure on economically feasible terms or at all. Failure to obtain access to such infrastructure could render Canadian Manganese's properties unviable. Unusual or infrequent weather phenomena, terrorism, sabotage, government or other interference in the maintenance or provision of such infrastructure could adversely affect Buchans' operations, financial condition and results of operations.

Competition

The mining industry is intensely competitive in all its phases, and Canadian Manganese competes with other mining companies in connection with the acquisition of properties producing or capable of producing, precious and base metals. Many of these companies have greater financial resources, operational experience and technical facilities than Canadian Manganese. Competition could adversely affect Buchans' ability to acquire suitable properties or prospects in the future. Consequently, Canadian Manganese's revenue, operations and financial condition could be materially adversely affected.

Executives and Conflicts of Interest

Canadian Manganese is dependent on certain key executives and the loss of these executives may adversely affect our business and results of operations. Due to the relatively small size of the Company, the loss of these persons or Canadian Manganese inability to attract and retain additional highly skilled or experienced employees may adversely affect its business and future operations.

Certain of the directors and officers of the Company also serve as directors and/or officers of, or have significant shareholdings in, other companies involved in natural resource exploration and development and consequently there exists the possibility for such directors and officers to be in a position of conflict. In addition, some of the directors and officers are engaged and will continue to be engaged in the search for additional business opportunities on behalf of other corporations, and situations may arise where these directors and officers will be in direct competition with Canadian Manganese.

Conflicts, if any, will be dealt with in accordance with the relevant provisions of applicable corporate and securities laws. Any decision made by any of such directors and officers involving Canadian Manganese will be made in accordance with their duties and obligations to deal fairly and in good faith with a view to the best interests of Canadian Manganese and its shareholders. In addition, each of the directors is required to declare and refrain from voting on any matter in which such directors may have a conflict of interest in accordance with the procedures set forth in the Canada Business Corporations Act and other applicable laws.

To the extent that such other companies may participate in ventures in which Canadian Manganese may participate, the directors of Canadian Manganese may have a conflict of interest in negotiating and concluding terms respecting the extent of such participation. In the event that such a conflict of interest arises at a meeting of the Company's directors, a director who has such a conflict will abstain from voting for the approval of such participation or such terms.

From time to time several companies may collectively participate in the acquisition, exploration and development of natural resource properties thereby allowing for their participation in larger programs, permitting involvement in a greater number of programs and reducing financial exposure in respect of any one program. It may also occur that a particular company will assign all or a portion of its interest in a particular program to another of these companies due to the financial position of the company making the assignment.

Under the laws of Canada, the directors of the Company are required to act honestly, in good faith and in the best interests of the Company. In determining whether or not Canadian Manganese will participate in a particular program and the interest therein to be acquired by it, the directors will primarily consider the degree of risk to which the Company may be exposed and its financial position at that time.

Limited Experience with Development-Stage Mining Operations

Canadian Manganese has limited experience in placing resource properties into production, and its ability to do so will be dependent upon using the services of appropriately experienced personnel or entering into agreements with other major resource companies that can provide such expertise. There can be no assurance that Canadian Manganese will have available to it the necessary expertise when and if Canadian Manganese places its resource properties into production in the future.

Ability to Attract and Retain Qualified Personnel

Recruiting and retaining qualified personnel is critical to Canadian Manganese success. The number of persons skilled in the acquisition, exploration and development of mining properties is limited and competition for such persons is intense. As Canadian Manganese business activity grows, additional key financial, administrative and mining personnel as well as additional operations staff will be required. Although Canadian Manganese believes it will be successful in attracting, training and retaining qualified personnel, there can be no assurance of such success. If Canadian Manganese is not successful in attracting, training and retaining qualified personnel, the efficiency of operations could be affected.

Fluctuating Mineral Prices

Factors beyond the control of Canadian Manganese may affect the marketability of metals discovered, if any. Metal prices are subject to significant fluctuation and are affected by a number of factors which are beyond the control of Canadian Manganese. The principal factors include: diminished demand which may arise if current rates of economic growth in India and China are not sustained; war, or international trade embargoes; increases in supply resulting from the alleviation of professional and skilled labour shortages experienced by the world's largest base metal producers; and, increases in supply resulting from the discovery and the development of new sources of metals. The effect of these factors on Canadian Manganese operations cannot be predicted.

Foreign Currency Exchange

Exchange rate fluctuations may affect the costs that Canadian Manganese incurs in its operations. Canadian Manganese's financing and operating activities have been denominated in Canadian dollars, while prices for base metals are generally quoted in U.S. dollars. The appreciation of the U.S. dollar against the Canadian dollar, if it occurs, may have a significant impact on Buchans' financial position and results of operations in the future.

Dividends

Canadian Manganese has not paid any dividends on its Common Shares since incorporation. Canadian Manganese has a limited operating history and there can be no assurance of its ability to operate its projects profitably. Payment of any future dividends will be at the discretion of Canadian Manganese's board of directors after taking into account many factors, including Canadian Manganese's operating results, financial condition and current and anticipated cash needs.

PROMOTER

Buchans, having taken the initiative in substantially reorganizing Canadian Manganese as contemplated in the Plan, is considered a promoter of Canadian Manganese within the meaning of applicable securities laws. Buchans currently owns all of the issued shares of Canadian Manganese. Upon completion of the Plan, Buchans will hold no shares of Canadian Manganese.

LEGAL PROCEEDINGS

Management is not aware of any material legal proceedings, actual, contemplated or threatened to which Canadian Manganese or any of its subsidiaries is a party or to which any of their properties or assets are subject.

INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

No director, executive officer or principal shareholder of Canadian Manganese, and no associate or affiliate of the foregoing, has had a material interest, direct or indirect, in any transaction that has materially affected or will materially affect Canadian Manganese except all of the directors of Canadian Manganese are currently directors of Buchans.

EXPERTS

Information of a scientific or technical nature regarding Canadian Manganese properties included in this Circular are based upon the Technical Report referred to under the heading "*Business of the Company"* above. The authors of this Technical Report are "Qualified Persons" as such term is defined in NI 43-101. Each author of the Technical Report is independent of Canadian Manganese within the meaning of NI43-101 and do not have any interest in any of Canadian Manganese's properties and do not own any securities of Canadian Manganese.

AUDITORS, TRANSFER AGENT AND REGISTRAR

Auditors

Canadian Manganese's auditors are McGovern Hurley LLP, located at 251 Consumers Road, Suite 800, North York, Ontario M2J 4R3.

Transfer Agent and Registrar

The transfer agent and registrar for the Canadian Manganese Shares is Computershare Investor Services Inc., located at 8th Floor, North Tower, 100 University Avenue, Toronto, Ontario, M5J 2Y1.

MATERIAL CONTRACTS

Except for contracts made in the ordinary course of business, the following are the only material contract entered into by Canadian Manganese since January 1, 2018 which is currently still in effect:

1. Arrangement Agreement among Buchans, Canadian Manganese, and Minco dated as of October 28, 2019 relating to the Plan and described in the Circular; and

A copy of the above material contract may be inspected prior to Effective Date and for a period of 30 days thereafter during normal business hours at Canadian Manganese's executive office at Suite 1805, 55 University Avenue, Toronto, Ontario, Canada, M5J 2H7.