



ASX Release

4 July 2012

NORNICO SCOPING STUDY YIELDS POSITIVE RESULTS

SCOPING STUDY HIGHLIGHTS:

- Confirms the technical & financial viability for the proposed development of the NORNICO project and its associated Greenvale, Lucknow and Kokomo deposits
- Demonstrates that existing nickel-cobalt & scandium resources can support a 750,000 tonnes per annum operation over a 20 year operational life
- Confirms the ability to produce three metals – as nickel metal, cobalt product & scandium oxide
- Estimated capital expenditure of A\$597 million (excluding contingency)
- Estimated average annual operating costs of A\$138 million
- NPV of A\$402 million (pre-tax, 10% real discount rate, 100% equity, 20% capital expenditure contingency) and IRR of 16.4%
- Average annual operating margin of A\$179 million
- Progressing to Pre-Feasibility Study stage

Australian resource development company, Metallica Minerals Limited (**ASX: MLM**), is pleased to announce the results of the Scoping Study completed on its wholly owned NORNICO “Tri-metal” project. The study has produced very positive results, demonstrating the potential of NORNICO to be a viable 20 year operational life project.

The Scoping Study (+/- 35% accuracy) demonstrates the robust nature of the NORNICO “tri-metal” project and Metallica is progressing confidently through its scandium recovery testwork to produce high purity scandium oxide (expected to be completed in mid-July) and negotiations with potential scandium offtakers (ongoing) as scandium is a key co-product to nickel. As a result, Metallica is planning to immediately commence a pre-feasibility study (PFS), in line with its previously announced project development schedule.

The development of NORNICO should position Metallica as the first major producer of scandium oxide and allow the company to deliver significant, long-term and reliable supply of a highly strategic commodity to various end users-most notably, aluminium alloy and fuel cell industry sectors.

The mine and processing plan used in the Scoping Study has been developed in a manner that constrains scandium oxide production in the initial years of operation to 40,000kg per annum. However, by altering the mine and processing plan, scandium oxide production could be increased to in excess of 100,000kg per annum by processing higher grade scandium material, therefore allowing Metallica to cater for future expected demand growth for scandium oxide. This same flexibility could be applied to nickel and cobalt throughout the operation by altering the processing plan to process higher grade nickel-cobalt resources. The production of three metals and the flexibility to adjust levels of production to maximise revenues in accordance with the underlying commodity prices at the time is one of the key strengths of the NORNICO project.

Securing scandium offtake agreements to guarantee future sales of scandium remains the single biggest challenge for Metallica and the NORNICO project. Based on its ongoing discussions with potential end users in the aluminium master alloy sector and solid oxide fuel cell sector, Metallica is confident of securing offtake agreements for the sale of scandium oxide from NORNICO and this will have to be achieved before a development decision could be considered.

Metallica Managing Director, Andrew Gillies, commented:

“The development of NORNICO would see Australia become the world’s leading supplier of scandium oxide, a highly strategic metal that is high value and hard to source. We believe there is tremendous first-mover advantage

at stake with respect to significant, long-term and reliable scandium production and we are endeavouring to become the world's first major scandium supplier.”

Metallica Chief Executive Officer, Gavin Becker, commented:

“The Scoping Study is the culmination of many months of hard work from a highly and relevantly experienced in-house project team supporting recognised mining industry consultants. The results underpin NORNICO as a technically and financially viable project that is forecast to have very strong operating margins that should deliver significant cash flow over a long operating life.”

Introduction

The NORNICO project is located in North Queensland, approximately 250km on sealed roads from Townsville and consists of a number of nickel-cobalt rich and scandium-rich lateritic deposits.

The three main deposits in the southern area of NORNICO are Greenvale, Lucknow and Kokomo, which form the basis of the Scoping Study (see Figure 1). There are sufficient resources at these deposits, the greater majority of which are classified as Indicated or Measured, to support a 20 year operational life.

Figure 1: NORNICO Project Location

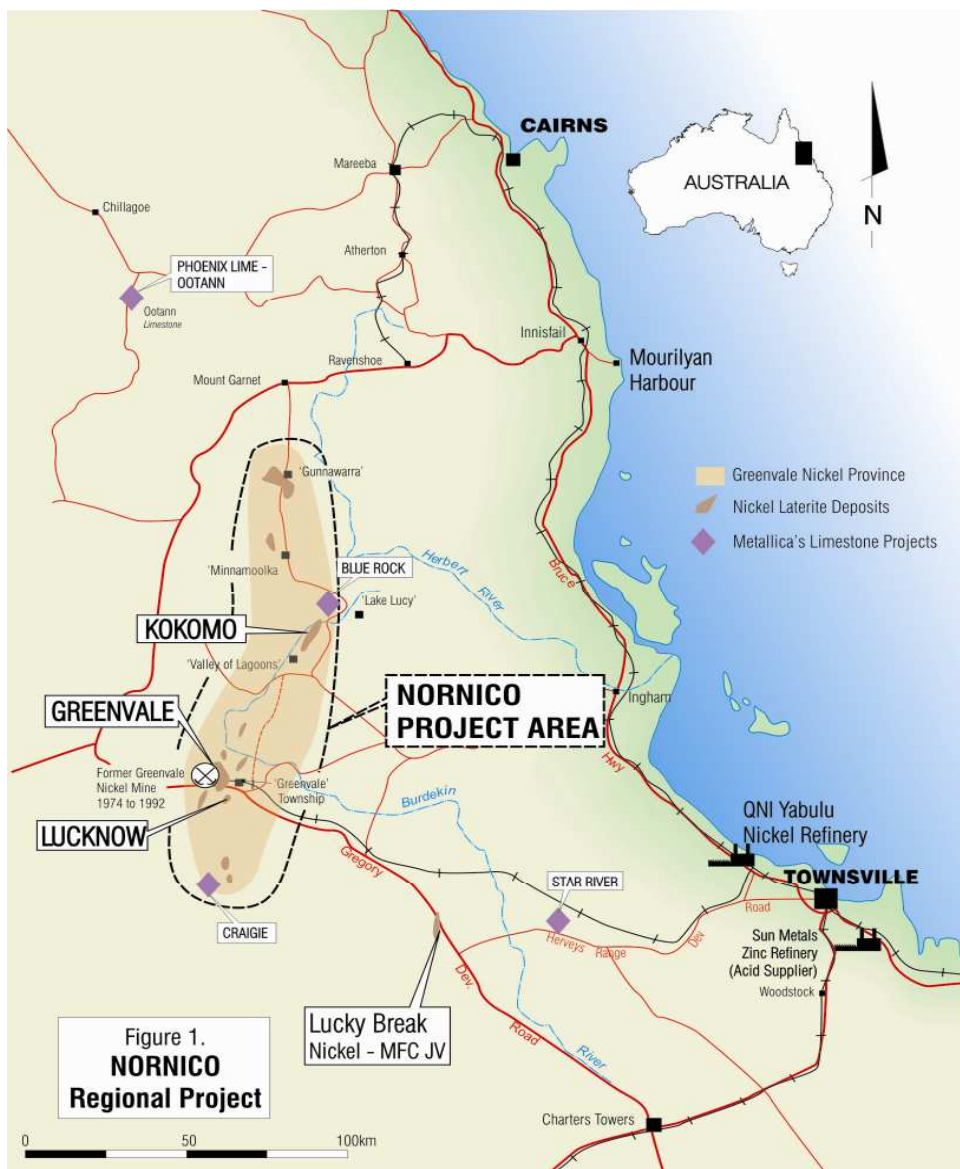


Figure 1. NORNICO Regional Project

Lucky Break Nickel - MFC JV



Table 1: NORNICO Nickel Resources (Measured, Indicated & Inferred)

Deposit	Mt	Ni %	Co %
Greenvale	8.0	1.04	0.08
Lucknow	3.6	0.57	0.19
Kokomo	16.3	0.67	0.12
Bell Creek South	9.1	0.97	0.07
Bell Creek North	2.3	0.83	0.03
Bell Creek NW	3.1	0.77	0.05
Minnamoolka	7.1	0.80	0.04
The Neck	0.8	0.84	0.03
Total	50.3	0.81	0.09

Table 2: NORNICO Scandium Resources (Measured, Indicated & Inferred)

Deposit	Mt	Sc
Lucknow	7.8	154
Kokomo	9.0	109
Total	16.8	130

Notes to Table 1 & 2:

1. Please refer to Appendix I for detailed resource table with Measured, Indicated and Inferred breakdown and information on resource cut-off grades.
2. Greenvale also contains low grade scandium mineralisation (<70g/t) which is not reported.
3. Only Greenvale, Lucknow and Kokomo resources were used in the Scoping Study,
4. Refer to Appendix I for Competent Person's Statement

NORNICO Scoping Study

General

The NORNICO Scoping Study is based on the Measured, Indicated and Inferred resources at the Greenvale, Lucknow and Kokomo deposits (See Table 1 & 2 and Appendix I).

The key Metallica personnel (Table 3) and consultants (Table 4) used on the Scoping Study are detailed below:

Table 3: Metallica Project Personnel Team

Name	Technical Field	Years Exp.	Relevant Experience
Andrew Gillies	Geology and Management	25+	BHP Gold, Perseverance, Cracow Mining JV, NORNICO exploration
Gavin Becker	Metallurgy and Management	35+	Anglo, Mintek, Davy, WMC, Dominion, URS, Gladstone Pacific Nickel (GPNL), GHD
Peter Mason	Processing	40+	Anglo, Minproc, Cawse, Ramu Project, Falconbridge, Xstrata Nickel, GPNL
Tim Riley	Engineering	40+	WMC, BHP, Ramu Project, GPNL, Goro Mine
Nick Currey	Environmental	30+	Placer Dome, Lihir, Newcrest
Mike Tyndall	Geology	20+	Anglo, De Beers, Xtract
Kevin Perry	Metallurgy	15+	Yabulu Nickel Refinery, Sedgman

Table 4: Key Study Consultants

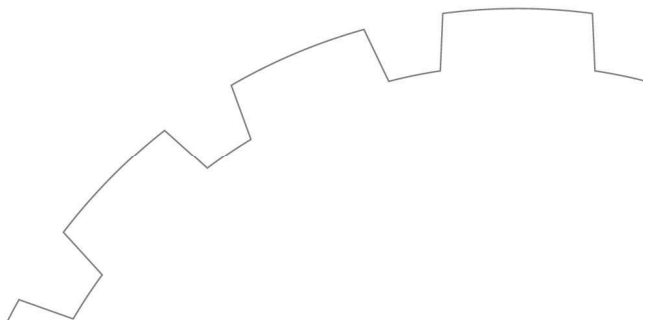
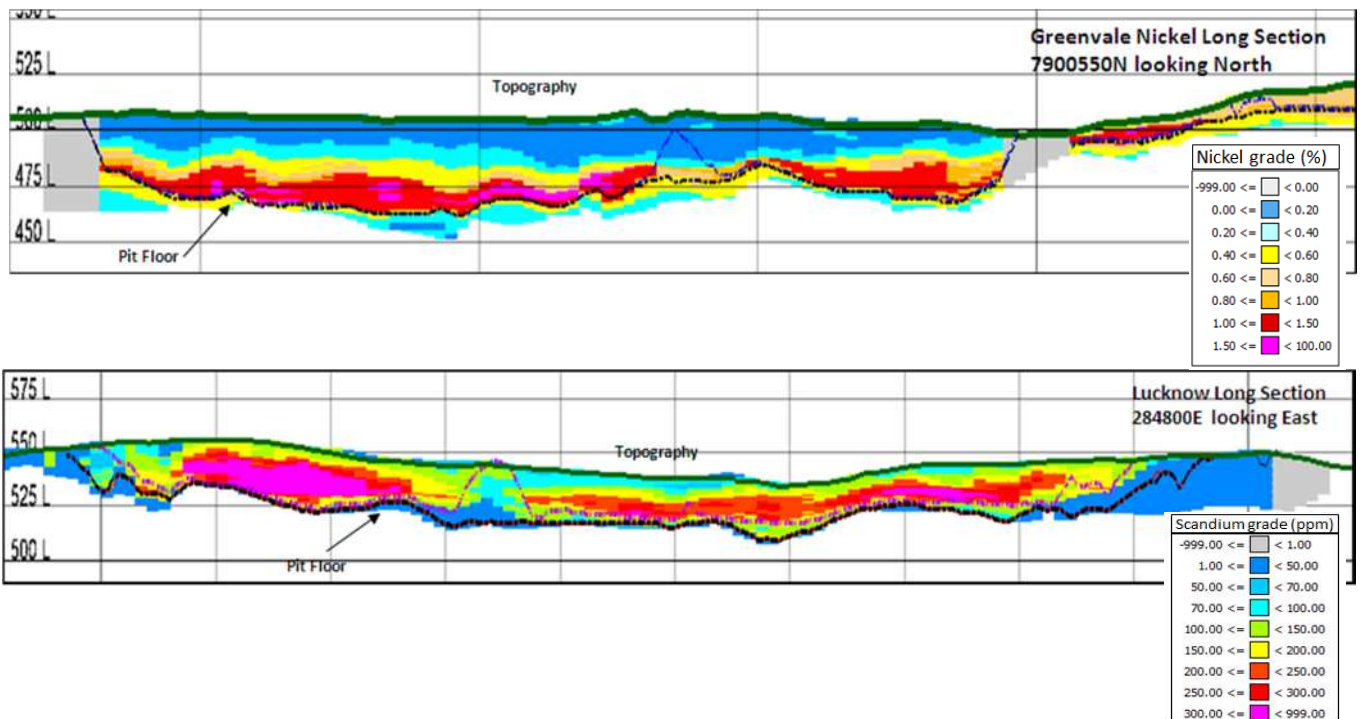
Consultant	Field
Jacobs	Engineering & Metallurgical Engineering
IMC Mining Group	Mining
Golder Associates	Geology
GHD, AARC & LRS Environmental	Environment & Water
Canopean	Metallurgy
Logistics & Project Services	Logistics

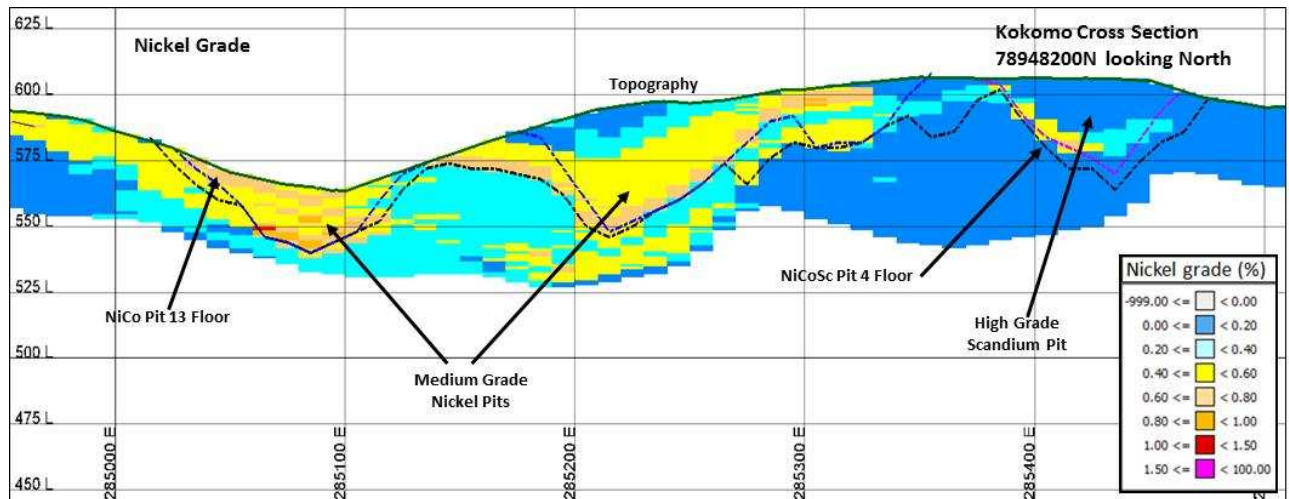
Mining

IMC Mining Group (IMC) was commissioned to conduct a mining evaluation of the nickel-cobalt and scandium resources at Greenvale, Lucknow and Kokomo deposits (**See Table 1 & 2 and Appendix I**) and to develop an optimised mine and stockpiling plan that would support a 20 year plant operational life. The IMC mining report concluded that mining could be undertaken using a truck and shovel approach with a relatively small mining fleet.

The mining study completed by IMC demonstrates that the resources could be mined as an open pit, with the resultant pit being very shallow, as shown in the cross sections below in **Figure 2**:

Figure 2: Greenvale, Lucknow & Kokomo Resource Block Model with Pit Shell Sections





Notes to Figure 2:

1. Greenvale & Lucknow shown at a vertical exaggeration of ratio 2:1

Both mining and resource haulage costs were estimated by IMC using their internal operating cost database. These costs are summarised in **Table 5** below. The mine operating costs have been modelled on the basis that a mining contractor will perform the mining related services.

Table 5: Estimated Average Mining Unit Operating Costs

Category	Greenvale	Lucknow	Kokomo
Average LOM Strip Ratio (waste:Ni-Co & Sc resource)	2.86:1	1.34:1	1.18:1
Ni-Co & Sc Resource Mining	A\$5.00 / tonne	A\$5.00 / tonne	A\$5.00 / tonne
Waste Mining	A\$5.00 / tonne	A\$5.00 / tonne	A\$5.00 / tonne
Ore Haulage (pit to plant)	n/a	A\$1.60 / tonne	A\$12.00 / tonne

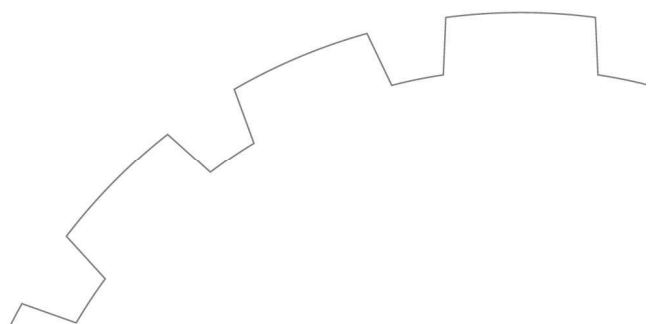
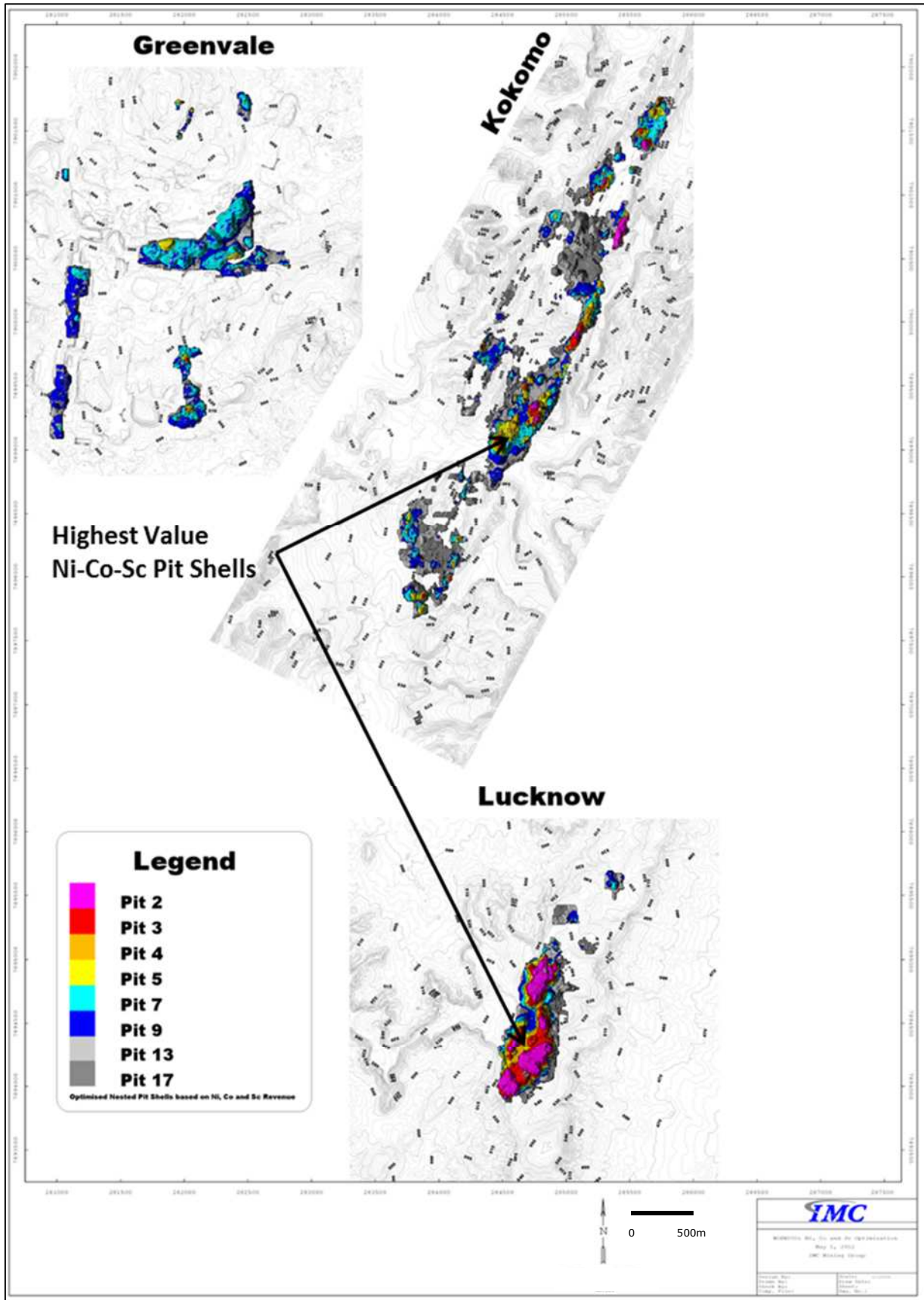


Figure 3: Combined Mosaic of Optimised Nested Pit Shells for Greenvale, Lucknow and Kokomo



Notes to Figure 3

1. Kokomo has been translated by 52km SW for the purposes of displaying all three deposits on one plan.
2. All deposits shown at equivalent scale



Acid & Power Plant

It is envisaged that sulphuric acid will be produced on site by an acid plant fed by imported sulphur. Based on metallurgical testwork, the average acid usage for processing is approximately 393kg acid per tonne of NORNICO feed. An important by product of the acid plant is heat, which will be converted to electricity and used to power the NORNICO operations also producing steam for use in the HPAL process.

Labour Force

Once developed, NORNICO is estimated to require a workforce of 200-250 people, divided into 5 main areas:

1. Mining
2. Processing
3. Maintenance
4. Safety, Environmental, Rehabilitation and Community
5. General & Administration

Site Infrastructure

NORNICO will require the following general infrastructure to support the operation of the process plant and the mine itself:

- Residue storage facility (RSF)
- Plant and access roads
- Site buildings
- Piperacks / Tailings disposal / Decant return pipelines
- Water supply and electrical grid connection
- Permanent accommodation / Communications

Capital & Operating Costs

Estimated Capital and Operating expenditure is detailed below in **Table 6 and 7**:

Table 6: Estimated Capital Expenditure

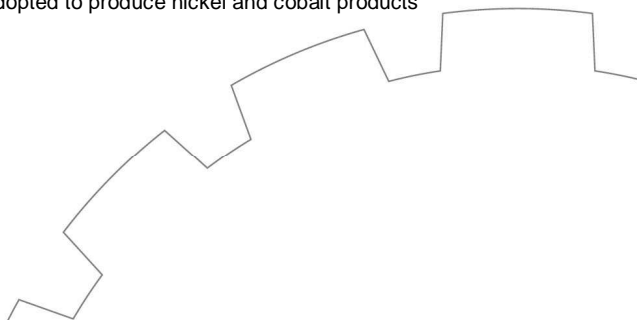
Category	A\$M
Mining	22
Leach Plant	118
Refinery	97
Major Process Packages	103
Services & Utilities	42
Process Plant Infrastructure	73
General Infrastructure	21
Total Direct Costs	476
Indirect Costs (@20%)	95
Direct + Indirect Costs	571
Owners Costs	26
Total Capex (ex Contingency)	597

Table 7: Estimated Operating Expenditure

Category	A\$M per annum	A\$/t feed processed
Mining & Haulage	12	16
Reagents / Consumables	36	48
Sulphur (delivered)	26	35
Labour	31	41
Maintenance	18	24
General & Administration	15	20
Total	138	184

Notes to Table 6 & 7:

1. Capital and operating expenditure assume the CMN Process is adopted to produce nickel and cobalt products





Financial Analysis

As part of the Scoping Study, a financial analysis was undertaken to assess the financial viability of the project. The results of this analysis conclude that when using reasonable forecast commodity price and exchange rate estimates assumptions, NORNICO could be a financially robust project with strong annual operating margins.

Table 8: Financial Analysis (20 year)

Description	Assumption / Output
Processing Plant Throughput	750,000tpa (with a 2 year ramp up period to full capacity)
Average Feed Grade (over 20 years)	0.81% Nickel, 0.11% Cobalt, 73g/t Scandium (109g/t Scandium Oxide)
Average Metal Recoveries	90% Nickel, 90% Cobalt, 85% Scandium
Average Annual Production	5,250t Nickel, 700t Cobalt, 68,000kg Scandium Oxide
Long Term Prices	US\$10.00/lb Nickel, US\$15.00/lb Cobalt, US\$2,000/kg Scandium Oxide
Exchange Rate AUD:USD	0.90
Capital Contingency	20%
Net Present Value	A\$402 million (pre-tax, 100% equity, 10% discount rate, real terms)
Internal Rate of Return	16.7% (pre-tax)
Average Annual Operating Margin	A\$179 million

Notes to Table 8

- 1kg of Scandium equates to approximately 1.5kg Scandium Oxide
- The Scandium oxide purity is expected to be at least 99.9% purity
- NPV and IRR calculated at commencement of project development

Scandium

Scandium (Element 21) is one of the 17 rare earth elements (REE) and one of the most valuable. High-grade, large tonnage scandium deposits that are mineable are scarce, making it a commodity that is difficult to obtain in large quantities.

Scandium has unique properties that can enhance our technological future. Scandium is one of the most potent strengthening elements that can be alloyed with aluminium to create stronger master alloys with applications in aerospace and high performance sporting equipment.

Scandium is also used in the production of the most efficient solid oxide fuel cells (SOFC's). As the western world transitions towards green energy, SOFC's will become more widely used, providing clean and efficient energy that is driven by natural gas.

The use of scandium has been limited by its scarcity and lack of reliable supply. The current total world supply of scandium is estimated to be around ten tonnes of scandium oxide per annum, all of which is sourced as a by-product from other strategic metal processing.

The importance of scandium to the world market cannot be overestimated, especially with the massive worldwide expansion of natural gas usage and gas distribution infrastructure. Natural gas and fuel cells are the future, and Metallica believes scandium is going to be a part of that future by getting the most amount of electrical and thermal energy from the least amount of fuel – where efficient cleaner energy is the gateway to a more sustainable society.

High purity scandium oxide currently sells at prices in the range of over US\$2,000/kg to in excess of US\$5,000/kg, depending on product purity.

For more information on scandium, see Metallica's March 2012 Quarterly Report (**Page 18 & 19**).

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Figure 5: HPAL Testing at SGS Lakefield Orestest Perth (Feb 2012)



Figure 6: Scandium Solvent Extraction pilot plant (June 2012)





Appendix I NORNICO Mineral Resource Statements

Scandium Resource Statement (cut-off grade 70g/t Sc)

Deposit	Mt	Sc	Contained Sc	Equivalent Scandium Oxide
Kokomo				
Measured	0.7	154	108	162
Indicated	3.8	121	460	690
Sub-total M&I	4.5	126	568	852
Inferred	4.4	91	400	600
Total	9.0	109	968	1,452
Lucknow				
Measured	0.6	190	116	174
Indicated	6.9	153	1,065	1,597
Sub-total M&I	7.5	156	1,181	1,771
Inferred	0.3	99	26	39
Total	7.8	154	1,207	1,810
COMBINED TOTAL				
Measured	1.3	171	223	334
Indicated	10.7	142	1,525	2,287
Sub-total M&I	12.0	145	1,748	2,622
Inferred	4.7	91	427	640
TOTAL	16.8	130	2,175	3,262

Nickel-Cobalt Resource Statement (cut-off grade 0.7% Nickel equivalent)

Deposit	Mt	Ni (%)	Co (%)	Fe (%)	Mg (%)	Contained Ni	Contained Co
Greenvale							
Measured	2.6	1.08	0.09	22.0	3.9	28.4	2.4
Indicated	4.5	1.03	0.08	21.0	4.5	46.0	3.6
Inferred	0.9	0.99	0.07	19.0	5.5	8.9	0.6
Totals	8.0	1.04	0.08	21.1	4.4	83.3	6.6
Lucknow							
Measured	0.9	0.65	0.17	24.5	2.2	5.6	1.5
Indicated	2.3	0.54	0.20	23.6	2.0	12.5	4.7
Inferred	0.4	0.60	0.13	28.8	2.0	2.5	0.6
Totals	3.6	0.57	0.19	24.4	2.1	20.6	6.8
Kokomo							
Measured	1.3	0.81	0.17	20.4	4.6	10.5	2.2
Indicated	11.7	0.66	0.12	21.9	3.2	77.2	14.0
Inferred	3.2	0.63	0.10	19.1	3.0	20.2	3.2
Totals	16.3	0.67	0.12	21.2	3.3	107.9	19.4
Bell Creek South							
Measured	8.9	0.97	0.07	11.7	7.5	85.8	6.2
Indicated	0.3	0.83	0.04	8.5	9.1	2.2	0.1
Inferred						-	-
Totals	9.1	0.97	0.07	11.6	7.5	88.0	6.3
Bell Creek North							
Measured						-	-
Indicated	2.3	0.83	0.03	8.6	7.7	19.1	0.7
Inferred						-	-
Totals	2.3	0.83	0.03	8.6	7.7	19.1	0.7
Bell Creek Northwest							
Measured						-	-
Indicated	3.1	0.77	0.05	15.7	5.2	23.6	1.5
Inferred						-	-
Totals	3.1	0.77	0.05	15.7	5.2	23.6	1.5
Minnamoolka							
Measured						-	-



Indicated	5.9	0.80	0.04	11.3	10.6	47.4	2.4
Inferred	1.2	0.78	0.02	8.9	10.2	9.0	0.2
Totals	7.1	0.80	0.04	10.9	10.5	56.4	2.6
The Neck							
Measured						-	-
Indicated	0.8	0.84	0.03	8.8	6.5	7.1	0.3
Inferred						-	-
Totals	0.8	0.84	0.03	8.8	6.5	7.1	0.3
COMBINED TOTAL							
Measured	13.6	0.96	0.09	15.3	6.2	130.3	12.3
Indicated	30.9	0.76	0.09	17.8	5.4	235.1	27.3
Inferred	5.7	0.72	0.08	17.7	4.8	40.6	4.6
TOTAL	50.3	0.81	0.09	17.1	5.5	406.0	44.2

Notes to Resource Statements

- Scandium resource & nickel-cobalt resource are considered separately (no double counting)
- Scandium resource reported at a cut off grade of 70g/t Sc
- Scandium contained within scandium oxide represents approximately two thirds of total product weight. Therefore equivalent scandium oxide has been calculated at 1.5 times contained scandium.
- The resources for Greenvale and Lucknow are reported at a cut-off grade (COG) of NiEq 0.7% (Ni + 2Co). This NiEq COG formula has been calculated using commodity prices of US\$10/lb nickel and US\$20/lb cobalt, and recoveries of 90% for both nickel and cobalt.

The resources for Kokomo, Bell Creek South, Bell Creek North, Bell Creek Northwest, Minnamoolka and The Neck are reported at a COG of NiEq 0.7% (Ni + 3Co). This NiEq COG formula has been calculated using commodity prices of US\$10/lb nickel and US\$30/lb cobalt, and recoveries of 90% for both nickel and cobalt.

The rationale for using different formulas is because these resource estimates were calculated at different points in time. The commodity prices adopted in each instance were considered reasonable at the time of calculation. It should be noted that the spot price for nickel and cobalt varies constantly. The rationale in using a NiEq COG is to ensure that both significant nickel and cobalt mineralisation are encapsulated in the resource estimate.

From Metallica's metallurgical testwork to date, it is of the opinion that there is reasonable potential for the nickel and cobalt to be recovered and similar recoveries to those assumed have been achieved in testwork.

- Variations are due to rounding factors.
- Iron (Fe) and magnesium (Mg) are included to indicate the overall resource quality, as both metals influence acid consumption as well as dissolved Fe, Mg and other metals, which are contaminants to nickel loaded pregnant solution which is treated to produce a marketable nickel and cobalt intermediate product. As a rule, the lower the Fe and Mg in the laterite resource the better metallurgy and the resource is more suited to heap leach processing.

Competent Person's Statement

Technical information & exploration results contained in this report has been compiled by Metallica Minerals Ltd full time employee Andrew Gillies (B.Sc Geology) in the position of Managing Director. Mr Gillies is a member of the Australasian Institute of Mining & Metallurgy & has sufficient experience that is relevant to the style of mineralisation being reported on to qualify as Competent Persons as defined in the 2004 edition of the Australasian Code for Reporting of Minerals Resources & Ore Reserves. Mr Gillies consents to the inclusion in this report of the matters based on the information in the form & context in which it appears

The NORNICO Nickel-Cobalt & scandium project Mineral Resource estimate(s) is based upon & accurately reflects data compiled, validated or supervised by Mr John Horton, Principal Geologist, who is a Fellow of the Australasian Institute of Mining & Metallurgy & a full time employee of Golder Associates Pty Ltd. Mr Horton has sufficient experience that is relevant to the style of mineralisation & the type of deposit under consideration & to the activity which he has undertaken to qualify as a Competent Person as defined in the 2004 edition of the 'Australasian Code for the Reporting of Exploration Results, Mineral Resources & Ore Reserves'. Mr. Horton consents to the inclusion of this information in the form & context in which it appears in this document.

