

June 30, 2021

## VANADIUM ONE IRON CORP. (VONE: TSXV)

### BUSINESS DESCRIPTION

Based in Toronto, Canada, Vanadium One Iron Corp. is a mineral exploration and development company that is advancing its wholly owned Mont Sorcier iron and vanadium project located just outside of Chibougamau, Quebec. The site hosts a large, high-quality magnetite iron resource with significant and extractable vanadium as a by-product. Metallurgical test work to date suggests that the site will produce a premium, above 65%-grade, iron ore product.

In early 2020, Vanadium One announced the findings of a preliminary economic assessment (PEA) on the site, which estimated an after-tax net present value (NPV) of C\$1.7 billion (\$1.4 billion USD, at the current 1:0.82 exchange rate) and an internal rate of return of 34% based on a long-term 65% iron concentrate price of US\$92/t as compared to current spot prices well in excess of US\$200/t. Other key estimated metrics cited include a generation of average annual free cash flow of C\$180 million (\$150 million USD), resulting in a three-year payback on required upfront capital of C\$437 million (\$360 million USD). Total cumulative, after-tax free cash flow over a 37-year mine life was estimated at C\$6.3 billion (\$5.2 billion USD).

Following the publishing of the PEA report, Vanadium One initiated activities under a two-year plan that it expects will improve upon these results. Primarily, this will come through the expansion of the site's resources to higher-confidence classifications, and further metallurgical test work that, in the aggregate, should enable the completion of a bankable feasibility study, which the company expects to undertake in 2022. Primary among these activities is a drilling program to confirm the economic viability of commercial operations at Mont Sorcier and convert indicated and inferred resource to measured tonnage.

In our view, defining sufficient resources to higher-confidence categories is a key consideration for supporting a bankable feasibility study, with an expected minimum 20-year mine life. To date, most of the resource identified in the PEA, and in subsequent drilling, remains categorized as Inferred, whereas a successfully completed drilling program would enable classification as Indicated, or Measured, for a significant portion of

*(continued on next page)*

### KEY STATISTICS

#### Key Stock Statistics

Recent price (6/29/21, CAD)	0.22
52 week high/low (CAD)	0.36 - 0.07
Shares outstanding (M)	84.7
Market cap (M, CAD)	19
Dividend	Nil
Yield	Nil

#### Sector Overview

Sector	Materials
Sector % of S&P 500	2.8%

#### Financials (\$M, CAD)

Cash & Mkt Securities	0.2
Debt	0.0
Working Capital (\$M)	0.4
Current Ratio	1.7
Total Debt/Equity (%)	NM
Payout ratio	NM
Revenue (M) TTM	NM
Net Income (M) TTM	NM
Net Margin	NM

#### Risk

Beta	0.25
Inst. ownership	0%

#### Valuation

P/E forward EPS	NA
Price/Sales (TTM)	NA
Price/Book (TTM)	NA

#### Top Holders

NA  
NA  
NA

#### Management

CEO	Mr. Cliff Hale-Sanders
CFO	Mr. Alonso Sotomayor
COO	Mr. Ashley Martin
Company website	www.vanadiumone.com

### PRICE CHART



**COMPANY SPONSORED REPORT. SEE LAST PAGE FOR DISCLOSURES.**

this material. We believe that such a change in classification would begin to de-risk the underlying economic analyses on the site and enable the formal feasibility study and future development of the site on favorable terms.

Vanadium One has started to deliver on many of the first-year milestones under this program. Subsequent to the PEA, Vanadium One undertook a further drilling program in late 2020 to expand the overall size of the Mont Sorcier deposit. As of May 2021, the company released a new resource estimate that now sits at 113.5 million tonnes of magnetite resource as Indicated, with a further 950 million tonnes classified as Inferred, highlighting the large scale potential of the resource. The drilling program resulted in a more than a doubling of the Inferred mineral resource tonnage in the North Zone. The company now estimates that the North Zone holds Inferred Mineral Resources of 809.1 million tons, which represents a 433 million ton increase over previous quantity suggested in the PEA. The South Zone is estimated to hold 113.5 million tons of Indicated Mineral Resources, and an additional Inferred Mineral Resources of 144.6 million tons. In June 2021, Vanadium One began a new, approximately 15,000-meter drilling program, covering both the North and South Zones, aiming to upgrade the confidence in the resource by upgrading the resource categories to backstop the planned feasibility study. This drill program is targeted for completion by late 2021. The company has also commenced base line environmental work as part of this work program.

Vanadium One has undertaken additional detailed metallurgical work to assess the concentrate grades of the site's resource. This work has validated the expectation for production of high-grade (65+% Fe) premium priced iron ore concentrate, as well as substantial vanadium product that warrants extraction and commercial sale. The company has engaged global, independent geological and mineral estimation firms to complete this work, which, in our view, further validates these findings.

Because of recent fundings, the company is also making progress on multiple other fronts, including recently initiating environmental baseline studies and early stages of the formal permitting processes. It also entered into discussions with various local community stakeholders. Over the coming months, we expect Vanadium One to commence discussions for commercial agreements with CN, Hydro Quebec and Quebec Port Authorities, and other groups, and to initiate engineering and design work, as it continues to move towards the feasibility study.

During the second quarter of 2021, Vanadium One successfully raised \$6.9 million from a series of private placement financings. It also entered into a finance-raise assistance agreement with Glencore, under which Glencore will assist Vanadium One in raising at least \$10 million USD, and is responsible for supporting \$8 million of this funding. Separately, Glencore and Vanadium One entered into an offtake agreement, which entitles Glencore to purchase 100% of annual vanadium rich iron concentrate produced at Mont Sorcier

over an initial eight-year term, and requires it to secure a value for the contained vanadium. The deal includes a price participation agreement in the offtake for any premium secured above the Metal Bulletin 65% iron index price for a given quotational period for the product sold. The deal's extended terms are flexible, as Glencore's rights can be extended upon meeting approved funding terms for project construction, or scaled back should Vanadium One need to secure project development funding.

## COMPETITIVE ADVANTAGE

Despite a more-than 100% increase in the spot price for iron over the past year, we believe the long-term market outlook for iron ore remains healthy. Currently, consensus estimates forecast a continued rise in pricing, albeit more in line with the industry's 7% average growth rate. Further, third-party marketing studies support premium product pricing for iron ore and vanadium, boosted by strong demand and tightening regulations in China (requiring higher grades of ore, amid environmental concerns). We note that domestic Chinese vanadium titanium mine supply has been declining in recent years, which could provide an economic tailwind to the output at Mont Sorcier.

In our view, the Mont Sorcier project is ideally located to deliver maximum benefits for Vanadium One. The Chibougibou region has been home to various mining and development operations for more than 100 years, and has a favorable permitting environment. Quebec has long been recognized as a top-tier mining jurisdiction in the world. Further, economic prospects for the site are supported by close proximity and robust access to existing infrastructure such as all-weather roads, water, low-cost grid hydropower, and sufficient railway capacity and ports for export to global markets. Thus, we expect the project to require modest infrastructure capital needs.

We also view the experience of Vanadium One's management team as a key competitive advantage. The team has an established history of developing mines from early stages. It is also working to forge partnerships with key logistical and service providers Quebec Hydro, Port Authorities, which we believe should mitigate many potential logistical challenges, as the project moves to commercial contracts and towards production stages.

In our view, the mineral resource at Mont Sorcier represents an underappreciated aspect of the Vanadium One story. As mentioned earlier, recent drilling in the North Zone of the site identified more resource than was initially Inferred in the preliminary economic assessment. As such, we expect that this will bolster confidence in the site's ability to provide sufficient Indicated resource to secure a bankable feasibility study that assumes a 20-year mine life with room to expand in the future. As more of the one billion tonnes of total

*(continued on next page)*

## PEER COMPARISON

Company	Ticker	Recent Price (\$)	52-Week High (\$)	52-Week Low (\$)	Mkt. Cap (\$ML)	1-yr Price Change (%)	1-yr Rev Growth (%)	1 YR EPS Growth (%)	P/E Ratio	Beta	Yield (%)
Vanadium One Iron Corp.	TSXV: VONE	0.22*	0.36*	0.07*	19*	175	NM	NM	NM	0.25	NA
Black Iron Inc.	TSX: BKI	0.42*	0.76*	0.10*	121*	332	NM	NM	NM	1.82	NA
Oceanic Iron Ore Corp.	TSXV: FEO	0.19*	0.32*	0.14*	19*	36	NM	NM	NM	0.44	NA
Macarthur Minerals Limited	TSXV: MMS	0.44*	0.7*	0.15*	61*	175	NM	NM	NM	2.4	NA

\* Canadian Dollars (CAD)

resources are targeted for higher-confidence classification, we see the potential for the project to be expanded over time -- and, importantly, funded through cash flow.

In addition, the viability of vanadium as a payable byproduct represents another value-add to the iron core resource. We note that all iron ore has vanadium, to some extent. However, some does not have enough value to warrant extraction. We are encouraged by the findings of recent metallurgical testing, which suggests a high-grade ore and the potential for substantial economic benefit.

## ANALYST COMMENTARY: EARNINGS

In our view, Vanadium One's earnings are less material than other industries, given its status as a pre-production mining operation. Rather, its progress towards executing on key deliverables in the development of the Mont Sorcier site and its funding to complete these steps are more-relevant benchmarks.

Still, for the nine months ended November 30, 2020, the company's total operational expenses declined by 44% over the prior year period, and the net comprehensive loss for the nine-month period was \$0.001 per share. The company maintained positive working capital during the nine-month period.

At a current market capitalization of \$19 million, the VONE shares are trading at a fraction of the C\$1.7 billion (\$1.4 billion USD) after-tax NPV suggested by the 2020 preliminary economic assessment. Further, mining companies historically trade closer to a range of 0.1x implied NAV. Vanadium One's valuation is well below this level as well.

We attribute the disconnect in market valuation to minimal value being ascribed to the approximate 90% of resource that is classified as Inferred and investor perceptions of the company remaining in a risk-capital category. However, with funding in place to bring the development program at Mont Sorcier towards a bankable feasibility study, we expect the ongoing drilling program to result in the reclassification of a large part of the currently Inferred resources to Indicated and/or Measured status. As these deliverables are completed, they should provide confidence to the market about the viability of these mineral assets and management's ability to maximize value.

Further, we see upside from the company's potential to expand production beyond that currently outlined in the PEA as well as from

the extended mine life that is envisioned in the feasibility study. We expect these expansion efforts can be funded through operating cash flow beyond the initial period.

## MANAGEMENT

Mr. Cliff Hale-Sanders is an entrepreneurial mining executive and has over 20 years of capital markets experience as an equity mining research analyst. During his career, he visited and evaluated numerous global mining development and production facilities to determine their investment potential. Mr. Hale-Sanders has a Masters' degree in Business Administration from McMaster University, a Bachelor of Science degree in Geology and Chemistry from the University of Toronto, and is a CFA Charterholder.

Vanadium One's board is comprised of six members, including four independent directors. The company's board, management, and advisors have significant experience in developing, building, and operating mining projects around the world. Further, the group is invested in the success of Vanadium One Iron, with an approximate 25% ownership stake.

## RECENT DEVELOPMENTS

During the second quarter of 2021, Vanadium One closed \$6.9 million in a series of private placement financings. This enabled the undertaking of additional work programs at Mont Sorcier, as the project moves through initial phases towards completing a full feasibility study.

In June 2021, Vanadium One announced the appointment of Robert Girardin as project manager to support its ongoing development. Mr. Girardin has extensive experience in iron ore mining and project development in Quebec and will be an integral part of the company's development team as it moves towards completion of a bankable feasibility study. Mr. Girardin joins Hubert Vallee as part of the Vanadium One Quebec-based project development team that has developed and worked at numerous iron ore mines.

Also in June 2021, at its Annual General Shareholders meeting, Vanadium One formally proposed a corporate name change, to Quebec Iron and Vanadium, or another alternative. Management believes the new name better reflects its target mineral resource. We expect this name change to be completed by the end of 2021, and anticipate that a rebranding effort will be implemented across 2022.

Steve Silver

**INCOME STATEMENT**

<b>Growth Analysis (\$MIL)</b>	<b>2018 (Feb 2019)</b>	<b>2019 (Feb 2020)</b>	<b>2020 (Feb 2021)</b>
Revenue	0.0	0.0	0.0
Gross Profit	0.0	0.0	0.0
G&A	0.7	0.7	0.5
R&D	0.0	0.0	0.0
Operating Income	-0.8	-1.1	-0.7
Interest Expense	0.0	0.0	0.0
Pretax Income	-0.8	-1.1	-0.7
Tax Rate (%)	NA	NA	NA
Net income	-0.6	-1.0	-0.4
Diluted Shares	40.2	55.3	71.0
EPS	-0.01	-0.02	-0.01
Dividend	NA	NA	NA
<b>Growth Rates (%)</b>			
Revenue	NA	NA	NA
Operating Income	NA	NA	NA
Net Income	NA	NA	NA
EPS	NA	NA	NA
<b>Valuation Analysis</b>			
Price (\$): High	NA	NA	NA
Price (\$):Low	NA	NA	NA
PE: High	NA	NA	NA
PE: Low	NA	NA	NA
PS: High	NA	NA	NA
PS: Low	NA	NA	NA
Yield: High	NA	NA	NA
Yield: Low	NA	NA	NA
<b>Financial &amp; Risk Analysis (\$MIL)</b>			
Cash	0.0	0.1	0.3
Working Capital	0.0	0.0	0.3
Current Ratio	1.1	0.9	1.5
LTDebt/Equity (%)	NM	NM	NM
Total Debt/Equity (%)	NM	NM	NM
<b>Ratio Analysis</b>			
Gross Profit Margin	NM	NM	NM
Operating Margin	NM	NM	NM
Net Margin	NM	NM	NM
Return on Assets (%)	NA	NA	NA
Return on Equity (%)	NA	NA	NA
Op Inc/Int Exp	NA	NA	NA
Div Payout	NA	NA	NA

## DISCLAIMER

Argus Research Co. has received a flat fee from the company discussed in this report as part of an “Equity Report” agreement between Argus and the company. No part of Argus Research’s compensation is directly or indirectly related to the content of this assessment or to other opinions expressed in this report. Argus Research provides a suite of Equity Report services including but not limited to initial reports with ongoing coverage and updates; distribution to Argus Research’s clients; a license to enable the company to proactively use and distribute the report ; a press release announcing our initial coverage and updates; and optional access to the Vickers Research database. The price for this suite of services generally ranges from \$11,000 to \$16,000 depending on the level of services selected. Argus Research receives no part of its compensation in the form of stock or other securities issued by the company discussed in this report, and has no long equity position or short sale position in the company’s stock. Argus Research is not involved in underwriting securities for the subject company, and will receive no proceeds or other financial benefit from any securities offering by the company. Argus Research; its officers, directors, and affiliates; and the author of this report have no financial interest in, or affiliation with, the subject firm. The report is disseminated primarily in electronic form and is made available at approximately the same time to all eligible recipients.

Argus Research Co. (ARC) is an independent investment research provider whose parent company, Argus Investors’ Counsel, Inc. (AIC), is registered with the U.S. Securities and Exchange Commission. Argus Investors’ Counsel is a subsidiary of The Argus Research Group, Inc. Neither The Argus Research Group nor any affiliate is a member of the FINRA or the SIPC. Argus Research is not a registered broker dealer and does not have investment banking operations. The Argus trademark, service mark and logo are the intellectual property of The Argus Research Group, Inc.

The information contained in this research report is produced and copyrighted by Argus Research Co., and any unauthorized use, duplication, redistribution or disclosure is prohibited by law and can result in prosecution. The content of this report may be derived from Argus research reports, notes, or analyses. The opinions and information contained herein have been obtained or derived from sources believed to be reliable, but Argus makes no representation as to their timeliness, accuracy or completeness or for their fitness for any particular purpose. This report is not an offer to sell or a solicitation of an offer to buy any security. The information and material presented in this report are for general information only and do not specifically address individual investment objectives, financial situations or the particular needs of any specific person who may receive this report. Investing in any security or investment strategies discussed may not be suitable for you and it is recommended that you consult an independent investment advisor. Nothing in this report constitutes individual investment, legal or tax advice. Argus may issue or may have issued other reports that are inconsistent with or may reach different conclusions than those represented in this report, and all opinions are reflective of judgments made on the original date of publication. Argus is under no obligation to ensure that other reports are brought to the attention of any recipient of this report. Argus shall accept no liability for any loss arising from the use of this report, nor shall Argus treat all recipients of this report as customers simply by virtue of their receipt of this material. Investments involve risk and an investor may incur either profits or losses. Past performance should not be taken as an indication or guarantee of future performance.

Argus has provided independent research since 1934. Argus Investors’ Counsel (AIC), a portfolio management business based in Stamford, Connecticut, is a customer of Argus Research Co. (ARC), based in New York. Argus Investors’ Counsel pays Argus Research Co. for research used in the management of the AIC core equity strategy and model portfolio and UIT products, and has the same access to Argus Research Co. reports as other customers. However, clients and prospective clients should note that Argus Investors’ Counsel and Argus Research Co., as units of The Argus Research Group, have certain employees in common, including those with both research and portfolio management responsibilities, and that Argus Research Co. employees participate in the management and marketing of the AIC core equity strategy and UIT and model portfolio products.