GIYANI METALS CORP.

BATTERY-GRADE MANGANESE DEVELOPMENT OPPORTUNITY

July 2020

TSX.V: EMM
CAUTIONARY NOTE

Forward Looking Statements

This presentation contains forward-looking statements and factual information that are current as of the date the presentation was originally delivered. When used in this presentation, words such as “may”, “would”, “could”, “will”, “expect”, “anticipate”, “estimate”, “believe”, “contemplate”, “intend”, “budget” “plan” and other similar expressions are intended to identify forward-looking statements. Forward-looking statements include, but are not limited to, statements with respect to the timing and amount of estimated future exploration, success of exploration activities, expenditures, permitting, and requirements for additional capital and access to data. Forward-looking statements involve known and unknown risks, uncertainties, and other factors which may cause the actual results, performance or achievements of Giyani Metals Corp. (the “Company”) to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Such factors include, among others, risks related to actual results of current exploration activities; changes in project parameters as plans continue to be refined; the ability to enter into joint ventures or to acquire or dispose of properties; future prices of commodities; fluctuations in currency markets; operating or technical difficulties in relation to the speculative nature of exploration and development; accidents, employee relations (including labour disputes) and other risks of the gold industry; ability to obtain financing; changes in costs and estimates associated with the Company’s projects; legislative, political or economic developments in the jurisdictions in which the Company carries on business; requirements for additional capital; and regulatory restrictions including delays in obtaining governmental approvals. Although the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking statements, there may be other factors that cause results not to be as anticipated, estimated or expected. The Company disclaims any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise except as required by applicable law.
COMPLIANCE STATEMENT

Qualified Persons

The scientific, technical, and economic information contained in this presentation relating to the K.Hill Manganese Project are based upon a technical report prepared by Mr. Michael John Beare BEng, CEng, MIOM3, Ms. Lucy Roberts BSc (Hons), MSc, PhD, MAusIMM(CP), both of SRK Consulting, and Mr. Ian Flint Ph.D., P. Eng. of Lab 4 Inc., and entitled “Kgwakgwe Hill Manganese Project Independent Technical Report” having an effective date of February 20, 2020 (release date April 28, 2020) (the “NI-43-101 Technical Report”). The NI-43-101 Technical Report was filed on SEDAR at www.sedar.com on April 30, 2020. Mr. Beare, Ms. Roberts, and Mr. Flint are "Qualified Persons" under NI 43-101, and have each consented to the inclusion in this presentation of such scientific, technical, and economic information. Mr. Beare, Ms. Roberts, and Mr. Flint are "independent" within the meaning of NI 43-101.

Giyani’s disclosure of mineral resource information is governed by NI 43-101 under the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum (the "CIM") Standards on Mineral Resources and Mineral Reserves, adopted by the CIM Council, as may be amended from time to time by the CIM ("CIM Standards"). There can be no assurance that those portions of mineral resources that are not mineral reserves will ultimately be converted into mineral reserves.
INVESTMENT SUMMARY

Highlights

• Manganese Oxide deposit in a supportive mining investment jurisdiction
• Robust project economics: 82% IRR and C$389M NPV
• Low project capex of C$155M
• Definitive Feasibility Study due Q1 2021
• Experienced management and board with a track record of successful project delivery
• Well positioned to leverage the growth in the battery electric vehicle market
PROJECT PORTFOLIO

Land Package in a Favourable Jurisdiction

OWNERSHIP
88% interest (with option to own 100%) in an extensive land package covering 2,641km² in south-eastern Botswana

PROJECT PIPELINE
3 battery-amenable manganese Prospects (K.Hill, Otse & Lobatse), as well as several additional targets, provides optionality for increasing the overall resource size and extending the project life

INFRASTRUCTURE
The K.Hill Project is located near the 45,000-inhabitant town of Kanye, which hosts good rail and road connections, sufficient water supply, a 167-bed hospital and reliable power connectivity

ROUTE TO MARKET
5 seaports accessible by rail and road with cost effective shipping to Asia, Europe and North America

JURISDICTION
Botswana is consistently rated as one of the most attractive African countries for supporting investment in mining\(^1\), due to favourable tax regulations and efficient government processes

---

1. Fraser Institute, Survey of Mining Companies 2019
K.Hill, Otse & Lobatse: Battery-Grade Manganese Oxide Deposits

K.HILL
- Adjacent to the town of Kanye – 45,000 inhabitants
- 5km from Trans Kalahari highway connecting South Africa and Namibia
- Historical open pit DSO operation 1950 – 1970
- Remnants of processing facilities and discarded material still available
- ~166kt of high grade Mn-Ore sold

OTSE
- 2km from A1 tarmac sealed road and the North-South railway
- Historically mined for high grade, low iron content manganese ore
- Mineralization hosted in a chert breccia unit

LOBATSE
- Also adjacent to the A1 highway and 1km from the RSA border
- Mineralization hosted a siliceous shale/sandstone

Rail connection to South Africa
167-bed Kanye Hospital 4km from K.Hill
A1 highway connecting Otse and Lobatse to Gaborone
MILESTONES ACHIEVED

Highlights

Sep. 2017: Completion of reconnaissance surface mapping & sampling program

Feb. 2018: Successful fund raising of $1.2M for 2018 exploration

Sep. 2018: Completion of mineral resource estimate at K.Hill, 1.1M tonnes at 31.2% MnO

Dec. 2019: Commencement of Feasibility Study & ESIA

May. 2020: Successful fund raising of C$1.2M

Dec. 2017: Appointment of Mr. Robin Birchall as CEO & Director

Sep. 2018: Completion of ground geophysics at K.Hill & Otse, resource drilling at K.Hill & exploration drilling at Otse & Lobatse

Aug. 2019: Completion of PEA for K.Hill with NPV of C$379M & IRR of 90%

April. 2020: Increase in K.Hill resource & updated NPV of C$389M & IRR of 82%
MANGANESE

Used in Steel, Specialty Alloys, Fertilizers, Chemicals and Batteries

MANGANESE ORE AND MANGANESE METAL

- Manganese ore is used in the production of steel and metal alloys. Approximately 86% of globally mined manganese ore is used in steel making\(^1\)
- The total global manganese ore consumption in 2018 was 20 million mt\(^1\)
- Pure manganese metal, or Electrolytic Manganese Metal (EMM) is used in making a variety of speciality alloys. In 2018 approximately 8% of mined manganese ore (1.6 million mt) was processed into EMM. China accounts for approximately 97% of global EMM production. In 2018, High Purity Electrolytic Manganese Metal (HPEMM) at 99.9% purity represented only 35,000 mt (approximately 2.2% of total EMM output)

1. IMnI Report February 2018
MANGANESE IN LI-ION BATTERIES

Where is the Source of Supply?

MANGANESE IMBALANCE WORSE THAN COBALT

- China dominates the refined manganese market (EMM, HPEMM)
- China accounted for 93% of the chemically refined manganese in 2019, but only responsible for 6% of the mined supply
- Only 3 non-Chinese producers of refined manganese
- Not all EMM can be used in lithium-ion battery cathodes. This is due to the existence of toxic impurities such as selenium in traditionally made EMM
- Non-Chinese suppliers of HPEMM are critical to reducing the cathode supply chain risk
- Buyers of Non-Chinese sourced HPEMM are less price-sensitive

<table>
<thead>
<tr>
<th></th>
<th>Lithium</th>
<th>Nickel</th>
<th>Manganese</th>
<th>Cobalt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current global supply</td>
<td>tonnes</td>
<td>77,000</td>
<td>2,700,000</td>
<td>19,000</td>
</tr>
<tr>
<td>Total land reserves</td>
<td>tonnes</td>
<td>17,000,000</td>
<td>89,000,000</td>
<td>810,000</td>
</tr>
<tr>
<td>Required for 30% of Automotive production (NMC 811)</td>
<td>tonnes</td>
<td>154,845</td>
<td>1,046,250</td>
<td>122,760</td>
</tr>
<tr>
<td>Proportion of current supply</td>
<td>%</td>
<td>201%</td>
<td>39%</td>
<td>646%</td>
</tr>
<tr>
<td>Time to deplete current reserves</td>
<td>Years</td>
<td>110</td>
<td>85</td>
<td>7</td>
</tr>
<tr>
<td>Required for 100% of Automotive production (NMC 811)</td>
<td>tonnes</td>
<td>516,098</td>
<td>3,487,151</td>
<td>409,159</td>
</tr>
<tr>
<td>Time to deplete current reserves</td>
<td>tonnes</td>
<td>33</td>
<td>26</td>
<td>2</td>
</tr>
</tbody>
</table>

SIGNIFICANT INCREASE IN SUPPLY IS REQUIRED JUST TO ACHIEVE 30 PERCENT ELECTRIFICATION, LET ALONE 100%

1. Benchmark Mineral Intelligence, new lithium-ion battery supply chain data exposes manganese weaknesses. March 2020
2. How critical metal shortage might impact the energy transition, by Dr Jody Muelaner. April 2020
CATHODE CHEMISTRIES

Li-ion Batteries have different types of cathode chemistries

NMC – THE DOMINANT CATHODE FOR AT LEAST THE NEXT 8 YEARS

• NMC cathodes are expected to be used in at least 50% of all batteries (not just EVs) by 2028 (currently 35%)¹
• Solid state technologies will be slow to develop and likely to only be commercialised, if at all, in the 2030s.
• NMC cathodes come in many different chemistries, such as 1:1:1, 8:1:1, 5:3:2.

The makeup of the cathode materials must address the following key challenges²:
• Specific Energy
• Specific Power
• Safety / Thermal stability
• Life Spam
• Cost
• Performance / Power Output

MANGANESE A SMALL COMPONENT, BUT HERE TO STAY

<table>
<thead>
<tr>
<th>Battery composition</th>
<th>Critical metals required (kg/kWh)¹</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lithium</td>
</tr>
<tr>
<td>NMC 111</td>
<td>0.14</td>
</tr>
<tr>
<td>NMC 622</td>
<td>0.13</td>
</tr>
<tr>
<td>NMC 811</td>
<td>0.11</td>
</tr>
</tbody>
</table>

Properties of Manganese in Cathodes

• **Safe / high thermal stability** (low risk of thermal runaway)
• Supply chain not complicated by conflict sources
• **Cheapest** raw material component in the cathode (2%)
• **High Performance / Power Output**

Cathode Cost of an NMC 811 per Raw Material²

- Nickel
- Lithium
- Cobalt
- Manganese
- Other

1. IMnI Report, May 2019
2. Liu et al. (2017)
K. HILL RESOURCE ESTIMATE (2020)

1.24Mt at 27.3% Manganese Oxide – with Significant Upside Potential

K. Hill Mineral Resource Estimation by Domain

<table>
<thead>
<tr>
<th>Domain</th>
<th>Category</th>
<th>Tonnes (millions)</th>
<th>MnO %</th>
<th>Al₂O₃ %</th>
<th>SiO₂ %</th>
<th>Fe₂O₃ %</th>
<th>LOI %</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-Grade Upper Mn Shale</td>
<td>Inferred</td>
<td>1.00</td>
<td>31.2</td>
<td>8.9</td>
<td>26.3</td>
<td>16.9</td>
<td>8.8</td>
</tr>
<tr>
<td>Low-Grade Upper Mn Shale</td>
<td>Inferred</td>
<td>0.24</td>
<td>11.2</td>
<td>9.9</td>
<td>58.5</td>
<td>9.8</td>
<td>4.8</td>
</tr>
<tr>
<td>Total</td>
<td>Inferred</td>
<td>1.24</td>
<td>27.3</td>
<td>9.1</td>
<td>32.5</td>
<td>15.5</td>
<td>8.1</td>
</tr>
</tbody>
</table>

Example of K. Hill core from 10m to 30m

- Two manganese shale horizons, predominantly Mn-oxide
- Horizon average thickness of 5 m (ranges from 2m to 12m)
- Shallow dip (5-10°) towards the NW
- Mn-shale represents a primary manganese deposition in a shallow marine basin, upgraded by supergene enrichment
- Friable deposit amenable to free digging
- K. Hill prospect open to the south

Upper Chert Breccia in blue, low grade manganese in orange, high grade manganese in red, and footwall iron shale in yellow

Resource Estimate Notes: The Inferred Mineral Resource Estimate is reported above a cut-off grade of 8.9% MnO. A 10% reduction has been applied to the resource tonnage to account for moisture content. Tonnages can therefore be considered dry. The Mineral Resource Estimate is constrained within grade based solids and within a Lerchs-Grossman optimised pit shell based on an HPEMM price of US$4,700/t and the following parameters: a. Mining Cost – US$3.46/t rock b. Processing Cost – US$276.5/t ore c. Selling cost – 3% d. G&A – US$20/t ore e. Discount Rate – 10% f. Processing Recovery – 87.5% g. Mining Recovery – 95% h. Mining Dilution – 5% i. Geotechnical Slope Angle – 45°

All figures are rounded to reflect the relative accuracy of the estimate. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. It is uncertain if further exploration will convert Inferred Mineral Resources to higher confidence categories.

The Qualified Person (as that term is defined by NI 43-101) responsible for preparing the Mineral Resource statement, PEA and Amended Technical Report for the K. Hill is Michael John Beare, BEng, CEng, MIOIM of SRK Consulting (UK) Ltd. Mr. Beare has reviewed and approved the scientific and technical content contained in this press release and verified the underlying technical data. Mr. Beare is independent of the Company.
K. HILL PROJECT PEA

Robust Economics Over a 10 Year Project Life

HIGHLIGHTS

• Pre tax NPV\textsuperscript{10} of C$505M (US$357M)\textsuperscript{2}
• After tax NPV\textsuperscript{10} of C$389M (US$275M)\textsuperscript{2}
• After tax IRR of 82.1%
• C$155M (US$110M)\textsuperscript{2} Capex
• C$7M (US$5M)\textsuperscript{2} closure cost
• Payback within year 3
• 10 year operating life
• 30 - 40kt per annum of HPEMM (or equivalent amount in high purity Manganese Sulphate Monohydrate)
• Open pit, free-digging mining (no blasting required)

IMPROVEMENT POTENTIAL TO ECONOMICS

• Resource upside at K.Hill
• Inclusion of Otse and Lobatse in mine plan
• Inclusion of lower power costs

---

2. C$:US$1.4139 as of 02/05/2020
MAKING HIGH PURITY MANGANESE

Acid Dissolution, Solvent Extraction And Electrowinning

LOW COST PROCESS OF THE K.HILL MANGANESE ORE

- **Low cost of grinding** → friable ore means free dig mining and grinds easily to 200 μm
- **Low cost of leaching** → oxide ore leaches in sulphuric acid (no expensive calcination required)
- **Low cost of electrowinning** → standard commercial power costs in Botswana are US¢6/kWh

2 HIGH PURITY PRODUCTS

In order to offer customers a choice, the Giyani plant will produce both high purity electrolytic manganese metal (HPEMM) and high purity manganese sulphate monohydrate (HPMSM)

PROCESS OVERVIEW

- Manganese is extracted using acid leach, solvent extraction and electrowinning (SX/EW) process - similar to the processing method of copper and other base metals
- Mn ore is milled before being dissolved in an acid solution
- The ore goes through a series of precipitation and solution purification processes before the manganese pregnant solution is fed into electrolytic cells where the pure Mn gets plated on the cathodes
- The HPMSM product is deposited out prior to the electrowinning circuit
- The plated manganese is stripped from the cathodes, washed, dried and degassed
Submit ESIA scope & terms of reference to the Department of Environmental Affairs (DEA)

Commence in-fill & hydrometallurgical drilling

Receive approval for Scope & Terms or Reference by DEA

Complete market analysis, price forecasting and route to market studies

Complete local infrastructure & site services optimisation

Commerse in-fill & hydrometallurgical drilling

Lab test results from hydrometallurgy test work

Update resource block model & upgrade classification of resources

Finalise engineering plant design and process flowsheet

Generate mineral reserve estimate & life of mine plan

Update capital & operating cost estimate

Submit completed ESIA to the DEA

DEA review complete & endorsement of ESIA received

Government gazetting of ESIA

Review of comments from public review

Complete workstream assessments within the ESIA scope

Public review of ESIA

Commerse mine permitting process
Proven Record in Mining Company Management & Project Delivery

BOARD

JONATHAN HENRY B.A.(Hons)  
Non Executive Chairman

25 years of experience in the mining company leadership and management
- Executive Chairman of Ormonde Mining
- President and CEO Gabriel Resources
- CEO of Avocet Mining

EUGENE LEE BCom  
Non Executive Director

Over 20 years of experience in mine finance capital markets, financial reporting, risk management, internal controls and corporate governance
- Director, Marketing at Hudbay Minerals
- Non-Executive Director Nevada Zinc Corp
- CFO at Premier Royalty Inc.

JOHN PETERSON J.D, B.S  
Non Executive Director

40 years of experience in law, sustainability and energy storage and is a global thought leader on energy and sustainability issues
- Director & VP at ePower Engine Systems Inc
- Chairman at Axion Power International Inc
- Partner at Feer Peterson & Co

MICHAEL JONES C.Eng.  
Non Executive Director

30 years of experience in mine management, corporate finance and corporate development
- Director at Hatch
- Corporate Development at African Minerals
- Head mining corporate finance at Canaccord
- Various mining engineering roles at Gencor, DE Beers and Debswana

MANAGEMENT

ROBIN BIRCHALL MBA, M.Sc.  
Chief Executive Officer

18 years of experience in the investment banking, management and development of resource companies
- Executive Chairman of Silver Bear Resources
- Co-Head of Forbes & Manhattan London
- V.P. Investment and Corporate Banking at BMO Capital Markets
- V.P. Corporate Finance at Canaccord

WAJD BOUBOU MBA, B.Eng.  
President

29 years of experience in natural resources & telecommunications
- Services Delivery Lead at Cisco Systems
- Service Delivery Manager at Schlumberger
- Business Development Manager at Atos Origin

AAMER SIDDIQUI CPA, CA  
Chief Financial Officer

10 years of experience in financial and management advisory
- Manager at Marelli Support Services
- Manager at Welch LLP

THOMAS HORTON M.Eng, MBA  
Vice President, Business Development

13 years of sector experience in finance, business development and engineering
- VP Corporate Development at Pembridge Resources
- Investment Executive at Duke Street Capital
- Project Engineer at AMEC Americas & Fluor Corp

KNEIPE SETLHARE  
Country Manager

13 years of operations experience in base metals and diamond mining across Botswana
- Consultant to Premium Nickel Resources
- Facilities Manager at Discovery Metals
- Shift Co-Ordinator at BCL limited

LUHANN THERON M.Sc.  
Chief Geologist

13 years of exploration geology experience across Africa
- Project Geologist at Remote Exploration Services
- Consulting Geologist at Lambda Tau
SHARE STRUCTURE

Capital Structure and Major Shareholders

MAJOR SHAREHOLDERS

- RAB Capital: 11%
- Tribeca: 2%
- US Global: 1%
- Directors and Management: 4%

<table>
<thead>
<tr>
<th>TICKER</th>
<th>MARKET CAP*</th>
<th>SHARE PRICE*</th>
<th>52 WEEK RANGE</th>
<th>SHARES ISSUED</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSXV : EMM</td>
<td>C$18.4 M</td>
<td>C$0.18</td>
<td>C$0.35 – 0.04</td>
<td>102,253,234</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TOTAL</th>
<th>EXERCISE PRICE</th>
<th>EXPIRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Options</td>
<td>7,637,500</td>
<td>C$0.10 - C$0.34</td>
</tr>
<tr>
<td>Warrants</td>
<td>8,856,000</td>
<td>C$0.10 - C$0.275</td>
</tr>
</tbody>
</table>

* As at opening June 29, 2020
CONTACT US

TSXV : EMM

1155 North Service Road West
Unit 11
Oakville, Ontario
Canada
L6M 3E3

info@giyanimetals.com

www.giyanimetals.com

@GiyaniMetals

#GiyaniMetals
STABLE ECONOMY TO INVEST IN

- Domestic pension fund assets account for 41 per cent of GDP (US$7Bn) with 30% of which mandated to invest domestically\(^1\)
- Well established mining industry with investor friendly laws and processes for exploration, development and operations
- Local currency is the Botswanan Pula. The currency is freely convertible and pegged against a basket of currencies including the South African rand
- Longest serving democracy in Africa (independence in 1966)
- Steady economic growth of 3.7% in the 12 months to September 2019 (5% previous 12 months)
- Investment grade rating - A2 Stable\(^2\) (unchanged since 2001)
- Central Bank of Botswana benchmark interest rate 4.25% & headline inflation rate of 2.2%\(^3\)
- Economy highly reliant on mining (20% of GDP & 88% of exports)\(^4\) – which has been in decline in recent years
- One of only three African countries to offer a flat universal pension program\(^5\)

The Economist’s ranking of 66 countries, using four indicators of financial strength\(^6\)

---

1. The Economist, May 2020
2. OCED public data, 2019
3. Moody’s April 2020
4. TradingEconomics.com April 2020
5. African Development Bank Group 2018
6. The Economist, April 2020
APPENDIX - BOTSWANA AS A MINING JURISDICTION

Economic & Geopolitically Stability + Mature and Supportive Mining Sector

FISCAL ADVANTAGES FOR THE K.HILL PROJECT

• One of the most attractive mining jurisdictions in Africa with political stability and transparency\(^1\)
• Government royalty is 3% for manganese
• No import taxes on mining equipment and spares
• Potential to classify Giyani processing plant as *manufacturing*, which has a low corporate tax rate of 15%
• Deduction of 100% of the mining capital expenditure incurred during the tax year with an unlimited carry forward of losses
• There is no mandatory national or governmental joint venture (JV) / free carry / Black Economic Empowerment (BEE) regulation. Debswana is the only JV, set up in 1969, with a 50/50 share between the government of Botswana and De Beers

1. Fraser Institute, Survey of Mining Companies 2019
APPENDIX - MASS ADOPTION OF EVS IMMINENT

As BEVs Become Price Competitive with ICEVs Adoption will Accelerate

Over the next decade 130 individual lithium-ion Battery Megafactories are planned, which will produce a capacity of 2,397.5 GWh\(^1\)

Economies of scale drive down the cost of a lithium-ion battery below the $100/kWh - the point where the cost of a BEV ≈ ICEV

---

**Megafactory Capacity GWh\(^1\)**

**Lithium-ion cell cost $/kWh\(^{1.2}\)**

---

BEVs Battery Electric Vehicles
ICEVs Internal Combustion Engine Vehicles
GWh Gigawatt hour
$/kWh US$ per Kilowatt hour

1. Benchmark Mineral Intelligence, March 2020
2. Assuming flat future raw material costs, excludes margin, module and pack costs, figure accounts for top 80% of producers by scale only
**APPENDIX – BATTERY CHEMISTRIES**

Different Types Cathodes of Li-ion Batteries

**COMPARISON BETWEEN CURRENT CATHODE CHEMISTRIES**

- The *lithium-ion* battery is an umbrella term used to describe a number of different cathode chemistries (NMC, NCA, LCO, LFP, LMO).
- The different elements contained in each chemistry have varying abilities to facilitate the shuttling of active lithium ions from the cathode and the anode or enhance cell capacity.
- Each combination has its share of advantages and disadvantages.
- NMC cathodes are the most widely used with 60% of global EV sales having NMC battery packs in 2019 - expected to be ~80% by 2029.

**PRODUCTION CAPACITY BY CATHODE TYPE**

**TECHNICAL COMPARISON OF CATHODE TYPES**

<table>
<thead>
<tr>
<th>Cathode Chemistry</th>
<th>Specific Energy</th>
<th>Specific Power</th>
<th>Life Span</th>
<th>Safety</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>LMO</td>
<td>High</td>
<td>High</td>
<td>Fair</td>
<td>Good</td>
<td>Low</td>
</tr>
<tr>
<td>LFP</td>
<td>Low</td>
<td>High</td>
<td>High</td>
<td>V.Good</td>
<td>Fair</td>
</tr>
<tr>
<td>LCO</td>
<td>High</td>
<td>Fair</td>
<td>Fair</td>
<td>Fair</td>
<td>V.High</td>
</tr>
<tr>
<td>NCA</td>
<td>High</td>
<td>High</td>
<td>Fair</td>
<td>Fair</td>
<td>High</td>
</tr>
<tr>
<td>NMC811</td>
<td>Higher</td>
<td>Fair</td>
<td>Fair</td>
<td>Fair</td>
<td>Low</td>
</tr>
<tr>
<td>NMC622</td>
<td>Fair</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>NMC523</td>
<td>High</td>
<td>High</td>
<td>Low</td>
<td>Good</td>
<td></td>
</tr>
<tr>
<td>NMC111</td>
<td>High</td>
<td>High</td>
<td>Low</td>
<td>Good</td>
<td></td>
</tr>
</tbody>
</table>

1. Benchmark Mineral Intelligence, Mega-factory Assessment April 2020
2. TIAX – PHEV Battery Cost Assessment, BMO Capital Markets, Publicly available industry research, Giyani Metals
Definitions: NMC - Lithium Nickel Manganese Cobalt Oxide, NCA – Lithium Nickel Cobalt Aluminium Oxide, LCO – Lithium Cobalt Oxide, LFP – Lithium Iron Phosphate, LMO – Lithium Manganese Oxide
The Lithium-Ion Battery Supply Chain

### Stage One: Mining

<table>
<thead>
<tr>
<th></th>
<th>EU</th>
<th>US</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel</td>
<td>8%</td>
<td>0%</td>
<td>31%</td>
</tr>
<tr>
<td>Cobalt</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Graphite</td>
<td>1%</td>
<td>0%</td>
<td>65%</td>
</tr>
<tr>
<td>Lithium</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
</tr>
<tr>
<td>Manganese</td>
<td>0%</td>
<td>0%</td>
<td>6%</td>
</tr>
</tbody>
</table>

### Stage Two: Chemical Processing/Refining

<table>
<thead>
<tr>
<th></th>
<th>EU</th>
<th>US</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel</td>
<td>13%</td>
<td>1%</td>
<td>65%</td>
</tr>
<tr>
<td>Cobalt</td>
<td>17%</td>
<td>0%</td>
<td>82%</td>
</tr>
<tr>
<td>Graphite</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Lithium</td>
<td>0%</td>
<td>4%</td>
<td>59%</td>
</tr>
<tr>
<td>Manganese</td>
<td>7%</td>
<td>0%</td>
<td>93%</td>
</tr>
</tbody>
</table>

### Stage Three: Cathode or Anode Production

<table>
<thead>
<tr>
<th></th>
<th>EU</th>
<th>US</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cathode</td>
<td>0%</td>
<td>0%</td>
<td>61%</td>
</tr>
<tr>
<td>Anode</td>
<td>0%</td>
<td>0%</td>
<td>83%</td>
</tr>
</tbody>
</table>

### Stage Four: Lithium Ion Battery Cell Manufacturing

<table>
<thead>
<tr>
<th></th>
<th>EU</th>
<th>US</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cells</td>
<td>6%</td>
<td>10%</td>
<td>73%</td>
</tr>
</tbody>
</table>

---

1. Benchmark Mineral Intelligence, new lithium-ion battery supply chain data exposes manganese weaknesses. March 2020
APPENDIX – K.HILL DEPOSIT

Mining, Processing and Upside

MINING & PROCESSING CHARACTERISTICS

- Low tonnage mining – 175,000tpa operation
- Life of Mine stripping ratio of 7.3:1
- 3 months for pre-stripping in year 1
- Small mining fleet:
  - X4 30t dump trucks
  - X2 excavators
- US$3.56/t rock mined & US$276.45 ore processed
- 87.5% total process recovery
- Total Cash Cost of US$1,855 per tonne (HPEMM)

THE UPSIDE

- Following reserve drilling program, resource & reserves will be remodelled with the aim that the two pits will join into one large pit – increase tonnage and improving economics
- Additional exploration to the south expected to delineate additional mineralisation
- K.Hill PEA does not include inclusion of Otse & Lobatse
APPENDIX – K.HILL SUMMER DRILL PROGRAM

Program Summary

Phase 1 – channel chip sampling program along 3 outcropping sections of the ore horizon.

Phase 2 – RC drilling verification program where 4-holes will be drilled with an RC rig as twins of previously drilled diamond holes.

Phase 3 – RC drilling program over a regular 50m grid over the entire deposit.

Phase 4 – ONLY required infill drilling to the phase 3, 50m grid as defined by the channel chip program.

<table>
<thead>
<tr>
<th>Phase</th>
<th>Quantity</th>
<th>Average depth (m)</th>
<th>Total (m)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>30</td>
<td>4</td>
<td>120</td>
<td>Channel chip samples</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>30</td>
<td>120</td>
<td>RC - Verification</td>
</tr>
<tr>
<td>3.1</td>
<td>80</td>
<td>30</td>
<td>2400</td>
<td>RC – Regular grid</td>
</tr>
<tr>
<td>3.2</td>
<td>6</td>
<td>30</td>
<td>180</td>
<td>RC – Supporting holes</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>if &amp; only required</td>
</tr>
</tbody>
</table>
APPENDIX - 2020 DSO PROGRAM

Monetising Remnant Stockpiles at K.Hill & Ore From Rehabilitation Work at Otse

5 MONTH PROGRAM

- Rehabilitation of the Otse pits and consolidation of old stockpiles at K.Hill
- Processing material through a DMS\(^1\) plant
- Approximately 50,000t of product expected
- Capitalize on the recent rise in manganese ore prices
- Cash generated from program to be used for funding ongoing project development activities

Source of DSO material - rehabilitation work on Otse pits and old stockpiles from K.Hill

Sample of DSO ore feed

DMS Plant Design\(^2\)

<table>
<thead>
<tr>
<th>Acquire permits</th>
<th>Appoint contractor</th>
<th>Mobilization of DMS plant</th>
<th>First sale of DSO material</th>
<th>Completion of DSO program</th>
</tr>
</thead>
</table>

1. Dense Media Separation
2. Engineering design study completed by Worley RSA in August 2019