



HIGH GRADE NICKEL-COPPER SULPHIDES

INVESTOR PRESENTATION
NOVEMBER 2018

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Corporate Overview



CLASS 1 NICKEL-COPPER SULPHIDES





Dr Leon Pretorius – Executive Chairman

BSc (Hons) MSc PhD FAusIMM (CP) MAIG PrNatSci

Dr Pretorius is a Geochemist with 47 years international mineral and mining experience.

Since settling in Brisbane in 1978 he has worked on varied commodities with discovery success in gold, industrial minerals and uranium both in Australasia (mainly Queensland) and southern Africa. Open pit mining and mineral processing experience has been gained in Gold, Industrial Minerals, Uranium and Tungsten.

Corporately, he has also been involved as a public listed company director in Australia and overseas since 1985 and in the ten years prior to joining TopTung's Board as its Executive Chairman , he was a Director of Paladin Energy until April 2005; Managing Director of Deep Yellow Limited until March 2010; and, Executive Chairman of Carbine Tungsten until July 2013.



Martin Kavanagh – Non Executive Director

BSc Hons Geology FAusIMM MAIG MCIM

Mr Kavanagh has 48 years' exploration and mining experienced acquired through fieldwork, research and management of Australia-wide and offshore programmes in Indonesia, North America, the Southwest Pacific region and Southern Africa. As a senior executive and consultant in the resource industry he has a strong background in resource development, open-pit and underground mining. This includes +10 years working as a nickel geologist. Mr Kavanagh has been a director of ASX listed companies for over 20 years.



Charles Thomas – Non Executive Director

Mr Charles Thomas is an Executive Director and Founding Partner of GTT Ventures a leading boutique corporate advisory firm based in Australia. Mr Thomas holds a Bachelor of Commerce from UWA majoring in Corporate Finance. Mr Thomas has worked in the financial service industry for more than a decade and has extensive experience in capital markets as well as the structuring of corporate transactions. Mr Thomas has significant experience sitting on numerous ASX boards spanning the mining, resources and technology space. Mr Thomas's previous directorships include among others AVZ Minerals Ltd (ASX:AVZ), Force Commodities Limited (ASX:4CE), Vikings Mines Ltd (ASX:VKA) & Marquee Resources Ltd (ASX:MQR) , where he was responsible for the sourcing and funding of numerous projects.



Marnus Bothma - Geologist

Mr Bothma has a Masters degree in Geology from the University of Wollongong and is experienced in early to mid stage exploration having conducted numerous technical programs in Australia, Canada and South Korea. Mr Bothma has direct experience in magmatic Ni-Cu sulphide mineralisation within the Belleterre-Angliers Greenstone Belt, Canada.



Orix Geoscience – In-Country Geological team

The Company has engaged leading Canadian geological consulting firm, Orix Geoscience to provide in-country technical expertise and support. Orix is a firm that specialises in 2D and 3D compilation, interpretation, modelling services and exploration program project management.

TopTung Ltd Corporate Overview

Cash at Bank	~\$3,750,000														
Major and Significant Shareholders	<table> <tr> <td>Dr Leon Pretorius (Chairman)</td> <td>- 6.76%</td> </tr> <tr> <td>GTT Global</td> <td>- 5.52%</td> </tr> <tr> <td>Hustler Investments</td> <td>- 4.83%</td> </tr> <tr> <td>Southern Reaches</td> <td>- 4.61%</td> </tr> <tr> <td>Kitara Investments Pty Ltd</td> <td>- 2.28%</td> </tr> <tr> <td>Steven Scott Day</td> <td>- 2.28%</td> </tr> <tr> <td>Mounts Bay Investments (Director)</td> <td>- 2.06%</td> </tr> </table>	Dr Leon Pretorius (Chairman)	- 6.76%	GTT Global	- 5.52%	Hustler Investments	- 4.83%	Southern Reaches	- 4.61%	Kitara Investments Pty Ltd	- 2.28%	Steven Scott Day	- 2.28%	Mounts Bay Investments (Director)	- 2.06%
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Steven Scott Day	- 2.28%														
Mounts Bay Investments (Director)	- 2.06%														
Top 20 Shareholders	~51%														
Top 40 Shareholders	~68%														
Shares on Issue	206,961,938														
Market Cap @ 0.034c	~\$7.04 mil														
Enterprise Value (EV)	~\$3.29 mil														
Performance Shares <small>(10day VWAP)</small>	7.5c – 6,750,000 10c – 6,750,000														

Project Overview

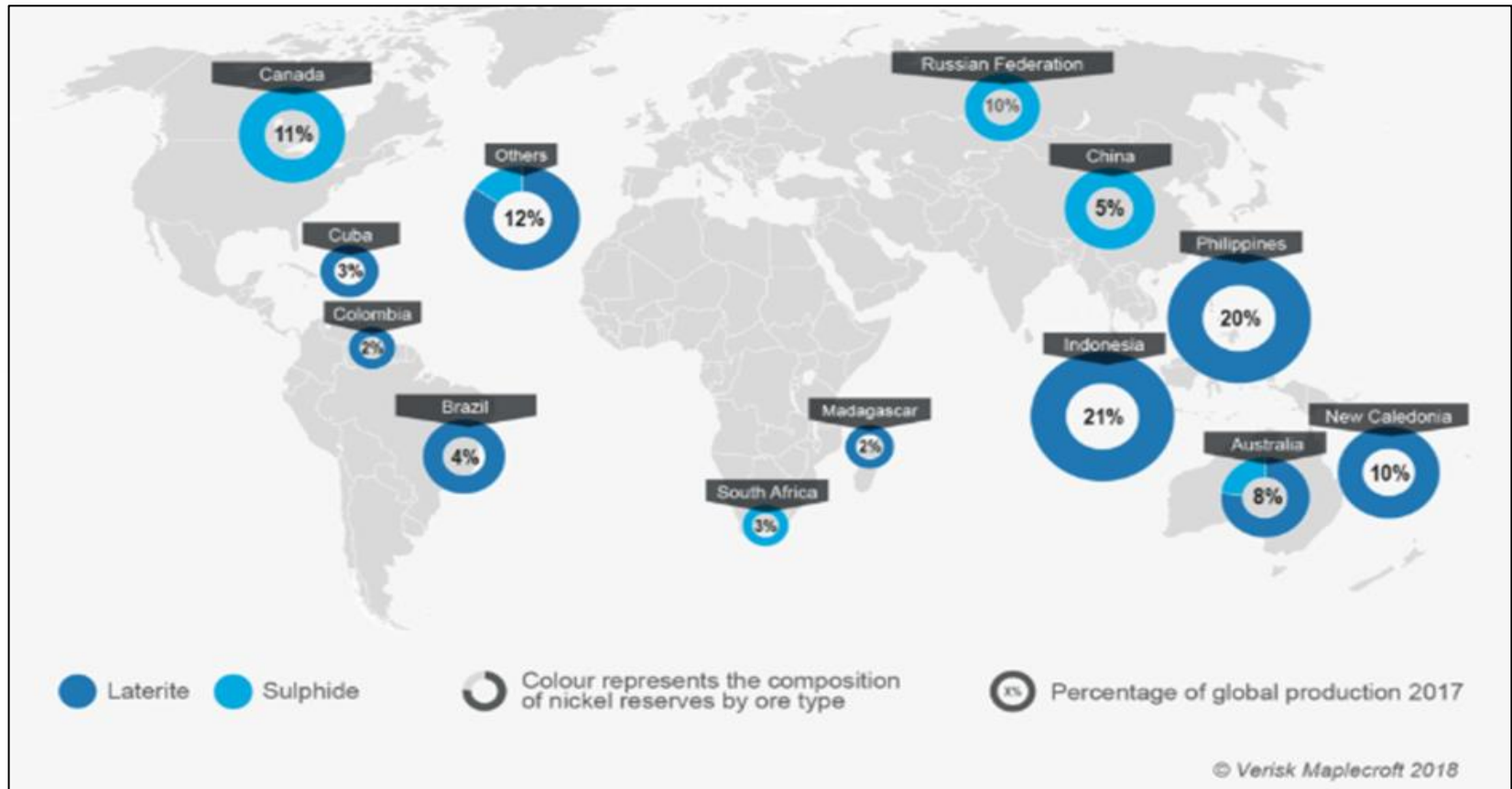


CLASS 1 NICKEL-COPPER SULPHIDES



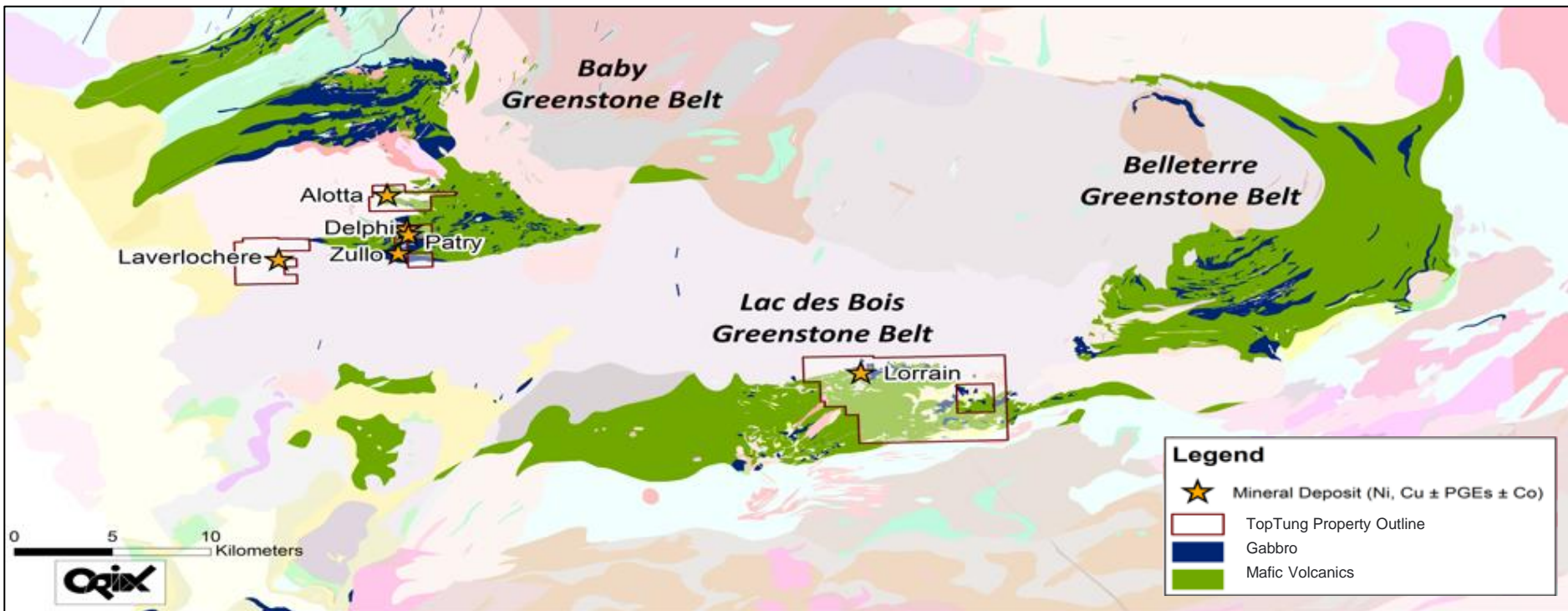
The Right Space, At The Right Time, With The Right Type of Nickel.... Nickel Sulphides

- Canada hosts more Nickel Sulphides deposits than anywhere in the world.
- Only Class 1 Nickel is suitable for the battery market, Class 1 Nickel is dominantly & preferentially derived from Sulphides.
- Expectations of a boom in demand for electric vehicles are leading investors and battery makers to stockpile Class 1 Nickel, helping to fuel a spike in global prices of the metal, as a result of this Class 1 Nickel LME warehouse levels are depleting at a rapid rate.



Belleterre-Angliers Greenstone Belt (BAGB)

- TopTung Ltd is a Nickel-Copper Sulphide focused explorer with three highly prospective project areas within the mining friendly jurisdiction of Quebec, Canada.
- 24 EM targets have been identified by Falconbridge in a 2001 program **targeting multiple shallow 3-5 Mt deposits**, but were never followed up due to a take over of Falconbridge by Glencore.
- A characteristic of the Nickel-Copper mineralised bodies in the BAGB is the association of mineralisation with gabbroic sills. The extensive areas of mafic volcanic rocks, together with the large volumes of gabbroic intrusions - which host the sulphide mineralisation in the district “suggest that the potential for further discoveries within the company’s tenements is excellent.”



Drill Proven Nickel-Copper Sulphides¹

Broad Intersects

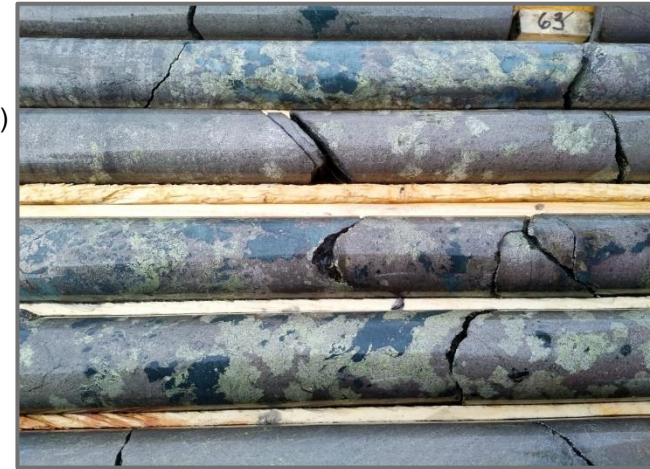
- **26.50m @ 3.05% NiEq, 1.37g/t Pd & 0.09% Co from 36.80m** (Hole BT-01-19)
Including
- 22.20m @ 1.88% Ni, 2.04% Cu, 1.47g/t Pd and 0.10% Co from 36.80m
- **48.05m @ 3.05% NiEq and 0.09% Co from 54.25m** (Hole BT-01-32)
Including
- 13.1m @ 1.59% Ni, 1.03% Cu and 0.22% Co from 54.25m
- 29.3m @ 1.87% Ni, 2.16% Cu and 0.10% Co from 73m

High Grade Intersects

- **1.95m @ 5.50% NiEq and 0.10% Co from 51.55m** (Hole BT-01-36)
Including
- 1.45m @ 6.2% Ni and 2.91% Cu and 0.10% Co from 51.55m
- **12.80m @ 3.54% NiEq, 1.72g/t Pd and 0.11% Co from 59.90m** (Hole BT-01-33)
Including
- 7.55m @ 2.76% Ni, 1.31% Cu and 1.82 g/t Pd and 0.13% Co from 64m
- **3.35m @ 3.96% NiEq, 0.95gt Pd and 2.18g/t Pd from 25m** (Hole BT-01-18)
Including
- 1.0m @ 20.53% Cu, 1.55g/t Pt and 5.5g/t Pd from 25m

High Metallurgical Recoveries From Regional Test Work

- Flotation test work conducted on the neighbouring Midrim deposit mineralisation indicated that up to **95% Cu and 80% Ni can be recovered through simple flotation within 10 minutes.***



Hole ZA-18-05
(Assays Pending)

2018 DRILL PROGRAM

Maiden Drill Program

- The company completed its maiden drill programme totalling 801m over 9 holes within 10 days at Alotta.
- The programme successfully intersected significant zones of mineralisation in all 9 holes.
- 8 holes intersected significant zones of massive sulphides.
- Step out drilling successfully extended mineralisation both down plunge and up plunge to previously known mineralisation.
- Assay results expected Nov 2018.



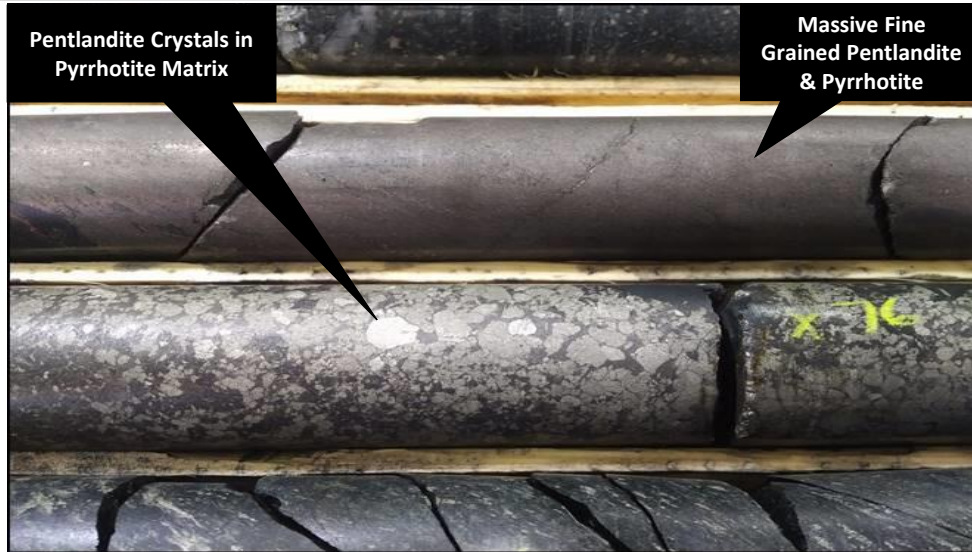
Hole ZA-18-01

Significant Massive Sulphide Intersections

Hole Number	From	To	Mineralisation	Massive Sulphides	Status	Comments
ZA 18-01	70.6m	76.77m	6.17m		Assays Pending	Down Plunge Extension Hole
including	74.3m	76.77m		2.41m		
ZA 18-02	28.5m	41m	12.47m		Assays Pending	Infill Hole
including	28.5m	36.9m		2.98m		Cumulative Massive Sulphides Within Zone
ZA 18-03	40.7m	57.32m	16.62m		Assays Pending	Infill Hole
including	40.7m	45.6m		4.9m		
&	60m	61.5m		1.5m		
ZA 18-04	53.1m	63.87m	10.77		Assays Pending	Twin Hole (BT-01-07)
including	53.1m	56.37m		3.27m		
&	70.1m	76.84m		6.67m		
ZA 18-05	61.1m	71.7m		10.55m	Assays Pending	Up Plunge Extension Hole
ZA 18-06	43.1m	50.7m	7.53		Assays Pending	Scissor/Infill hole
Including	43.1m	50.7m		6.61m		Cumulative Massive Sulphides Within Zone
&	63.3m	72m	8.7m			
including	63.3m	68.6m		5.3m		
ZA 18-07	44.9m	55.55m	10.6m		Assays Pending	Footwall Target Zone
including	44.9m	46.4m		1.45m		
ZA 18-08	85.8m	94.4m		8.53m	Assays Pending	Undercut of ZA-18-04
ZA 18-09	81.9m	84.68m	2.78m		Assays Pending	Undercut of ZA-18-01

Massive Sulphides

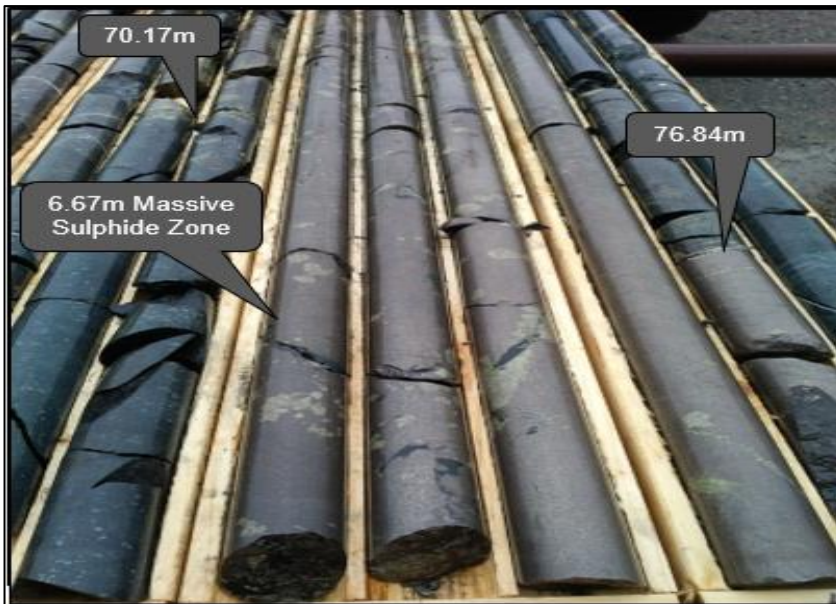
(Assays Pending)



Hole ZA-18-01



Hole ZA-18-08




Hole ZA-18-04




Hole ZA-18-05

Substantial Depletion of Nickel Sulphide Resources Globally

A decorative icon consisting of two overlapping diamonds, one dark red and one light grey.


Extensive mining of Nickel Sulphide deposits has meant that large scale high grade deposits of this type are being depleted at a faster rate than discovery. In terms of production Class 1 Nickel has preferentially been sourced from magmatic Sulphides as these are significantly easier and cheaper to mine and process than Lateritic ores.

Amenable to Simple Open Pit Mining

A decorative icon consisting of two overlapping diamonds, one dark red and one light grey.


High Grade Sulphide mineralisation is typically found close to surface within the TopTung tenement areas, offering a unique opportunity to run a significantly low cost, open pit mining operation due to its shallowly emplaced mineralisation compared to other Sulphide deposits, which are typically found hundreds of meters under ground. TopTung will not require large amounts of capital to begin a toll milling operation compared to other typical Sulphide deposits that would require costly underground mining.

Significant Toll Milling Options Available

A decorative icon consisting of two overlapping diamonds, one dark red and one light grey.

Multiple tolls mills have been identified within trucking distance of the TopTung tenements, importantly they all have capacity to take the type of ore that TopTung is targeting. This presents TopTung with a unique option to run a low cost open pit - toll milling operation once a suitable ore body is defined. The high value Cobalt & PGE credits found in the ore will also be a significant contributor to any production scenario. More importantly the mills in the Sudbury region are set up to process all these materials simultaneously.

Infrastructure and Accessibility

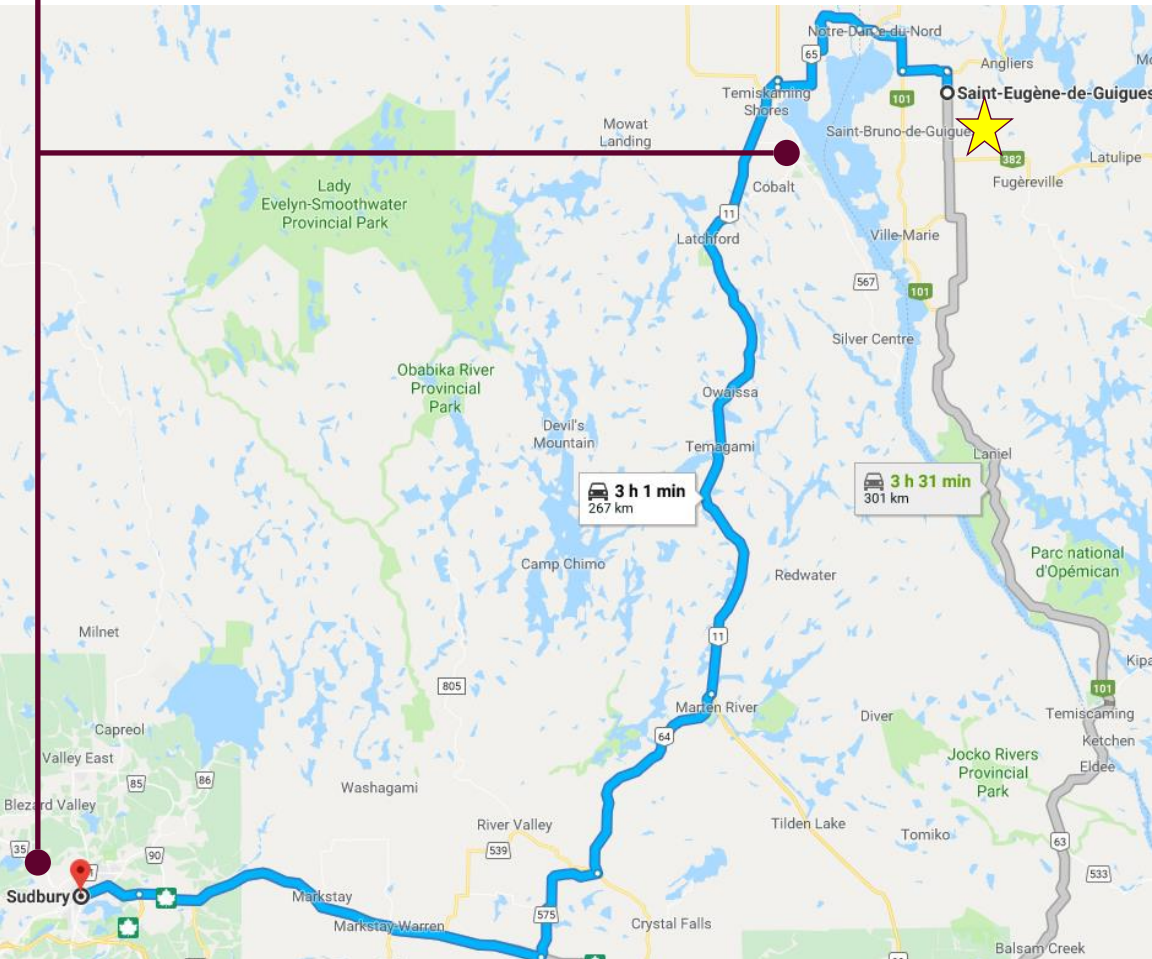
A decorative icon consisting of two overlapping diamonds, one dark red and one light grey.

Located in close proximity to a township which has a skilled work force and supportive community. Electricity, gas and water are also found in close proximity to the tenements and forest service tracks link the project areas to the freeway, making the project areas accessible all year round for drilling and trucking. The project areas are just a 3 hour drive from Sudbury which hosts multiple Nickel-Copper Concentrators and Smelters which have excess capacity.

Canada – Tier 1 Mining Jurisdiction

Processing Facilities

- Numerous Nickel, Copper, PGE and Cobalt processing facilities with toll milling capacity.



 TopTung's
Project Area

Quebec

- Ranked 6th in the global Fraser Institute investment attractiveness rankings.

Abitibi Greenstone Belt

- 50 km North of TopTung's properties.
- Has produced in excess of **180 Moz of Gold** and **over 450 Mt of Cu-Zn ore** since the early 1900's.
- Hosts the 2nd largest Nickel reserve in the world, and **5th largest Nickel Sulphide discovery ever.**

Belleterre Gold Mine

- Produced over **755,000 of gold @ 10.7 g/t Au**, between 1937-1958.

Lorraine Ni-Cu Mine

- Hosted within TopTung's project areas.
- **Historically produced over AUD \$100,000,000 of metal from 600kt of ore, in less than 24months.**

Significant Drill Intercepts

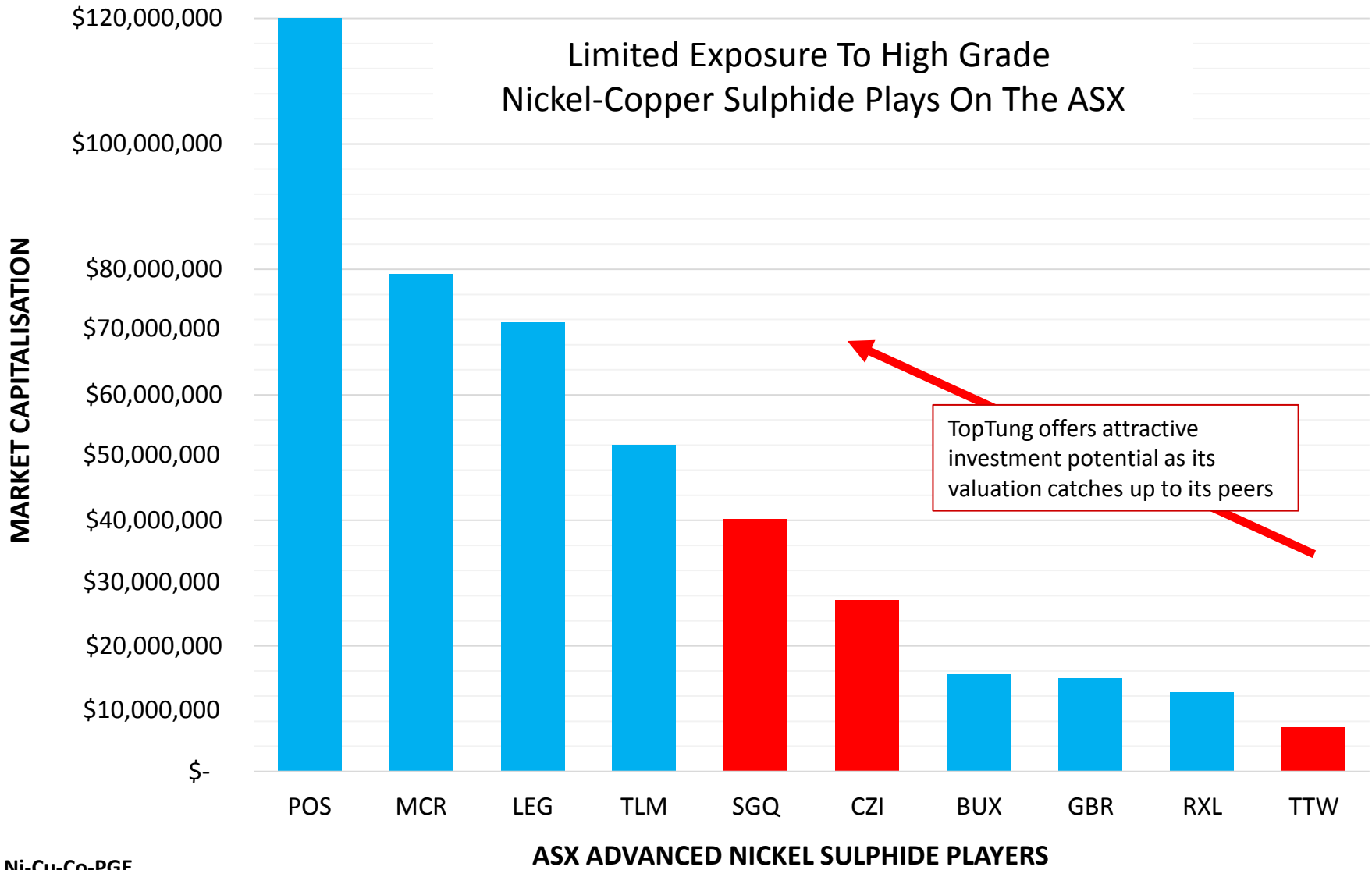
Hole No.	From (m)	To (m)	Interval (m)	NiEq% ¹	Ni%	Cu%	Pt g/t	Pd g/t	Co%
BT-01-05	50.00	75.00	25.00	1.42	0.78	0.97	0.16	0.70	0.04
inc	50.75	60.42	9.67	2.68	1.61	1.71	0.29	1.35	0.07
BT-01-07	53.40	78.00	24.60	2.44	1.46	1.57	0.29	1.21	0.06
inc	53.40	66.50	13.10	3.19	1.89	2.24	0.34	1.61	0.07
inc	73.20	78.00	4.80	3.44	2.31	1.57	0.36	1.52	0.10
BT-01-15	79.00	82.00	3.00	2.07	0.17	3.97	0.19	0.58	0.00
BT-01-17	40.40	44.30	3.90	3.04	1.58	1.63	0.29	1.27	0.14
BT-01-18	25.00	28.35	3.35	3.96	0.34	6.76	0.95	2.18	0.05
BT-01-19	36.80	76.55	26.50	3.05	1.78	1.87	0.42	1.37	0.09
inc	36.80	59.00	22.20	3.31	1.88	2.04	0.45	1.47	0.10
BT-01-32	54.25	102.3	48.05	2.72	1.62	1.65	0.04	0.14	0.09
Inc	54.25	67.35	13.10	3.19	1.59	1.03	0.04	0.18	0.22
Inc	73	102.30	29.30	3.24	1.87	2.16	0.05	0.15	0.10
BT-01-33	59.90	72.70	12.80	3.54	2.49	1.31	0.44	1.72	0.11
inc	64.00	71.55	7.55	3.89	2.76	1.31	0.36	1.82	0.13
BT-01-35	73.65	86.35	12.70	3.18	1.93	1.61	0.26	1.52	0.11
inc	73.65	84.25	10.60	3.54	2.20	1.73	0.25	1.68	0.12
BT-01-36	51.55	53.50	1.95	5.50	4.70	2.25	0.23	0.39	0.06

Bonanza Grade Gold At Lorraine

- 28.04m @ 37.42 g/t Au and 33.74 g/t Ag returned from channel sampling
- 1m @ 44.12g/t Au and 102.91gt Ag from a drill intercept from the 6th level
- Visible gold up to 29.2g/t Au found in five copper-gold bearing quartz veins
- 28g/t Au assayed in grab samples
- Gold values up to 13.8g/t Au from sulphide bearing samples in waste dumps

¹Based on a nickel price of US\$ 13,789/t, copper price of US\$6,786/t and a PGE value of US\$930/oz

ASX Nickel Sulphide Juniors Comparison Table



Project Areas & Technical Work

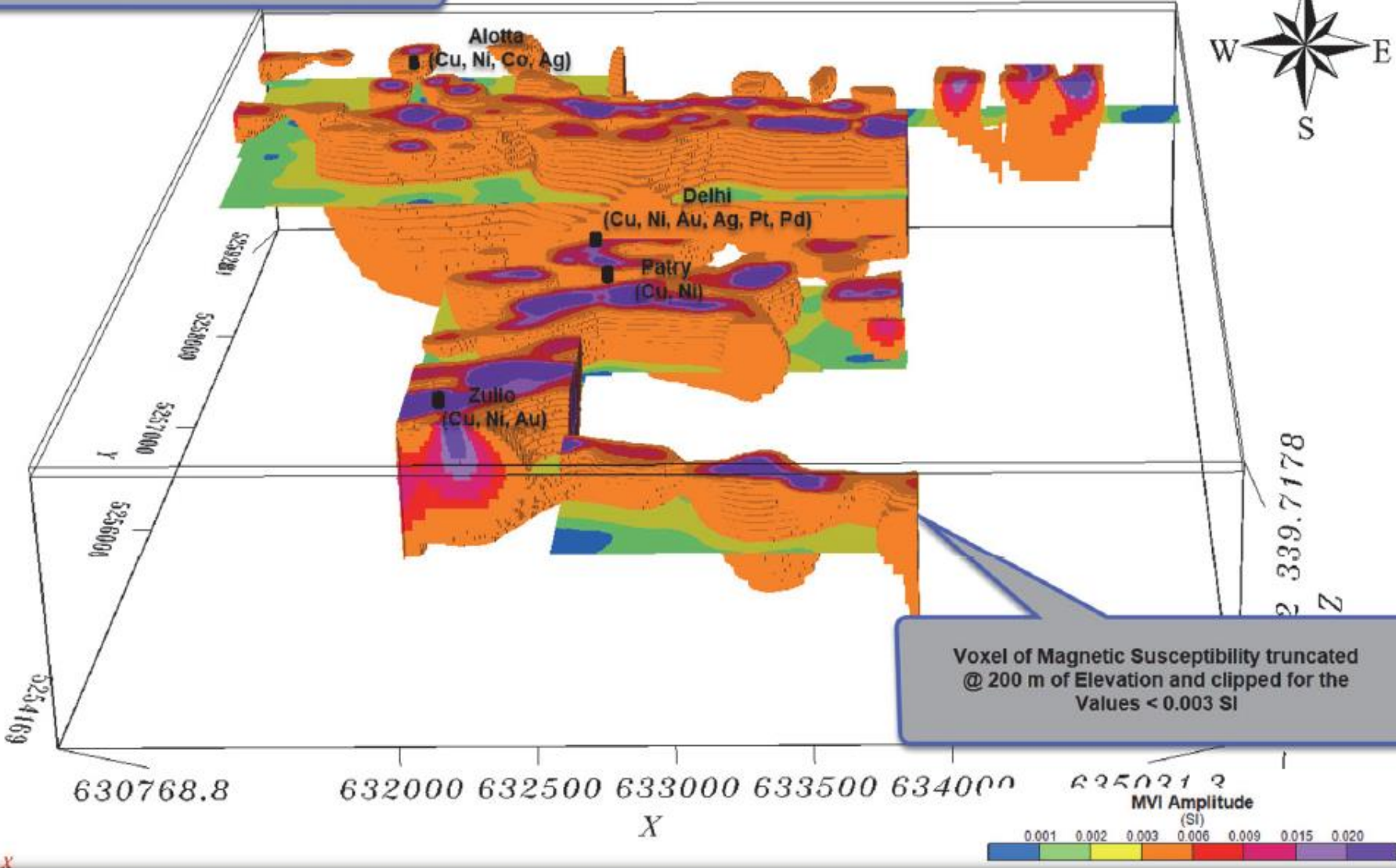


CLASS 1 NICKEL-COPPER SULPHIDES



Recent Technical Work – 3D Inversion¹

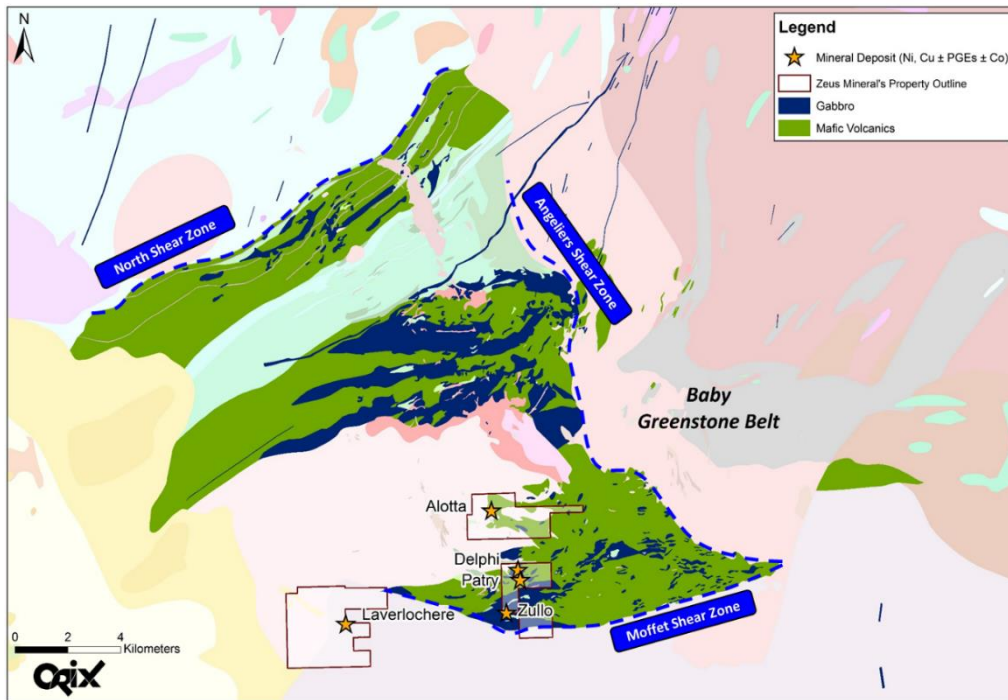
3D MAG INVERSION
VOXEL OF MAGNETIC SUSCEPTIBILITY



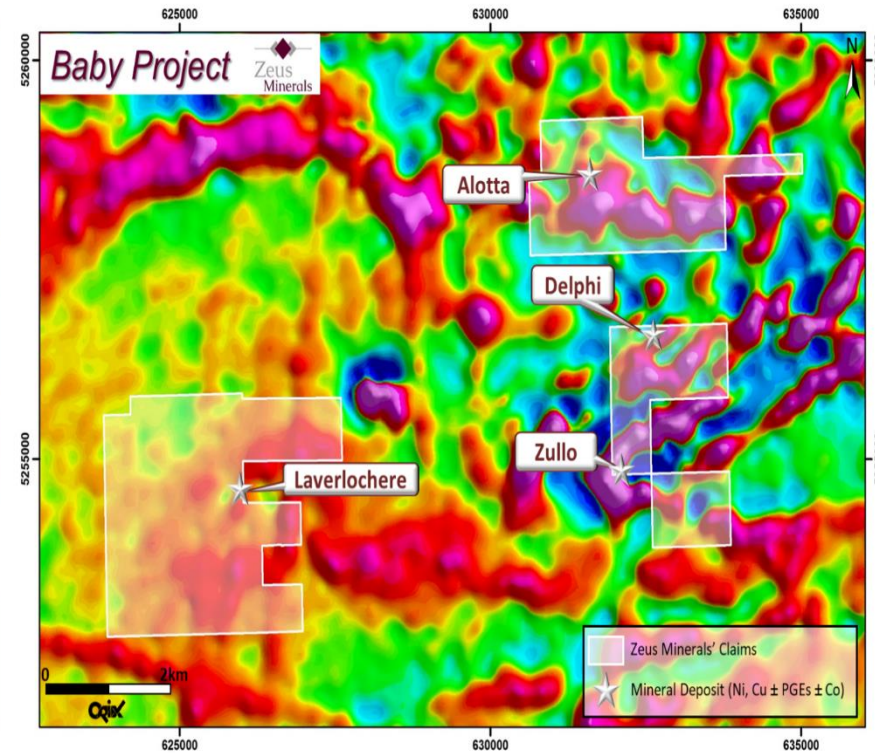
Project Areas

The Company owns 100% exploration rights over three project areas covering 63.5km² within the Belleterre-Angliers Greenstone Belt in Quebec, Canada. The project areas include:

- Baby Projects - Alotta/Delphi/Patry/Zullo
- Laverlochere Project - Laverlochere
- Lac Des Bois Project - Lorraine

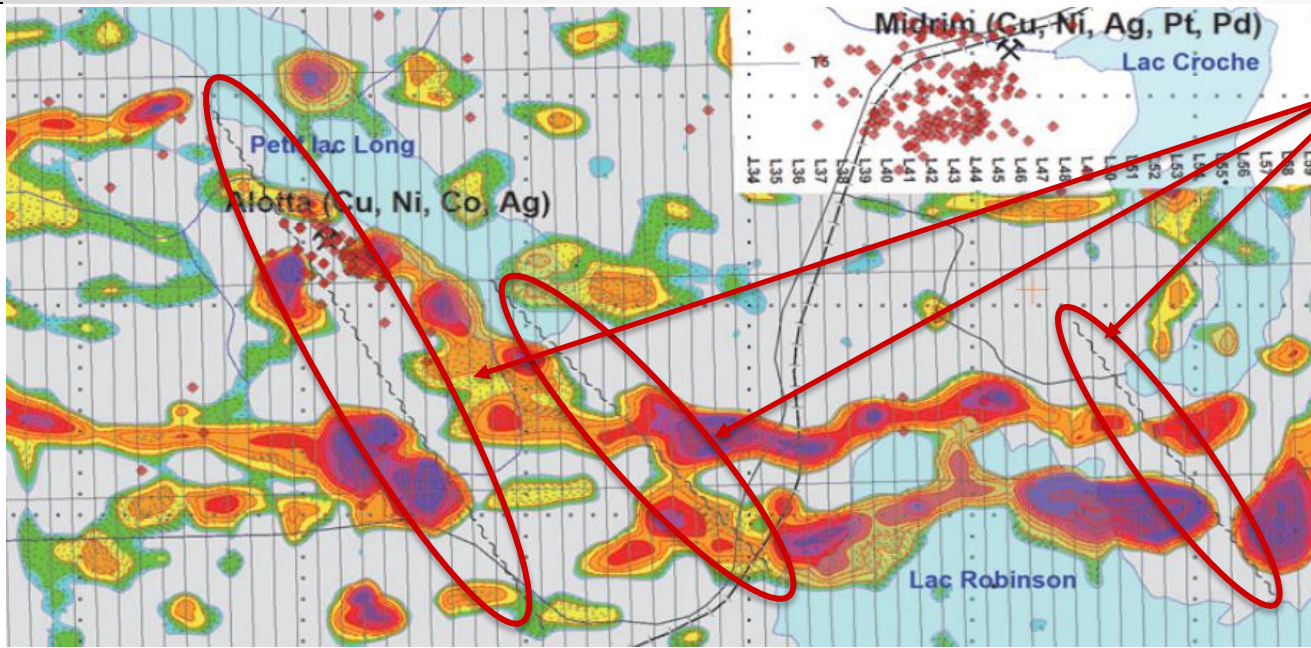


BABY PROJECT: GEOLOGY WITH PROJECT LOCATIONS

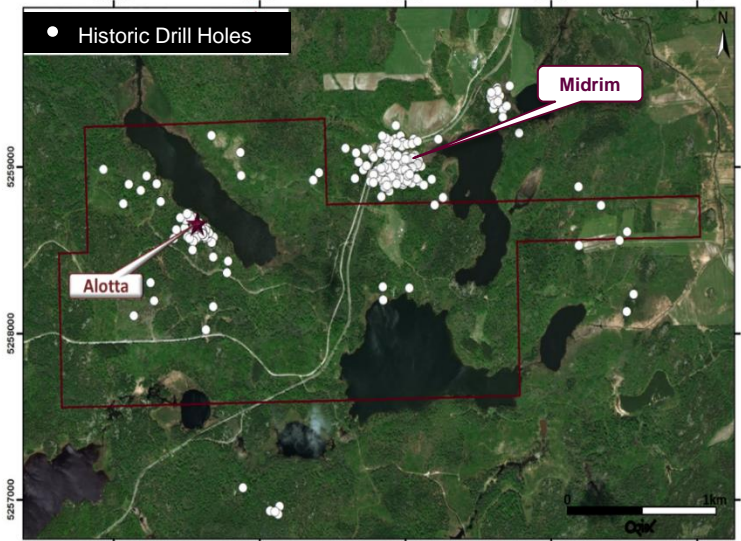
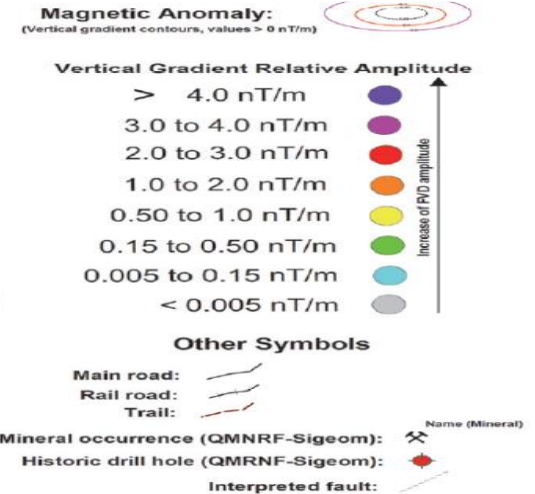


BABY PROJECT – AIRBORNE MAGNETIC SURVEY 1VD

Alotta Project Technical Work



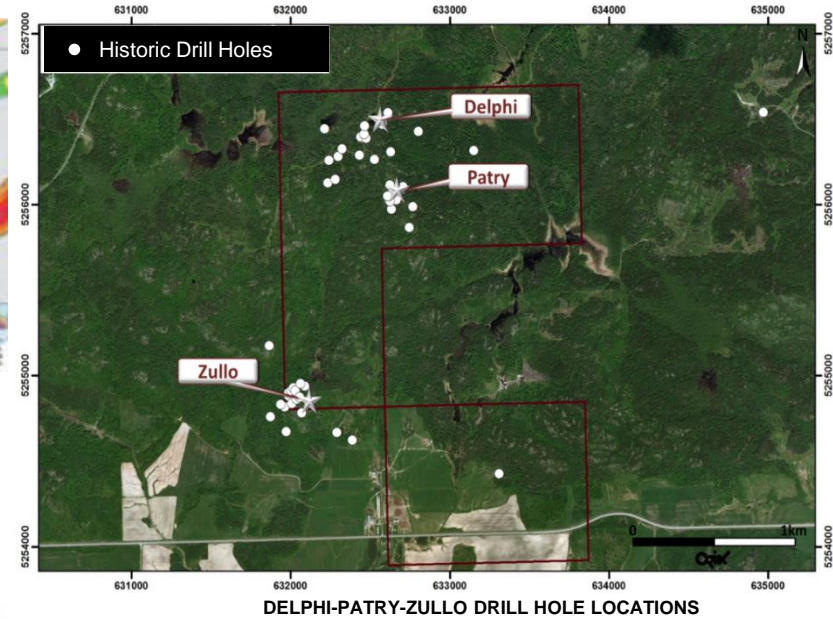
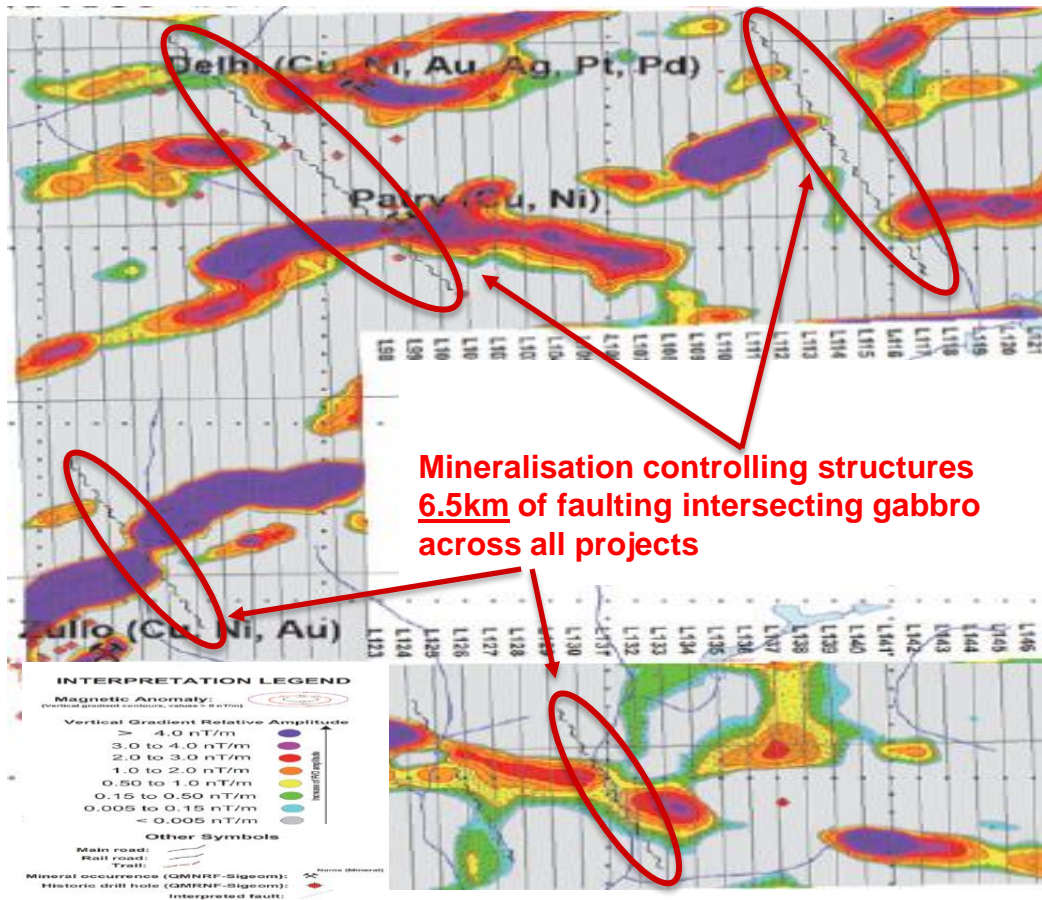
Mineralisation controlling structures 6.5km of faulting intersecting gabbro across all projects



ALOTTA MINERALISATION - DRILL HOLE LOCATIONS

- Multiple high resolution airborne magnetic surveys completed
- Numerous shallow magnetic anomalies identified along strike of known mineralisation
- Highly prospective local fault and mafic intrusive intersections
- 170 line km Survey, 50m line spacing completed by Zeus in April 2018
- Existing deposits interpreted to be structurally controlled
- 9 hole drill program completed October 2018 (Assays Pending)

Delphi/Patry/Zullo Technical Work



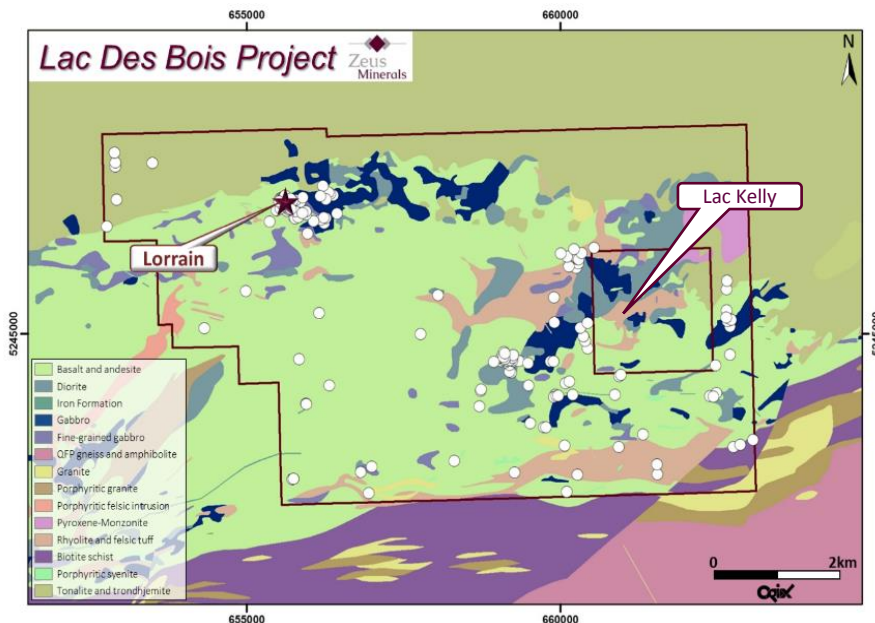
Highlights Include

- 1.45m @ 6.2% Ni, 2.91% Cu, 0.10 Co - BT-01-36
- 19m @ 1.38% Ni-Cu - BT-01-40

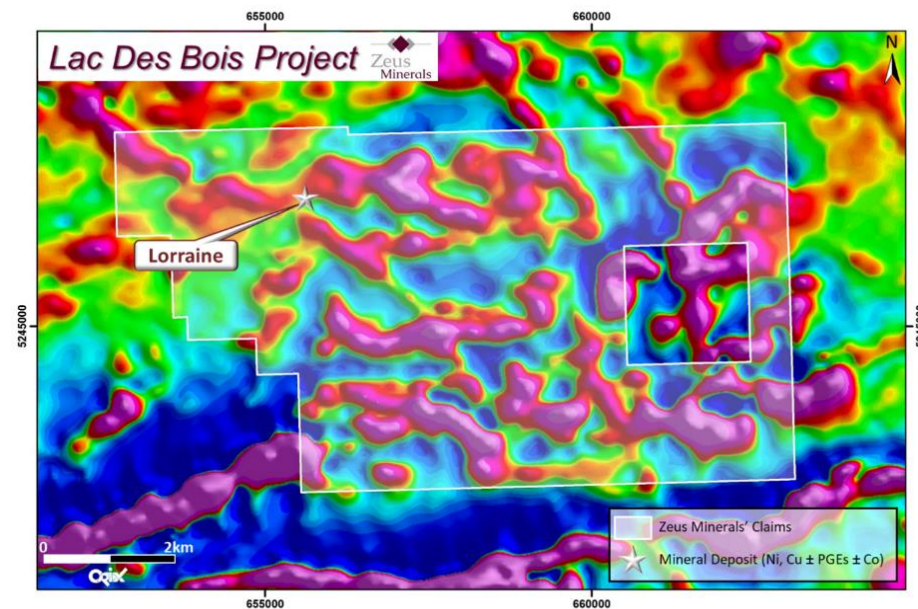
- At Patry Hole BT-01-36 intersected 1.45 metres of massive sulphides from 51.55 metres assaying **6.2% Ni, 2.91% Cu & 0.10% Co**.
- A second hole BT-01-40, drilled 30 metres to the west, intersected **19 metres of mineralisation averaging 1.38% Ni-Cu** from 79.30.
- Down hole geophysics indicated that the mineralisation in drill holes BT-01-36 and BT-01-40 was connected and that the mineralisation was trending about 290°, plunging in the same direction.

Lorraine Project Area

- Hosts the historical Lorraine Nickel-Copper Sulphide mine that produced 14.28 million pounds of Copper and 6.34 million pounds of Nickel @ 1.57% Cu, 0.62% Ni - producing **AUD \$100,000,000 of ore in less than 24 months**, from a 600kt Gabro Sill.
- Project located within the southern segment of the Belleterre Angliers Greenstone Belt
- Airborne magnetic surveys identified numerous magnetic bodies over the area prospective for additional Ni-Cu-PGE mineralisation
- Neighbouring Lac Kelly deposit contains a 1.4MT resource @ 0.7%Cu, 0.7%Ni and 1.2g/t PGE



LAC DES BOIS DRILL HOLE LOCATIONS



LAC DES BOIS – AIRBORNE MAGNETIC SURVEY 1VD

Nickel Market



CLASS 1
NICKEL-COPPER
SULPHIDES



Nickel Sulphides Vs Nickel Laterites

The majority of commercial Nickel mining is focused on 2 types of ore, generally classed as:

Sulphides – Class 1

Laterites – Class 2

- Only Class 1 Nickel is suitable for battery manufacturing because of its high purity and dissolvability.
- Laterite ores have a relatively low Nickel content and a wide range of metal contaminants that create complexity and increased cost benefications compared to Sulphide ore.
- Capital intensity of laterites is 5 times greater for the same Nickel output as Sulphides, making Sulphides much more desirable.
- Some laterite deposits can produce Class 1 Nickel, but this comes with massive capital and operational expenditure compared to Sulphides, which is why Sulphides are the preferred source for Class 1 Nickel, and why Class 1 Nickel is dominantly sourced from Sulphide ore.
- The major reason for this is the difficulty of processing Nickel Laterites compared to Sulfides – Laterite ores require extensive and complex treatment to extract Nickel, and has historically been more expensive than sulfide ores.

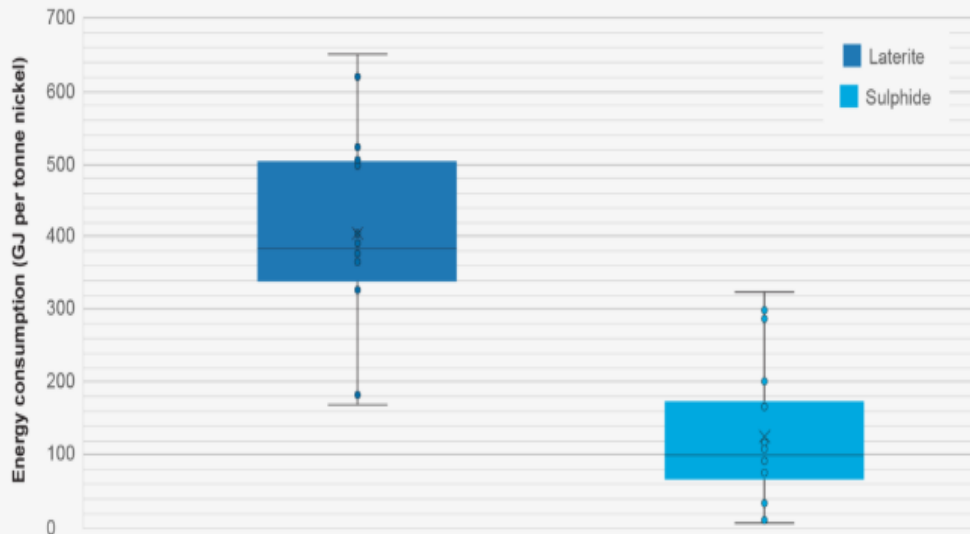
Nickel Sulphides Vs Nickel Laterites

Laterite-derived Nickel is not only more costly than Sulphides, but it also brings a suite of additional environmental concerns since the intensive processing uses more energy, pollutes more water and has a greater negative impact on biodiversity.

As shown in Figure 1, the production of Nickel Laterites uses far more energy than the production of Sulphides, where vast amounts of energy are consumed during mining, drying, acid leaching and refining.

The sheer scale of Laterite deposits means that extracting the ore produces more wastewater than when mining Sulphides. Laterite production also requires acid leaching, consuming massive amounts of chemicals such as sulphuric acid and ammonia and increasing the threat to surrounding water quality.

Operations producing nickel from laterite deposits tend to be far more energy intensive than sulphides



© Verisk Maplecroft 2018

Figure 1 – Sulphide vs Laterite Energy Consumption

Nickel Sulphides

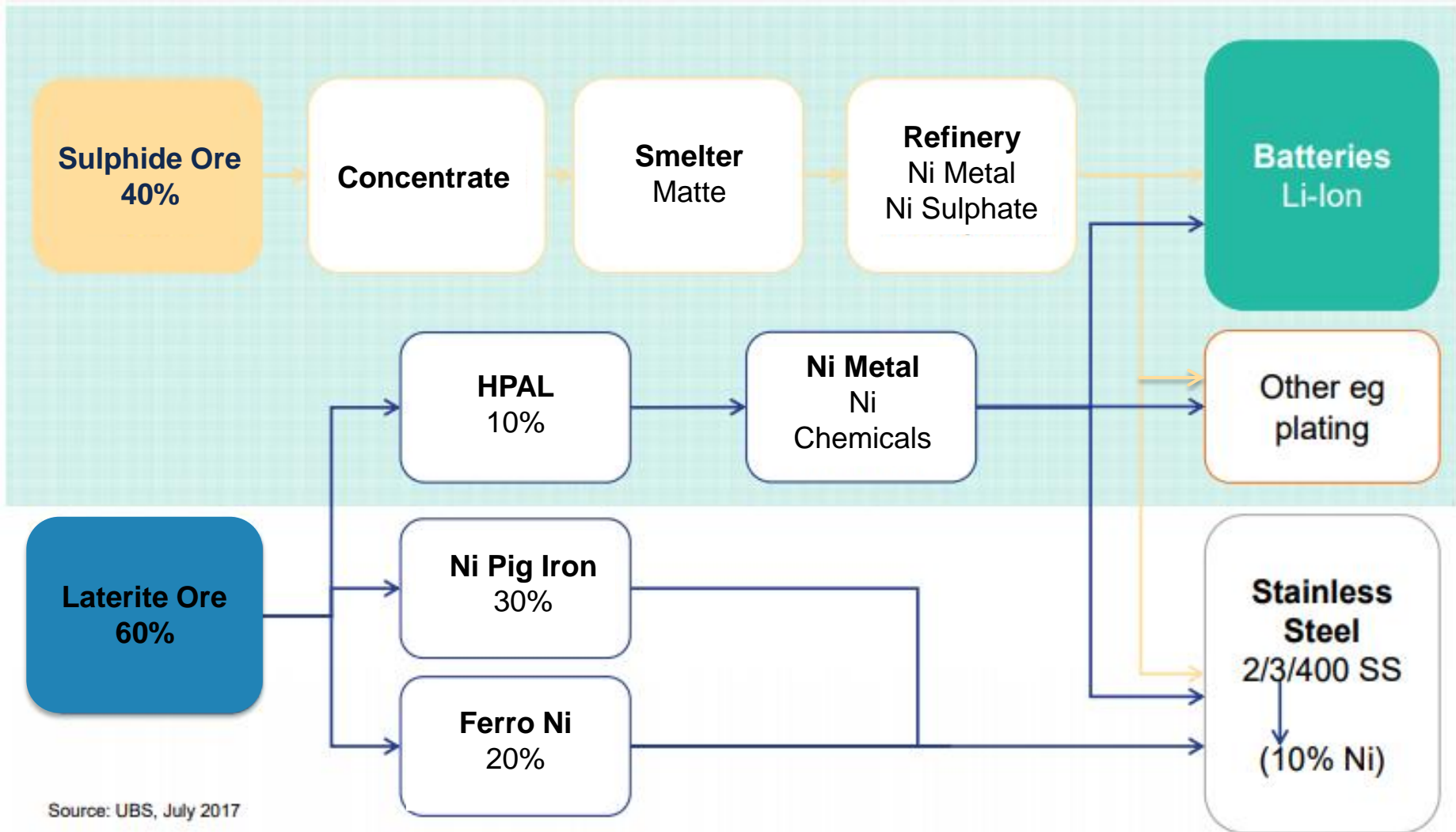
- High grade, but rare.
- Simple processing
- Low Capex and Opex
- Class 1 - Suitable for the battery market

Nickel Laterite

- Low Grade, bulk tonnage.
- Complex processing
- High Capex and Opex
- Class 2 - Suitable for the steel market

Nickel Sulphides Enormous Battery Market Potential

Nickel Sulphide is the Major Source for Battery Cathodes Due to its Ease of Processing



Source: UBS, July 2017

Nickel Market Drivers and The Boom That Lies Ahead

A Strong Supply vs Demand Story Unfolding

- LME warehouse levels only quote Class 1 Nickel (Figure 2).
- LME warehouse levels are being depleted at a rapid rate, Class 1 Nickel was in deficit of ~100'000 tones in 2017 and the deficit is growing rapidly as shown in Figure 3, adding to the downward pressure of inventory levels.
- Only 12months worth of LME Class 1 Nickel inventories left, before reaching the Pre-Nickel pricing boom levels of 2008.
- Supply of Class 1 Nickel is depleting just as the demand from Electric Vehicles (EV) is increasing, leading investors and battery makers to stockpile Nickel, helping to fuel a spike in global prices of the metal.
- Class 1 Nickel trades as high as a 35% premium to Class 2 Nickel, a different pricing mechanism for Class 1 & Class 2 Nickel may emerge to reflect the 2 distinct Nickel products, which would subsequently lead to a boom in Class 1 prices.
- Battery manufacturers are inevitably and increasingly moving towards NMC 811 batteries, a Nickel rich battery consisting of 80% Class 1 Nickel - driving demand for the metal even further.
- Double digit growth in traditional stainless steel markets using both Class 1 and Class 2 Nickel. High grade 300 series stainless steel requires Class 1 Nickel to keep its standard, therefor can not be displaced by Class 2 Nickel.

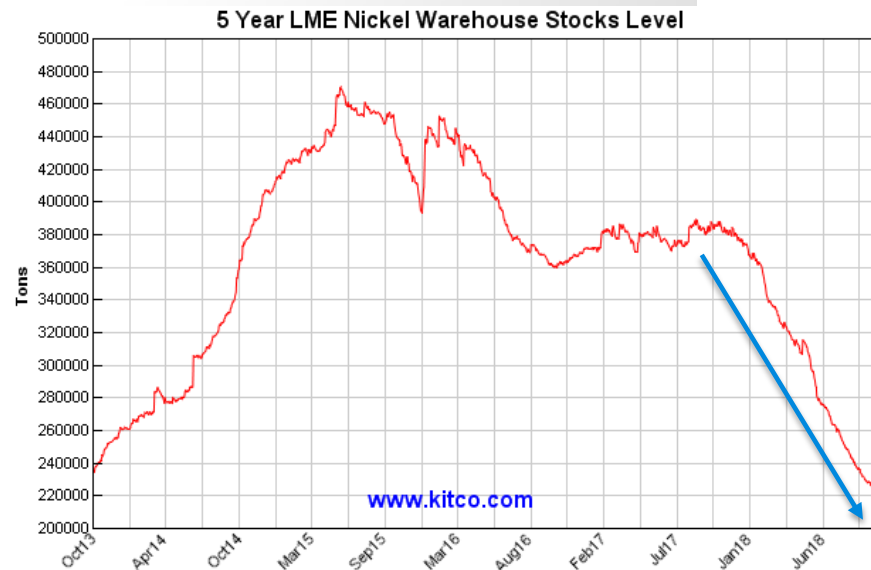


Figure 2 – Class1 Nickel LME Warehouse Levels

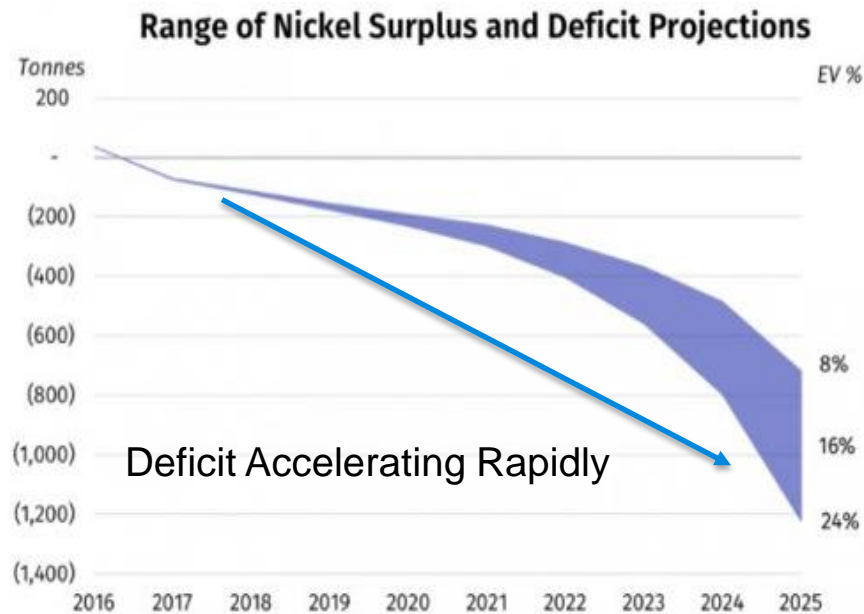
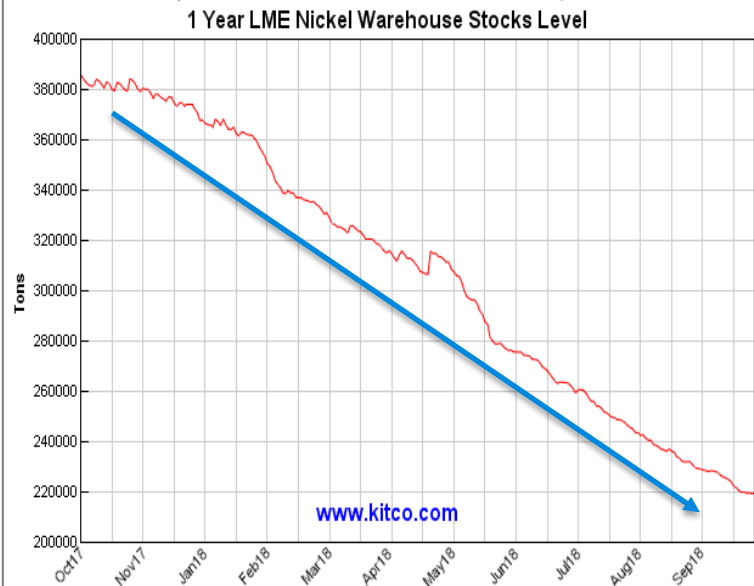
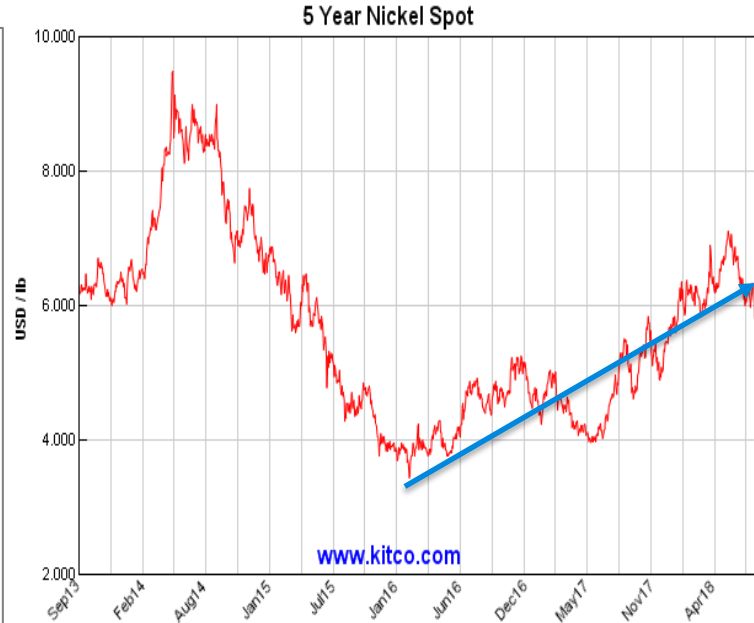


Figure 3 – Projected Nickel Deficit

Class 1 Nickel Testimonials

- **UBS** - Reported that nickel was its “preferred play” in the next 12 months due to its uptake in electric vehicles, with demand “rapidly rising”.
- “The projected growth in EV battery demand has electrified the Nickel price, which in turn is sparking a revival in the production of the “right” sort of metal for conversion into sulphate. The whole process has been accelerated by players grabbing physical units and expressing their bullish price view on the London and Shanghai exchanges, rapidly depleting warehouse levels of Class 1 Nickel” – **Reuters**
- “If EV penetration reaches 10% it would trigger a global Nickel supply deficit “- **Ivan Glasenberg, CEO of Glencore.**
- Although the capacity to produce Nickel sulphate is expanding rapidly, we cannot yet identify enough Nickel sulphate capacity to feed the projected battery forecasts” – **Wood Mackenzie**
- **Nornickel** - the world's second-largest nickel producer, said demand for the metal from the battery sector leapt 38 percent in the first half of this year versus the same period last year. "Consumption by the battery sector for electric vehicles may be lagging behind stainless steel, but it is growing at a furious pace,“
- **Elon Musk** – Our cells should be called Nickel-Graphite because primarily the cathode is Nickel and the anode is Gaphite”



Why Nickel Dominated Batteries?

- The top two reasons consumers cited for not buying an EV are the price and the driving range, Nickel rich batteries increase the driving range and lower the cost of the battery making EVs more affordable, and helping EVs to become more competitive for mass adoption.
- Nickel rich batteries are cheaper to make, smaller, lighter, hold more energy and have a longer life span than cobalt based ones.
- Nickel increases the energy density in the batteries, giving each vehicle more driving range, there by reducing the cost per km and making them cheaper per charge.
- Today, some best in-class batteries cost less than USD 150 per kWh. At USD ~100 per kWh, we believe that batteries will reach the tipping point at which EVs will be cheaper than cars with internal combustion engines, the need for higher battery densities through Nickel rich chemistries is essential for mass adoption.
- The average driving range increases from 200km in NMC 111 to as much as 500km in Nickel dominated NMC 811 batteries.
- Tesla already uses NCA batteries which is a Nickel rich battery (>80% Nickel). CATL, LG Chem and SK innovations – the top leading battery manufacturers have all cited that they will all be moving to the 80% Nickel – NMC 811 Nickel rich batteries from 2019.
- China & the USA both award tax credits and subsidies for electric vehicles with longer driving ranges.

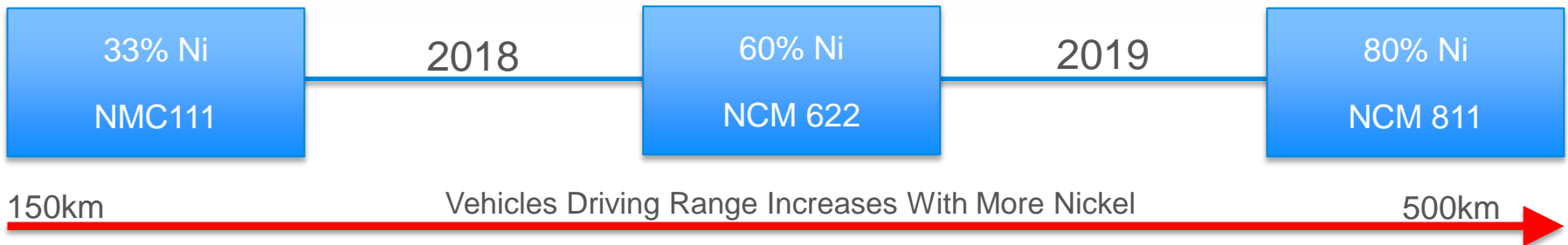
It is clear that the future of EV batteries will require more Nickel

Battery Chemistries

- The 2 most common battery chemistries deployed in EV's are:
 - NCA (Nickel-Cobalt-Aluminium)
 - NMC (Nickel-Manganese-Cobalt)
- NCA Batteries – Are a Nickel dominated battery with 80% Ni, 15% Co & 5% Al (Currently deployed in Tesla's)
- NMC Batteries – Which take 4 main forms:
 - **NMC 1:1:1** (33% Ni, 33% Mn, 33% Co)
 - **NMC 5:3:2** (50% Ni, 30% Mn, 20% Co)
 - **NMC 6:2:2** (60% Ni, 20% Mn, 20% Co)
 - **NMC 8:1:1** (80% Ni, 10% Mn, 10% Co)

Commonly used by leading battery producers CATL, LG Chem, SK Innovations and in the Tesla Power Wall.

- Currently the most common battery chemistry used in EVs are the NMC 532, NMC 622 and NCA, however all the leading battery manufacturers have sited the shift toward Nickel rich chemistries, NMC 811 in particular due to its multiple advantages. In this scenario demand for Nickel from the battery industry alone would reach 570kt by 2025 – more than 10 times the current demand, and would be exclusively focused on Class 1 Nickel.



- While non-nickel chemistries also exist, nobody has yet developed a technology that matches Nickel for its density and power to weight ratio that is critical in cost effectively moving the vehicle down the road, Nickel thus will be a major and growing player in the massive global deployment of Electric Vehicles.



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