Monday 8th of October 2018

HALLGARTEN & COMPANY

Initiating Coverage

Christopher Ecclestone
cecclestone@hallgartenco.com

Giyani Metals

(TSX-V: WDG, FSE: KT9, OTCBB: CATPF)

Strategy: Long

Key Metrics	
Price (CAD)	$0.23
12-Month Target Price (CAD)	$0.54
Upside to Target	135%
12 mth high-low	$0.15-$0.435
Market Cap (CAD mn)	$18.81
Shares Outstanding (millions)	81.8
Fully Diluted	91.0

Giyani Metals

The Manganese Challenge to Cobalt

- + Giyani is looking to be a major vertically-integrated independent supplier of battery grade manganese out of Africa
- + Maiden Inferred Resource estimate just published with 31.2% MnO at an 18% cut-off grade.
- + Cobalt supply fears (and the associated price hike) have focused efforts to produce batteries with cathode chemistries lower in cobalt and higher in other elements like Nickel and Manganese
- + Potential for a trial mine and workover of stockpiles, producing DSO, to provide cashflow within the next six months
- + The price of EMM (Electrolytic Manganese Metal) for batteries has been rallying this year due to expectation of increased demand from both the steel and battery cathode market, coupled with reductions in Chinese production
- × Project is early stage therefore priority will be on expanding the resource and potential for production
- × Chinese dominate the EMM space and can move the price up (or down) to suit mercantilist strategies that go beyond mere profit considerations

Manganese – The Road Less Travelled in Battery Metals

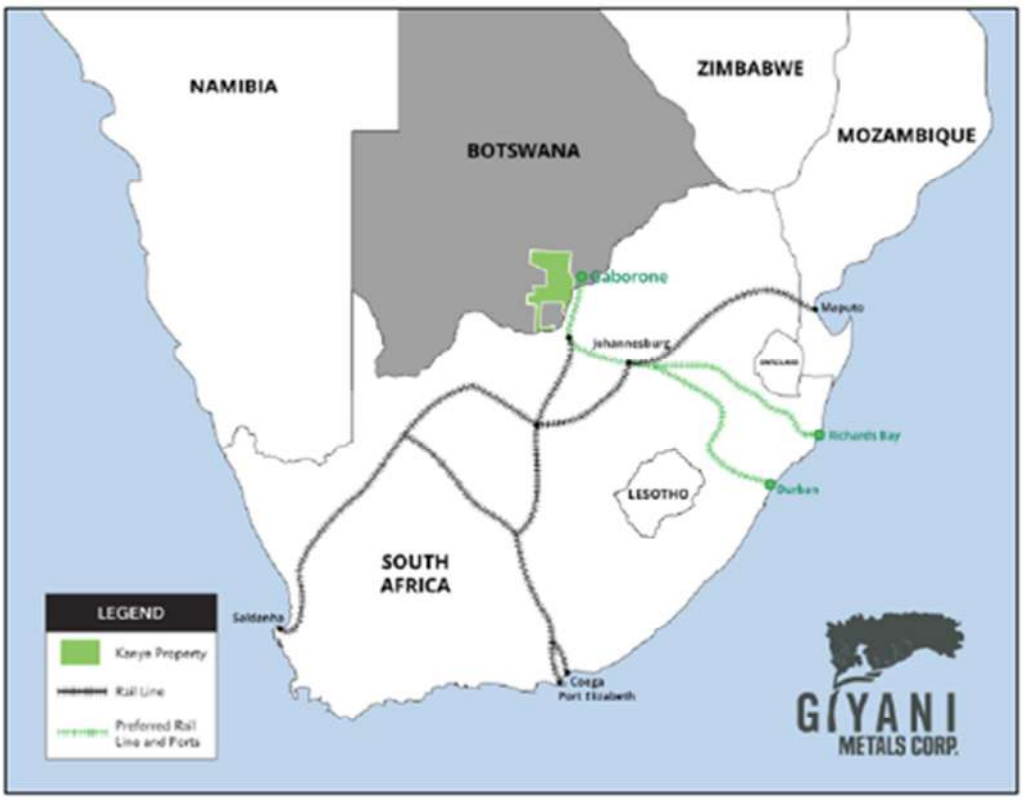
The pace of change in the battery space has moved up quite a few gears since Giyani Metals shifted into the Manganese space in 2017. Lithium plays first proliferated (and then came tumbling back to earth) and then Cobalt became the word on everyone's lips as the Cobalt crisis moved into centre stage and focusing minds on supply issues in the battery space. Manganese is receiving increasing attention for its potential to reduce the Cobalt component in various battery types using that metal via the rebalancing of the relative weightings of elements in the battery cathode formulations, particularly Nickel/Cobalt/Manganese in NMC batteries. Giyani spotted this early on and decided to pursue Manganese for its leverage to the revolution in battery metals.

The management of Giyani Metals, in a relatively fast-paced first year, has moved the company from an RTO to being a rising star in the battery-grade Manganese space. In this note we shall review the most recent developments and strategy evolution since 1Q17.

The Back Story

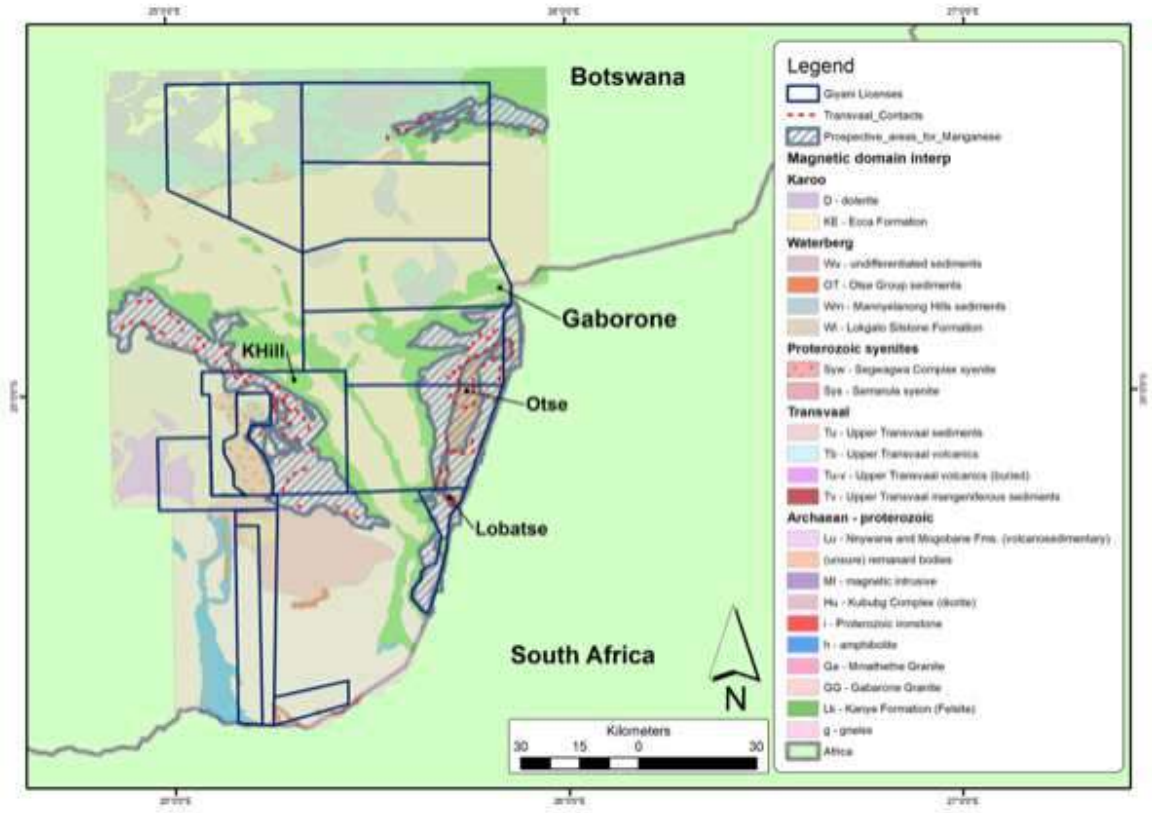
In early April 2017 the then-Giyani Gold announced the acquisition of six new prospecting licenses that encompassed the past producing Kgwakgwe Hill (K-Hill) Manganese mine located in the Kanye Basin, Southeastern Botswana, some 75kms south-west of the capital Gaborone. Binding agreements were

signed with Everbroad Investments (Pty) Limited and Marcelle Holdings (Pty) Limited to acquire an 88% interest in PL322/2016 (K-Hill License) and 100% interest in PL336/2016 to PL340/2016 (adjacent to K-Hill) inclusive by making cash payments totaling US$75,000. The current land holdings have since grown to some 8,135 square kilometres with the subsequent acquisition of 8 new licenses.



The deposit at K-Hill was mined from 1957 until 1972 when mining ceased due to political conditions, chiefly due to high production costs and a fall in the price of top-grade Manganese. The ore grades had ranged between 46.2%-57.9% Mn, rather impressive. A total of 131,563 tonnes was produced and shipped.

This deposit is of particular interest to Giyani because it is proof of concept that the manganese displays simple yet ideal chemical compositions and grade characteristics that would be attractive to battery manufacturers.



Lithostructural mapping, done by Giyani and based on government airborne magnetic work in the past, has identified several prospective areas (highlighted as hatched polygons in the map above) where prospective Lower Transvaal stratigraphy is likely to outcrop/subcrop. The recently completed ground surveys have helped to identify subtle magnetic contacts in this sedimentary package which facilitated the mapping of the manganiferous shale.

Five out of the fourteen licenses, currently held by Giyani, with total approximate land coverage of 1,400 square kilometres, are identified to have prospective stratigraphy for manganese mineralization.

Kgwakgwe Hill Manganese Mine

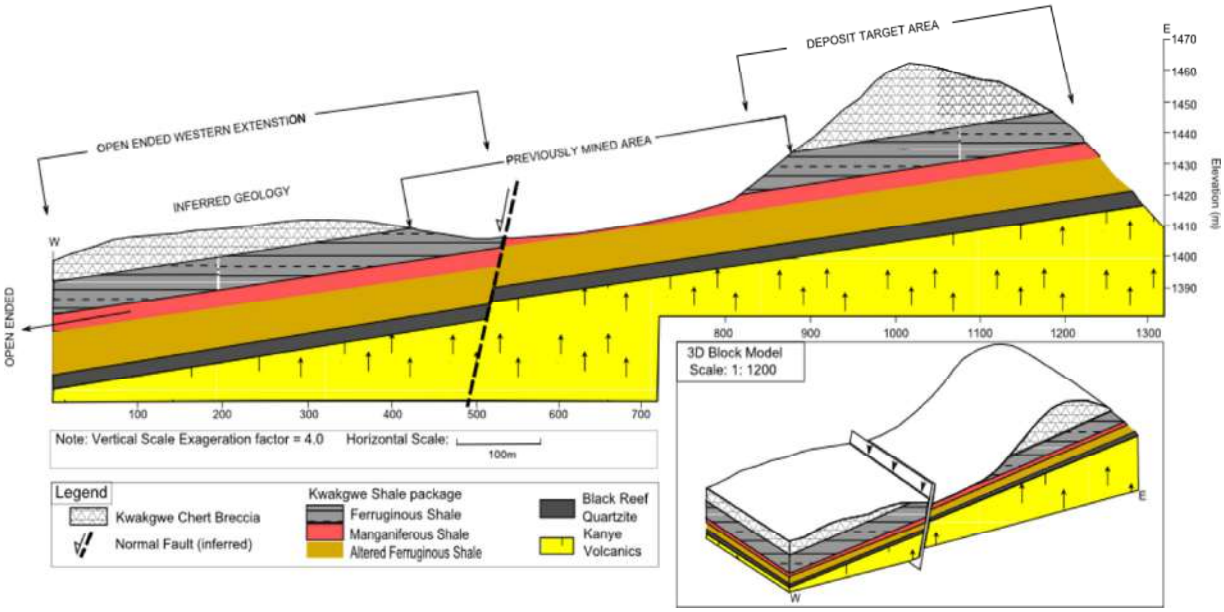
The K-Hill prospect is a supergene Manganese enriched shale horizon. Stratigraphically this 3-4m thick Manganiferous shale unit occurs at the top of a 40-50m thick shale horizon, within the Black Reef Formation (early Proterozoic ages). The Black Reef Formation unconformably overlies extrusive Felsite facies from the Kanye Volcanic Group (late Archean ages). The Manganiferous shale is overlain by a characteristic chert breccia unit with angular chert clasts within an Iron rich matrix. This chert breccia form part of the Taupone Dolomite Group.

The Manganiferous shale can be explained by a model first proposed by Force and Cannon in 1988, in which a shallow marine environment could preferentially precipitate manganese into a shale protore. A

subsequent chemical leaching and redistribution process most likely to occur during periods of intense weathering and erosion, will then enrich the protore to the levels seen today. Manganese would crystallize and grow at nucleation sites into a variety of Manganese complexes.

The ore horizon at K-Hill therefore consists of high grade nodular or lenses of Manganese oxide lumpy ore type material, and then interstitial lower grade black shale and Manganese Wad material. The medium grade background material which comprises some 80% of the ore is suitable for Giyani's proposed EMM process route due to it mineralogical characteristics.

The cross section below shows a conceptional model showing the stratigraphy and the Manganiferous shale.



Exploration

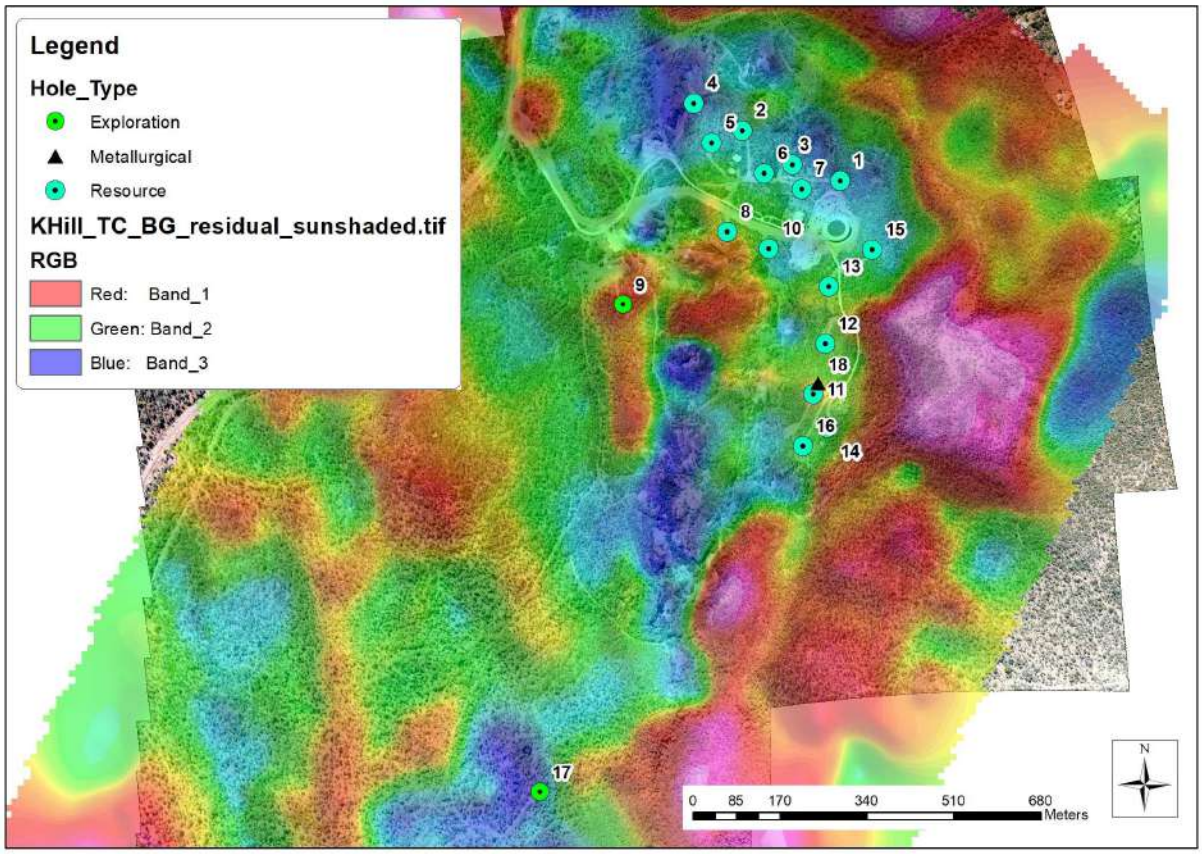
In 2017 the exploration program was chiefly surface sampling with assay results from the first 168 samples reporting high Manganese Oxide grades of up to 73.4% MnO at K-Hill and up to 67.4% at the Otse prospect.

The objective of the Phase 1 exploration campaign in 2018 was to verify the potential for future development through low-cost open pit mining. The Phase 1 program is comprised of ground geophysical surveying and diamond drilling at the K-Hill and Otse prospects.

The Phase 1 drilling campaign commenced in mid-April and concluded in early-July 2018 where Manganese mineralization has been encountered in all completed holes at K-Hill and Otse. The geophysics at both K-Hill and Otse drove the decision on where to locate collars for the drill holes. Additionally, the company was able to drill four exploration holes at its third prospect, Lobatse, which

were not originally planned. This was made possible after the conclusion of the planned Phase 1 drilling came in under budget.

A total of 1,832 metres had been drilled, core processing and sampling completed, and six batches of approximately 627 samples (425 samples from drill core at K-Hill, 78 samples from drill core at Otse and 67 samples from drill core at Lobatse) were sent for analysis to SGS labs in Randfontein, South Africa. The map below below indicates the locations of the drill hole locations at K-Hill.

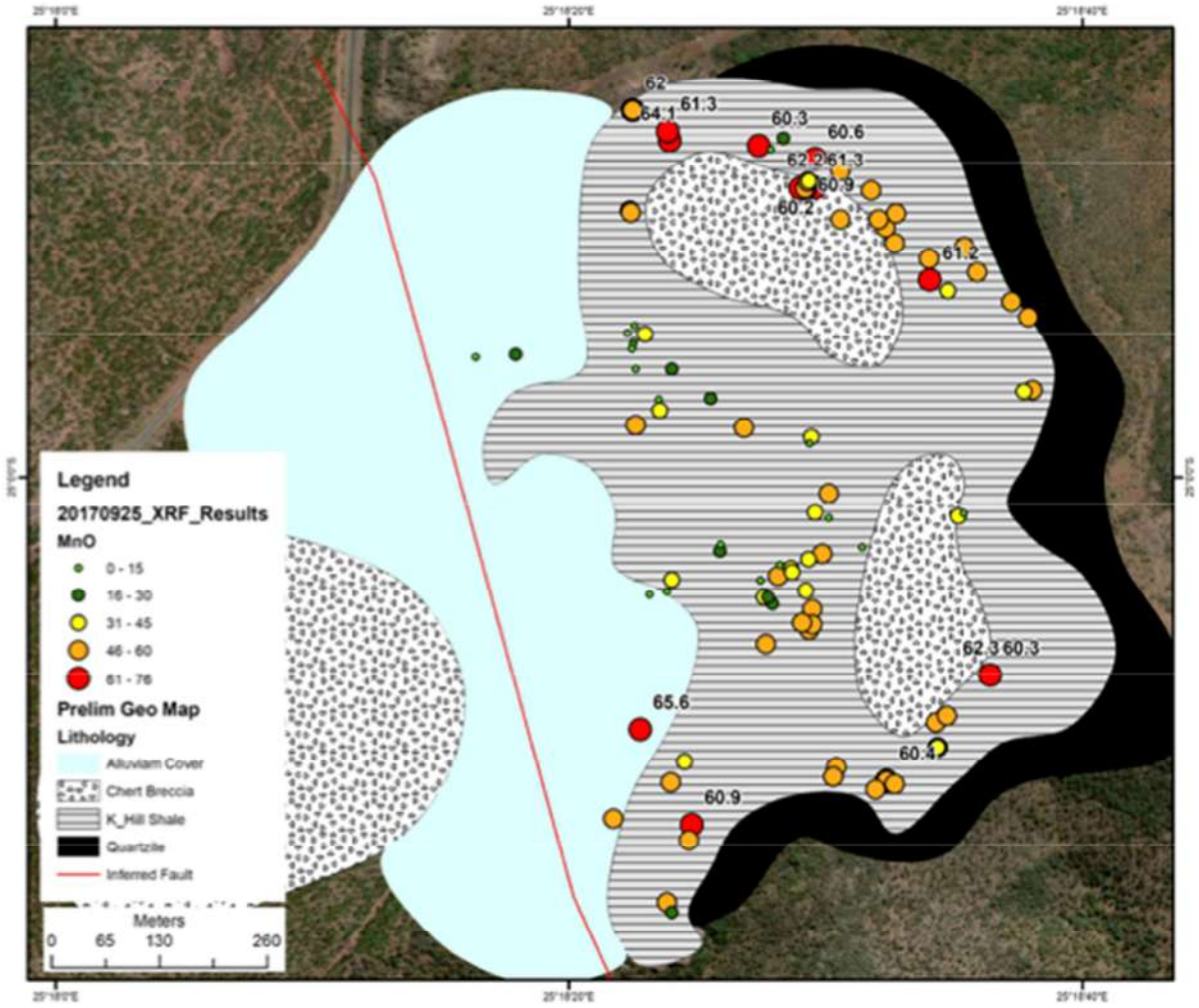


Assay results from the drill cores, confirmed the presence of a mineralized unit similar to the outcropping units sampled in the surface sampling program during late 2017. However, this drilling campaign allowed Giyani to collect samples from the mineralized horizon in a more representative method by collecting split core samples. The mineralized manganiferous shale unit which is envisaged to be the main mineralized body at K-Hill, has been intersected in all of the completed resource drill holes, with the exception of DDKH18_0002 which was abandoned in the overburden due to difficult drilling conditions.

The manganese-shale unit is approximately two to three metres in thickness and mineralization occurs as a manganese-clay as well as massive manganese-oxide sections with a steel grey metallic luster. An early and preliminary interpretation from the drill core observations suggests that the manganese-shale

is a flat lying, tabular and continuous body for approximately 300 metres in a NW-SE direction along the fence drilled between DDKH18_0001 to DDKH18_0004; and about 100 metres NE-SW direction towards the fence drilled between DDKH18_0005 and DDKH18_0007. The fence of drill holes has also intersected this shale between holes DDKH18_0015 and -0016 which represents an additional 300m extension of the same ore body.

The aerial image below shows the outline of the resource at K-Hill.



The photograph of core samples that follows shows a typical intersection of the manganese-shale, mineralized with black manganese-clay as well as manganese-oxide bands or laminations. On the right is an intersection of massive manganese-oxide mineralization from DDKH18_0007.

Ground geophysical surveying

Geophysical surveying at K-Hill and Otse was completed in May, 2018. A provisional interpretation of the northern portion of the K-Hill survey block was provided to assist with the decision making of the drill hole collar locations. This survey reiterated the presence of a thick shale unit (about 40 metres in thickness observed from the drill core) of which the manganese-shale makes up the upper portion. The contrast with a thick and denser underlying extrusive volcanic sequence is also clearly visible. This interpretation assisted with the location of the first seven drill collars, targeting the top of the shale unit stratigraphically above the volcanic unit.

Importantly the geophysics identified a very similar signature and contrast pattern towards the south of the outcropping and drilled mineralization. These areas are earmarked for follow up investigation with mapping, and/or drilling.

Drill Results

In early July the geochemical results of the samples collected from the first holes drilled at K-Hill were released to the market. The table below shows some results from seven holes. Only the oxides of interest, MnO, Fe_2O_3 and the deleterious element P_2O_5 were listed here due to their significance in the formulation of battery grade products.

Hole ID	From (m)	To (m)	Thickness (m)	Fe_2O_3 (%)	MnO (%)	P_2O_5 (%)
DHK18_001	6	10	4	18.54	40.09	0.156
including	6	8	2	16.9	42.3	0.316
DHK18_004	5.73	8	2.27	19.22	35.91	0.412
including	6.5	7.5	1	19.4	41.4	0.444
and	15	19	4	18.73	31.93	0.414
including	16	17	1	17.2	48.8	0.49
DHK18_007	25	29	4	13.9	40.15	0.147
including	28.07	29	0.93	13	57.9	0.17
DHK18_0010	11.73	14	2.27	20.74	31.82	0.16
DHK18_0011	21	23	2	21.3	36.9	0.308
DHK18_0012	17.73	19.5	1.77	22.02	34.45	0.218
DHK18_0014	15	19	4	17.19	31.44	0.154

In the view of the company's qualified person these geochemical results from the first drill holes confirm the thickness of the manganiferous shale horizon at K-Hill. The representative sampling from the K-Hill drill cores provides Giyani with a true vertical section of the mineralized horizon.

Resource

In late September, the company announced its long-awaited maiden NI43-101 Resource Estimate which was prepared by MSA Associates of Johannesburg. The resource estimate was based on geochemical analyses and density measurements of core samples obtained by diamond drilling undertaken by Giyani from 16 April 2018 to 02 July 2018. A total of eighteen vertical holes were drilled at K-Hill. Two of the drillholes were collared outside the Mineral Resource area, one was drilled for metallurgical purposes and twelve of the drillholes intersected the manganese shale. The intersections obtained from ten drillholes were used to estimate the grade of the Mineral Resource. The remaining holes were used in defining the extent of the mineralization.

K-Hill Manganese Resource

Category	Tonnes	MnO	Al2O3	SiO2	Fe2O3	LOI
		%	%	%	%	%
Inferred	1,100,000	31.2	8.9	26.3	16.9	8.8

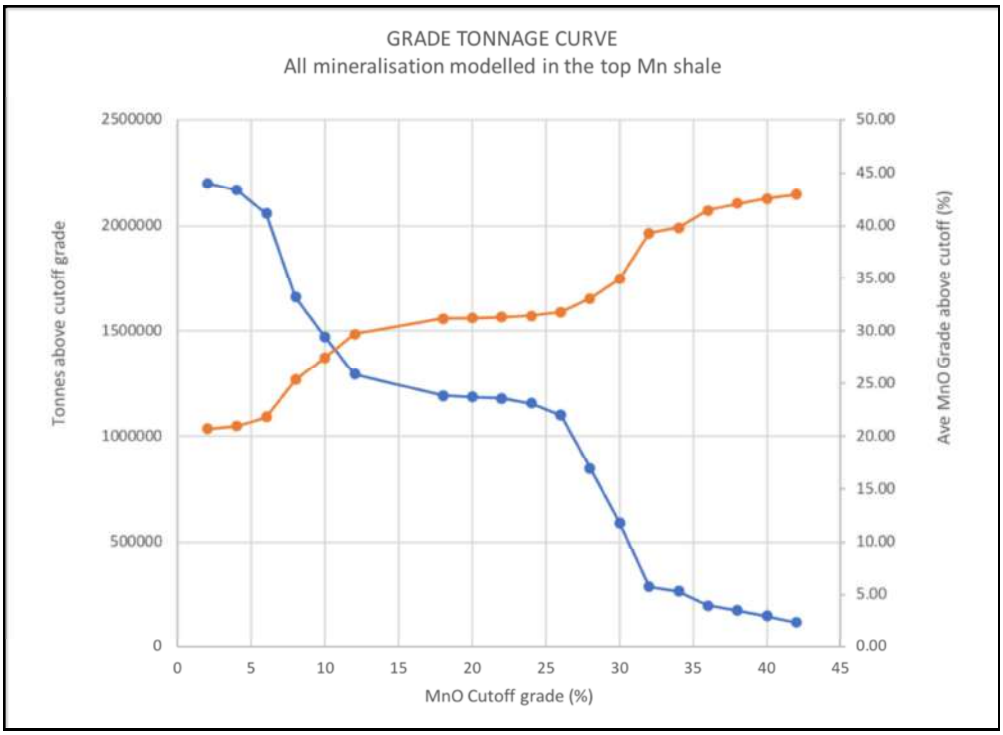
The cut-off grade employed was 18% MnO, which is the lowest grade block estimate within the mineralization model. It is important to note that the cutoff is based on the very conservative 60% recovery, even though the achieved recovery in the test work, at the University of Dalhousie labs, was 95%. As further work establishes the true recovery (which is expected to be considerably higher than 60%) the resource should increase in size as the economic cutoff grade drops.

The resource show a consistent grade of 20% of more, above the grade required to make EMM.

The company applies a test for reasonable prospects for eventual economic extraction based on the following assumptions:

- EMM price (FOB) US$2,600 per tonne
- Mining cost US$35 per tonne
- Processing cost US$75 per tonne of run-of-mine feed
- GSA cost US$20 per tonne
- Transport cost US$50 per tonne of EMM

- Metallurgical recovery 60% of contained run-of-mine Manganese



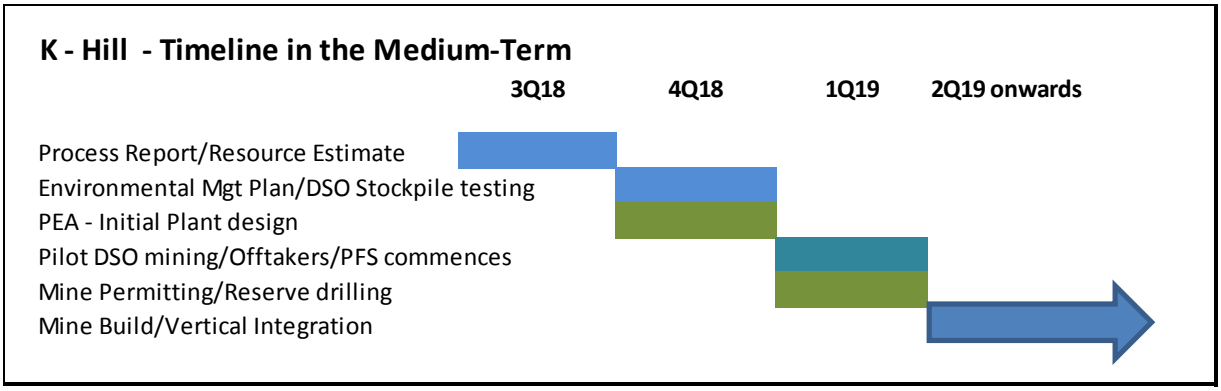
A key issue to be considered here is the simplistic apples-to-oranges comparison that is doing the rounds when it comes to Manganese resources and EMM production. Many investors/analysts that are accustomed to the Manganese steel and alloy space are looking at projects directed towards the battery manganese space with a jaundiced eye. They are comparing a product that sells for around $270 per tonne to a product (EMM) that vends for closer to $2,700 per tonne.

The value-added difference between one basic commodity and the upgraded product is the motivation for Giyani Metals to enter the battery metals space. The margin difference is the key factor. A tonne of DSO manganese sent for end-use in the steel alloy industry may generate a net margin of $100 per tonne for one of the behemoths in that space. However the margin on EMM might be around $500 per tonne. Thus a smaller resourced project is made infinitely more viable by the greater margin that comes from the upgrading of the product for battery applications.

Timetabling

Despite the formative nature of the work done thus far the company is determined to fast-track its deposit to production to get ahead of the curve as far as other wannabes in the battery-grade manganese space.

The tentative timeline below shows the goals that the company‘s management is setting out to achieve in the medium-term.



Financing

In early February the company announced the successful closure of the non-brokered private placement that had been previously announced in late December.

The placing consisted of 7,207,890 units issued at $0.275 per Unit with each Unit consisting of one common share and one half of a common share purchase warrant with total proceeds of around CAD$2mn.

Each whole Warrant is exercisable at an exercise price of $0.40 per share for a period of 18 months. In the event that the closing price per Common Share is more than $0.60 per Common Share for more than 20 consecutive trading days, Giyani shall be entitled to accelerate the warrants' expiry date.

Giyani was successful in selling the 2,800,000 common shares of the 16,490,000 shares it held in Canoe Mining Ventures Corp. to an arm's length private purchaser for proceeds of $350,000.

Giyani intends to use the funds received from the financing and the sale of the Canoe shares to advance the Kanye Manganese Project in Botswana including resource drilling, process engineering studies, hydrometallurgical testing and for general corporate purposes.

While not specifically a financing proposal, but rather one designed to heighten investor interest and the base, the company may consider a future potential ASX listing. That market has a much greater perception of the Manganese market than the Canadian markets currently do.

Stockpiles

Old mine dumps and piles of material from previous operation within the K-Hill prospect contain valuable Manganese ore. These piles were identified from drone footage and then investigated on foot.

A total of 25 samples were collected from 37 piles. Most piles consisted of a fine-grained material with small chips of MnO material. Some piles consisted of very fine, clay material and 3 small piles consisted of course, lumpy Mn-Oxide. At the right can be seen an example of the material on one of the piles.

A total tonnage of course and fine material was calculated to be approximately 25,600 tonnes, of which 47 tonnes are lumpy high grade Mn-Oxide material and the rest is fine grained. Of this fine-grained material, 17,579 tonnes are located in roughly the same area where it is suggested that the previous processing plant existed.

The goal here is to either use some of this material in a DSO campaign or combine it with RoM material when the mine is back in operation.

Fast Track to "Production"?

In a press release in early July the company revealed that it had been approached by, and is in discussions with, a number of market traders and end users of high grade manganese material for the steel market. The company reiterated that the sale of raw manganese material is not one of its long term goals.

In the very short-term the company is considering the possibility of selling DSO material from the mine which would generate cashflow to permit the company to become largely self-funding. With contract miners being utilized it could be an almost "capex-free" launch into a producing and cashflowing status.

The company might be able to produce between 30,000 to 40,000 tonnes over three to four months from existing surface stockpiles and reclamation bench work at the Otse prospect, with revenues of around $8mn. In addition, this material is currently being surveyed to determine its volume, and tested to establish exact specifications prior to discussing pricing terms with potential purchasers.

This short-term revenue generation would fit with the current desire of investors, in general, to see fewer demands made upon them in follow-up financings and minimize the dilution of the equityholders.

Some Colour on Botswana

Botswana has been a gold mining destination for nigh on a millennium. Diamonds though are obviously the mineral product the country is known best for these days and its biggest money spinner. Manganese has a history here but not exploited in recent memory.

As a mining destination, most surveys rank the country as the best mining jurisdiction in Africa and in one survey it is ranked 7th best mining country globally. The obvious advantages are the political stability (in a notoriously unstable continent and legal stability with English Law as the basis for the system).

On the economic front, there has been strong GDP growth in recent years, the country has an AA credit rating, while on the corporate front, the corporate tax rate can be as low as 22%, there is a 3% royalty on base metals sales and there are no exchange controls.

Collateral Advantages from the Cobalt Crunch

The pace of change in the battery space has quickened during 2017 and 2018, with Lithium plays dividing into the “serious” and the “non-serious” and the Cobalt crisis moving into centre stage and focusing minds on supply issues in the battery space, particularly as regards the “blue” metal. The price of Cobalt has soared above 2008 levels and the chatter in markets has been of an imminent supply crunch in absolute terms that might precipitate rationing by price and possible switching to other elements.

While there is no direct “switch” out of Cobalt into other metals there are patents out there for other technologies, both currently employed and theoretical, that employ other metals and minerals such as Manganese (Lithiated Manganese Dioxide batteries), Titanium (Lithium Titanate batteries) and Antimony/Magnesium (Molten Salt batteries), Vanadium (Vanadium Redox Flow batteries) and in other metals. Arguably, the Lithium Ion battery that looks to be a favorite amongst EV makers is the NMC (Nickel Manganese Cobalt) battery which can be produced in a range of ratios of these three elements. Current emphasis is on producing cathode chemistries with lower cobalt content like the (1-1-1), (5-2-3), and (6-2-2).

Conventional wisdom has it that battery manufacturers, particularly in the HEV/EV sphere, are committed to Lithium Ion batteries and will pay through the nose rather than retool or adapt. However,

if there is a Cobalt shortage in absolute terms or supply becomes highly irregular then they may not have any choice but to consider changes in battery formulations that attempt to minimize the Cobalt component.

Battery chemistries that rely on higher percentage of manganese at the expense of cobalt open up the interesting possibility that EMM, the production of which is currently dominated by China, might be tempting as a strategic choice within China in light of that country's lack of guaranteed Cobalt supplies. Watch this space.

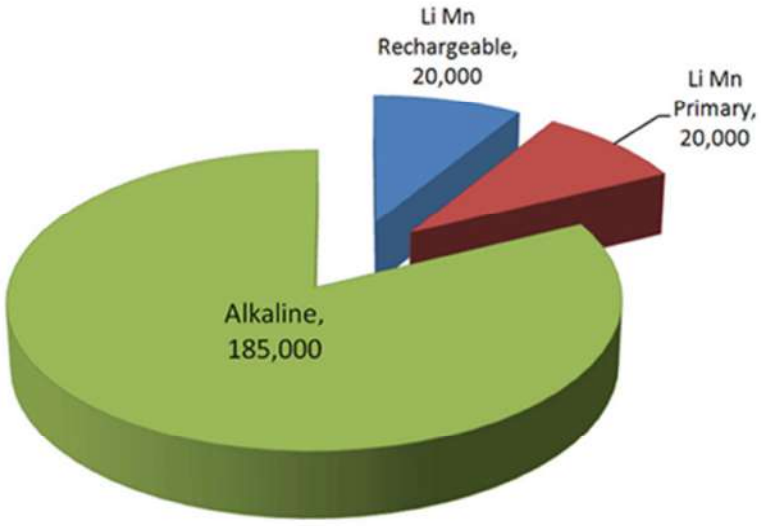
The LiB Format – Flawed but Entrenched

The shortcomings of Lithium Ion batteries are becoming more and more evident by the day. As if the travails of the Samsung Galaxy Note 7 were not enough there is a rising tide of frustration with the chargeability (or lack thereof) with the most common example of LIBs, namely in mobile phones. With rising usage (in terms of minutes and hours spent online) and ravenous apps continuing to operate even when a phone is not being actively used, the batteries are lasting ever shorter amounts of time and necessitating that users carry back-up power packs or spend their lives in search of "somewhere to plug in". If this is the future it looks very fraught and grim.

The die has already been cast though with regards to the type of battery that will go into the next few generations of EV and HEVs. It would be too expensive and disruptive for Western car makers to execute a *volte face* away from LiBs. However as applications proliferate so do technologies. Prominent amongst these are batteries utilizing Manganese as a key component.

Manganese Usage in Batteries

We should start by noting that manganese is currently employed in that most prosaic of battery formats, the alkaline battery (think AA or AAA). There is nothing new in that but it does provide a constant demand for manganese and has done for over half a century. It is also one in which little effort goes into the recycling of the Manganese metal in batteries.



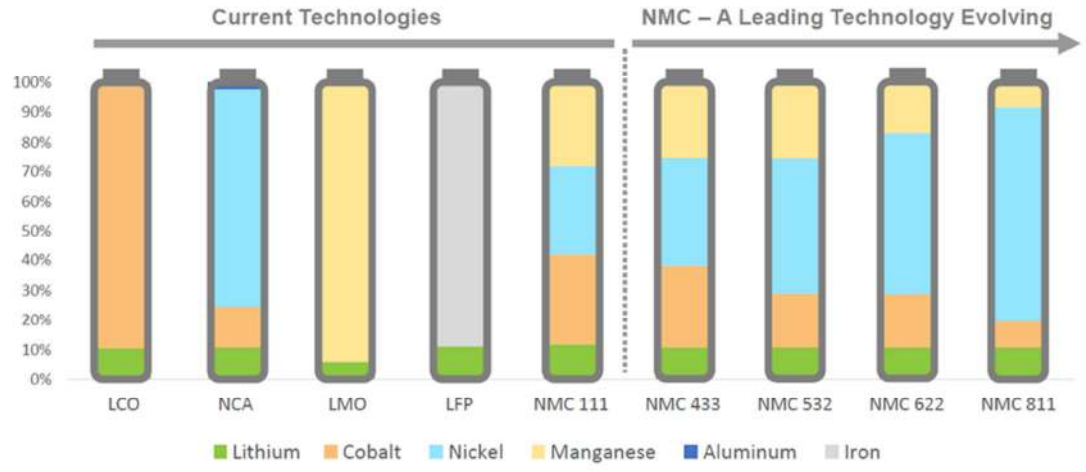
The cutting edge application is the Lithiated Manganese Dioxide (LMD or LMO) Battery. The Lithium-Mn oxide spinel is a relatively new material with some

proposing that, the ongoing expansion of the EV market may rely on its greater use in rechargeable batteries. LMO batteries are associated with good structural stability, low-cost and good electronic and lithium-ion conductivity. With growing concern over the safety and viability of other cathode designs spinels based on $LiMn_2O_4$ are growing in popularity as cathode materials.

The standard mix of LMD used in batteries contains 4% Lithium, 61% manganese and 35% oxygen by atomic weight. The attractions of this format are that LMD has high power output, thermal stability and enhanced safety when compared to other lithium ion battery types. For these reasons LMD batteries are used in the Chevy Volt and Nissan Leaf. Research at the University of Illinois has achieved an advanced prototype battery, using Lithiated Manganese that can be recharged in as little as two minutes (equivalent to filling a gas tank).

The Chinese market is currently heavily weighted towards the Lithium iron phosphate (LFP) battery formulation with little to no Cobalt involved. However, Manganese is a key ingredient in the cathodes of two of the most prominent up and coming electric vehicle battery types: the nickel-manganese-cobalt (NMC) battery, and the LMD/LMO battery.

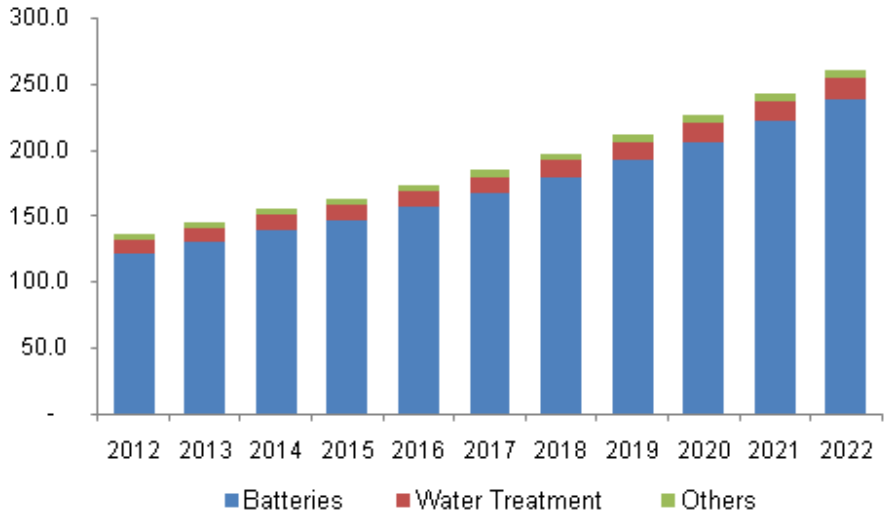
As the cathode markets develop toward NMC, it is felt by many observers that the LFP format favored by Chinese manufacturers, with lower suitability for electric vehicles will lose market share. Current NMC ternary lithium-ion batteries from South Korean and Japanese makers typically employ a ratio of 60% nickel to 20% manganese, and 20% cobalt (6:2:2), but as that ratio moves to 8:1:1 in 2018 and beyond, the cathode is a key element in achieving vast cost efficiencies. At the current moment though other formulations such as 5:2:3 and 1:1:1 have higher global markets shares than those favoured by the Japanese and Koreans. At the moment, the NMC battery mode is setting the industry standard and is likely to be at the forefront for at least five or ten years.



Source: HIS Markit

Electrolytic Manganese Dioxide (EMD) is a vital ingredient in the production of alkaline batteries with

total annual production capacity estimated by the International Manganese Institute at roughly 430,000 mt. Battery consumption of Electrolytic Manganese Dioxide (EMD) has been predicted to be fastest growing segment of manganese production with a CAGR of 5.1% from 2015 to 2022. As can be noted in the chart of projected usages below:



Source: Grand View Research

Spot export prices of Chinese EMM surged over June and July as supply continued to tighten, supporting domestic prices further. The International Manganese Institute reported in August that global manganese metal production dropped by 2% MoM and by 20% YoY. During the January to August period, supply contracted by 7% because of production cuts in China.

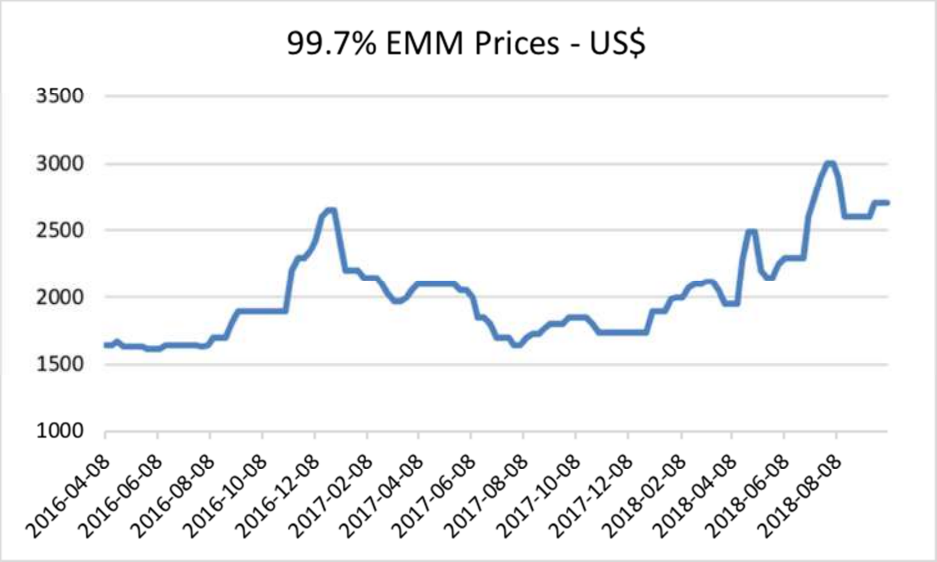
EMM Supply in August 2018

(in '000 mt)	Supply	MoM % Change in Supply	YoY % Change in Supply	Supply YTD	Supply Same Period Last Year	% Change YoY
China	117,3	-2%	-21%	1031,7	1109,3	-7%
Rest of the World	3,9	5%	17%	28,6	27,2	5%
World	**121,3**	**-2%**	**-20%**	**1 060,3**	**1136,5**	**-7%**

Source: International Manganese Institute (IMnI)

This "improving" supply dynamic drove prices higher with S&P Global Platts' weekly 99.7% Mn EMM assessment at $2,800-$2,850/mt FOB China in mid-July, up from $2,200-$2,300/mt at the end of June.

The chart on the following page shows Metal Bulletin's read on the price for EMM. The price briefly spiked to around $3,000 per m/t in August, however the price has recently settled back to around USD2,600/mt.



Source: Metal Bulletin

Board & Management Team

Jonathan Henry is the Chairman of the Board. He was President and Chief Executive Officer of TSXV-listed Gabriel Resources Ltd. from June 2010 to July 2018. Between 1994 and 2010 he worked with Avocet Mining PLC, now a West African gold mining and exploration company operating the Inata Gold Mine in Burkina Faso, in a variety of senior management capacities including Finance Director and Chief Executive Officer of Avocet. During his tenure at Avocet he oversaw the exploration, feasibility study, mine development and capital funding activities, plus a number of acquisitions and disposals of mine assets in Portugal, Peru, USA, Tajikistan, Burkina Faso, Malaysia and Indonesia. He is a director of Irish and AIM-listed Tungsten developer, Ormonde Mining plc, where he chairs the Remuneration Committee. He is also a director and chair of the Audit Committee of TSX-V listed African gold explorer Ashanti Gold.

The CEO and an Executive Director is **Robin Birchall**. He has more than eighteen years of experience in the financing and management of resource companies. He was most recently the Executive Chairman of Silver Bear Resources. Previous roles include CEO of a private oil and gas E&P company as well as V.P. Investment and Corporate Banking with BMO Capital Markets, where he completed a variety of high profile transactions for resource companies. Prior to BMO, he was V.P. Corporate Finance at Canaccord Adams Ltd. He earned an MBA from the University of Cape Town, a MSc in European and International Politics from Edinburgh University, a Première Degré en Langues Literature et Civilisation, from Stendahl Université and a BA from Queens University.

The President is **Wajd Boubou**, an executive with a 26 years' experience in the oil & gas and TMT sectors. He has held various leadership positions in multinational conglomerates, including Schlumberger and Cisco Systems. His most recent role was Service Delivery Executive at Cisco Systems

where he managed major telecom accounts. He worked on large projects in Asia, Europe, Middle East & Africa, and North America.

Dr. Ian Flint is the Chief Metallurgist. He has been active in the industry for over 25 years with experience ranging from engineering review, test work, pilot plants, process design, equipment design, metallurgist, and director of more than 30 projects. Dr. Flint holds a Bachelor of Science (Biology; 1983) and Bachelor of Engineering (Geo; 1986) and Masters of Engineering (Metallurgy and Material Science; 1989) degrees from the University of Toronto and a Ph.D. in mining and mineral processing engineering (2001) from the University of British Columbia.

John Petersen has been engaged in the practice of law for 37 years and is a global thought leader on energy storage and sustainability issues. His diverse experience in corporate finance, natural resource development and advanced battery technologies give him a unique perspective on the technical, economic and supply chain challenges of energy storage, vehicle electrification and alternative energy. From February 2003 through January 2007, John served as a director of Axion Power International, Inc., including a two-year stint as board chairman. John is a 1976 graduate of the College of Business Administration at Arizona State University and a 1979 graduate of the Notre Dame Law School. He was admitted to the State Bar of Texas in May 1980 and was licensed to practice as a Certified Public Accountant from March 1981 through December 1990.

Michael Jones as appointed a Director in May of 2018. He is a Mining Engineer who held various mine management roles for 13 years working at Gencor, De Beers, Debswana and as Consulting Mining Engineer for Iscor. Mr. Jones then joined Canaccord Capital in 1997, initially as a research analyst, then as an international corporate finance professional before his appointment as Head of UK Mining Investment Banking.

In 2010, he joined African Minerals Limited, and associated companies, as a corporate executive before establishing Makerfield Resources Limited in 2015, a private consulting group providing resource companies with coherent strategies for enhancing value.

Eugene Lee is a non-executive director. He is a Chartered Professional Accountant with extensive experience in corporate finance, metal marketing, financial reporting, and corporate governance. His experiences in the mining industry encompass roles as senior management to director roles with greenfield projects to intermediate gold and base metal producers. He is currently the Director, Marketing of Hudbay Minerals Inc. He also serves as a director and audit committee chair of Canoe Mining Ventures Corp. and Giyani Gold Corp. Previous roles include Chief Financial Officer of Commonwealth Silver and Gold Mining Inc., Chief Financial Officer of Premier Royalty Inc., Vice President, Finance and Assistant Corporate Secretary for Northgate Minerals Corporation and Senior Accountant at Centerra Gold Inc. He articled with PricewaterhouseCoopers in the audit and assurance group before transferring to PwC's consulting practice focusing on corporate bankruptcies and restructurings.

Another of the non-executive directors is **Scott Breard**. He is a business and marketing professional as well as an author and speaker. He attended the University of Guelph prior to opening his first retail store, Hot Shots Games in 1999 at the age of 25. He is currently Executive Director of DiRoNA. He has previously held senior positions as Director of Marketing with Olhausen Billiards, USA and Vice President of Marketing with Jack Nathan Health's Clinics at Walmart, Canada.

Risks

Amongst the risks at the current time are:

- Manganese price risk
- Being challenged by new battery technologies
- Financing is still tenuous and dependent upon sentiments towards other metals, such as Lithium and Cobalt
- Project may not show potential to expand grade or tonnages thus reducing its economics

With the price for Manganese ore for alloy purposes nearing ten year highs a price retreat must be the biggest risk at the current time. However the rise in prices has not spurred a surge in production and the major players (such as South32) are fairly disciplined compared to other bulk minerals categories e.g. iron ore.

The secular growth in battery uses for Manganese seems assured for the foreseeable future and thus the expected breakthrough in mass adoption of NMC battery styles would be an added boost. Manganese is already well-established in the battery space and it is not an "expensive" metal such as Cobalt. It is hard to imagine it being pushed out on price considerations or security or reliability of supply.

Financing in still tenuous with Lithium companies currently encountering more difficulties in financings than one would imagine in the ebullient battery metals environment on these times. The strategy at Giyani of potentially kickstarting a DSO production as a cash-generator is a sound one and potentially mitigates this risk.

Exploration is ongoing and until a PEA is published the economics of the project remain conjectural.

Conclusion

Those who think they can surf the battery metals boom with minimal effort are mistaken. Giyani Metals resolved to follow the path less travelled by exploring for alternative battery metals and have entered the fray in 2017 with a rapid-fire campaign to stake out their space in the marketplace for battery-grade Manganese in Africa. Exploration results are now starting to flow with the formulation of production plans for both the short and the longer term.

The battery space is a fast moving one these days. While the Lithium Ion battery format seems destined to have dominance for the foreseeable future it does have (in its most classic formulations) the all too

evident shortcomings, particularly on the charging and endurance fronts.

Manganese is shrugging off it rather prosaic image as "just" another steel alloy metal and is now being seen in many quarters as one of the rising battery metals, particularly in NMC and LMO formats. Cobalt's uncertain supply situation has helped foster this. The use of LMO battery technology is also particularly attractive as it offers a real opportunity for reducing reliance on lead, nickel and cadmium power sources in this important area, thereby offering potential environmental and health gains.

Giyani Metals is one of the few to have recognized this trend and is seeking to source battery-grade from Africa. Also in this mix are the Western battery manufacturers that wish to achieve "metals" independence in the battery space particularly in those categories that China has hitherto dominated, with Manganese being an obvious candidate for the cultivation as an alternative input.

This company has identified a niche that potentially muscles in on the supposedly indispensable and yet hard-to-source Cobalt. Therefore we are rating Giyani Metals as a **Long** call and our twelve-month target price of $0.54. The impetus for the price to break above this level would be securing an offtaker and/or publication of a PEA.

Important disclosures

I, Christopher Ecclestone, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers.

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Web access at:

Research: www.hallgartenco.com

60 Madison Ave, 6th Floor, New York, NY, 10010