



## ASX RELEASE 10 May 2010

### NORNICO Project Drilling Update Lucknow Nickel-Cobalt (and Scandium) Deposit

#### Key Points

- High grade Scandium (Sc) mineralisation discovered near the former Greenvale nickel mine in North Queensland
- This discovery adds to the existing Kokomo Sc Resource and opens the door for Australia to be a world leader in the supply of scandium and scandium products
- Bonanza intercept 27m @ 882g/t Sc (incl. 9m @ 1,417g/t Sc)
- High grade Nickel (Ni) & Cobalt (Co) zones also intersected
- 156 RC holes (3,520m) completed (Phase 1)
- Additional detailed resource drilling (Phase 2) planned between 3 high grade zones, each ~550m apart
- Excellent potential for high grade Ni-Co and Sc ore feed for proposed Ni-Co-Sc processing plant at Greenvale mine site to maximise metal revenues, operating margins and payback

#### Lucknow Introduction

The Lucknow Nickel-Cobalt-Scandium laterite (or oxide) deposit is located approximately 2km southwest of the Greenvale township and approximately 6km southeast of the Greenvale Nickel Mine site in North Queensland (190km west of Townsville). Metallica Minerals Ltd (ASX:MLM) subsidiary, Greenvale Operations Pty Ltd, owns the two tenements (EPM's 10680 and 10860) that cover the Lucknow Ni-Co-Sc deposit.

Metallica owns 100% of the Lucknow scandium rights and 80% of the Kokomo scandium rights. Joint venture partner, Straits Resources Ltd (ASX:SRL), holds 20% of the Kokomo scandium rights.

The **Kokomo scandium resource** occurs within the Kokomo Ni-Co laterite (or oxide) project located approximately 50km NNE of Greenvale. The Measured, Indicated and Inferred scandium Mineral Resource (at a COG of 70g/t Sc) stands at 9.0 Million Tonnes (Mt) at 109g/t Sc containing approximately 1,480 tonnes of scandium oxide ( $\text{Sc}_2\text{O}_3$ ). A breakdown of this resource is presented in **Table 1** at the end of this release. *For further information on the Kokomo Scandium Resource – see ASX release dated 27th January 2010.*

The Lucknow scandium deposit was discovered recently while drilling for Ni-Co. Metallica intends to become the world's major long-term supplier of scandium products by developing its scandium projects alongside the proposed Stage 1 Ni-Co (and Sc) NORNICO project. Metallica will incorporate the production of scandium oxide (99.9%  $\text{Sc}_2\text{O}_3$ ) and also investigate "value added" scandium product opportunities including scandium aluminium master alloy (ScAl) and Scandia Stabilized Zirconia (ScSZ) a key component in Fuel Cells.



## About Scandium

Scandium (element 21) is a Rare Earth Metal which has the potential to significantly enhance and possibly revolutionise the “Green Economy”. It is currently used in fuel cells, high strength low weight aluminium alloys (AlSc), high intensity lamps and structural ceramics (PSZ). The lack of readily available and reliable long term scandium supply in the market has limited its commercial applications to date.

Scandium is generally marketed as scandium oxide (e.g. 99.9% purity) which sells for more than US\$1,400 per kilogram (kg).

ScAl is increasingly used in a number of industries including aerospace, automotive, sporting equipment and mobile consumer electronics. ScSZ is a critical component of high efficiency Solid Oxide Fuel Cells (SOFC's). Partially stabilized ScSZ has the potential to replace high strength alloys in mechanical and aerospace applications. For further information on scandium see below – Scandium background and the **Q & A Summary** at the end of this release.

## Lucknow Drilling

Metallica commenced drilling at Lucknow in March 2010 and completed Phase 1 in early April. A total of 156 RC holes (LKRC-013 to LKRC-168) comprising 3,520 meters were drilled at four separate areas on the Lucknow Ridge, see **Figure 1**. The holes were designed to test areas of elevated Ni-Co mineralisation identified by previous explorers (QNI and Anaconda). Drilling was aimed at defining areas of high grade nickel cobalt laterite mineralisation which can be trucked approximately 6 km to the proposed Greenvale nickel mine and its onsite NORNICO Stage 1 ~180,000 tonnes per annum ore processing plant site.

Drilling was completed on either a nominal 20 by 20 meter grid or on a 40 by 40 meter grid pattern. This ensured that the majority of any mineral resources defined could be classified as either Measured or Indicated – see **Figure 1**. Phase 2 drilling is expected to be completed by the end of May 2010, followed by a resource estimate expected to be released mid year.

## Drilling Results (Phase 1)

All assay results from the Lucknow Phase 1 drilling program have been received and confirm the presence of high grade Ni-Co mineralisation at two of the areas drilled. High grade scandium mineralisation has also been discovered at two of the four areas drilled. The nickel–cobalt and scandium mineralisation remains open (see **Figure 1, 3 & 4** Grants Gully) and additional drilling will be required to determine the extent of the mineralisation, with a focus on high grade zones. This work is planned for the end of May.

## Scandium Results

The high grade scandium areas identified are referred to as Red Fort (Sc primarily) and Grant's Gully (Ni-Co +/-Sc) zones.

**At Red Fort**, an initial 120 by 120 meter area has been drilled out on 40 meter centres. All 21 drill holes in this block intersected high grade scandium mineralisation to a maximum depth of 27 meters (average thickness of intercept is approximately 19 meters) with better drill hole intercepts at:

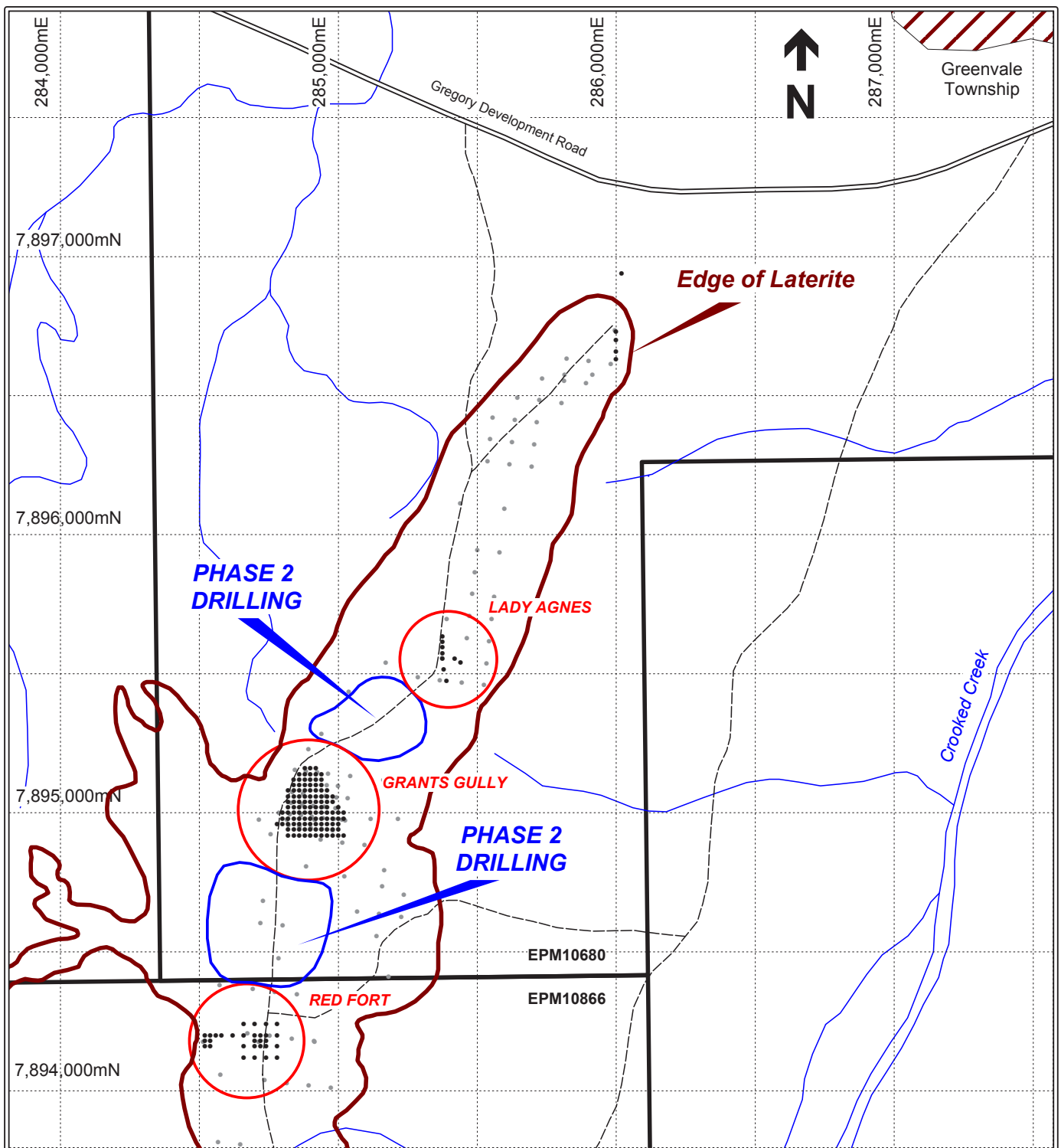
- LKRC-014: 27m @ 309g/t Sc (from surface)
- LKRC-151: 23m @ 310g/t Sc (from surface)
- LKRC-154: 14m @ 326g/t Sc (from 4m)
- LKRC-143: 16m @ 265g/t Sc (from 5m)

A simplified cross section across the centre of the Red Fort Scandium zone is shown in **Figure 2**.

A simplified cross-section diagram of the Red Fort Scandium zone, showing a jagged, irregular boundary line representing the mineralisation zone. The diagram is partially cut off on the right side.



Figure 1: Lucknow Ni-Co-Sc Project Phase 1 Drilling and Phase 2 Targets 2010



Projection: MGA94 Zone 55



- Previous Drilling (other companies)
- Drill hole location (Metallica 2010)

Figure 2: Red Fort Scandium Zone Cross Section Through High Grade Scandium Zone

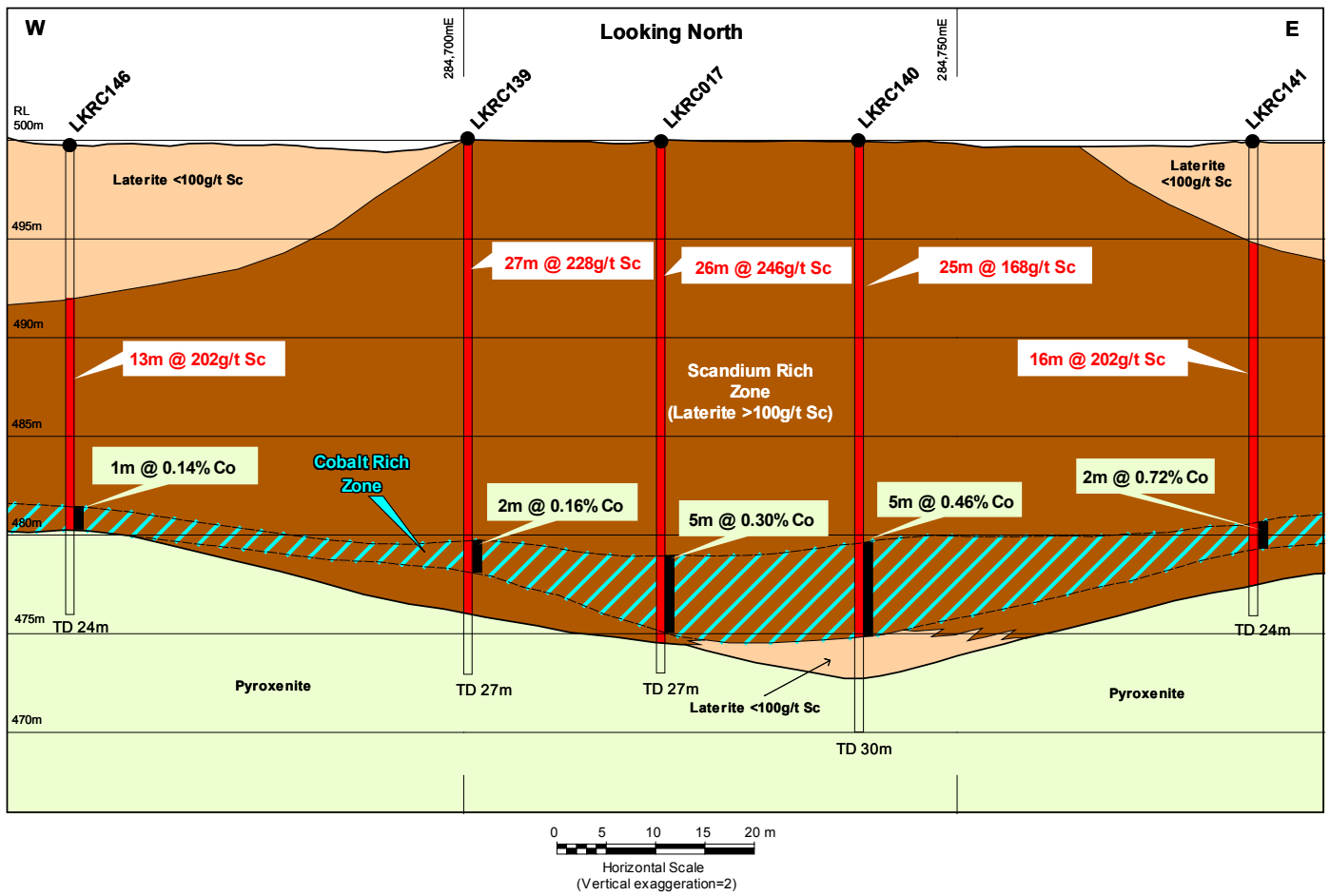
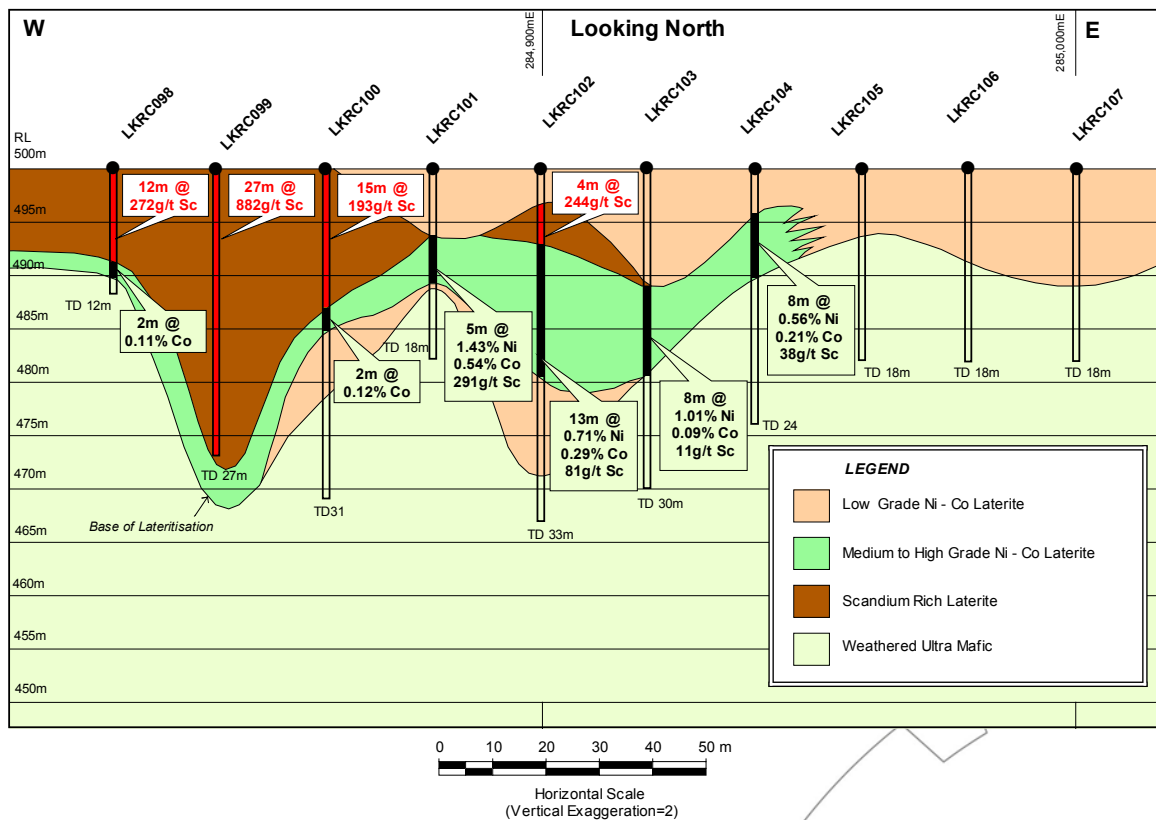


Figure 3: Grants Gully Nickel-Cobalt-Scandium Zone Cross Section





At **Grants Gully**, high grade nickel-cobalt has been intersected in approximately 15 holes located in the south-western corner of the drilled area. High grade scandium has also been discovered in this area associated with the high nickel cobalt laterite mineralisation and there are also drill holes which contain low levels of nickel and cobalt mineralisation. Better drill hole intercepts include:

### Nickel-Cobalt-Scandium holes

LKRC-093: 25m @ 1.06% Ni, 0.18% Co (1.42% Ni Eq) & 120g/t Sc from surface  
LKRC-101: 5m @ 1.43% Ni, 0.54% Co (2.51% Ni Eq) & 291g/t Sc from 6m  
LKRC-102: 5m @ 0.84% Ni, 0.52% Co (1.88% Ni Eq) & 38 g/t Sc from 13m

### Scandium Only Holes

LKRC-099: 27m @ 882g/t Sc from surface (including 9m @ 1,417g/t Sc)  
LKRC-098: 12m @ 285g/t Sc from surface  
LKRC-089: 15m @ 379g/t Sc from surface

**Grants Gully** is still open to the south and it is possible that high grade scandium could continue towards Red Fort, which is located approximately 550m to the south. See **Figure 3** for cross section through the southern area of Grants Gully and **Figure 4** for a metal distribution plan. Phase 2 infill holes will be designed to test the southern (towards Red Fort) and northern extent of this mineralisation (towards Lady Agnes), with drilling expected to recommence at Lucknow in late May.

### Lady Agnes zone

A third area at Lucknow, the Lady Agnes zone, is located 500m north of Grants Gully and has only been tested with 9 RC holes, 3 of which have returned high levels of Ni-Co mineralisation from surface. Better drill hole intercepts include:

LKRC-156: 24m @ 0.94% Ni and 0.43% Co from 2m (1.80% Ni Eq)  
LKRC-157: 17m @ 0.82% Ni and 0.28% Co from 7m (1.38% Ni Eq)

Mineralisation at Lady Agnes is open to the east, west and north. Additional drilling is planned to further define this zone. *A complete list of drill hole results are listed in the appendix to this release.*

### Scandium Extraction Testwork

Metallurgical test work has shown that in addition to high nickel and cobalt extractions, high extractions of scandium, (around 90%) can also be achieved through the proposed heated Atmospheric Acid Leach (AAL) nickel-cobalt processing plant which will be located at the Greenvale mine site. There is excellent potential to produce scandium oxide as a valuable by product from this Ni-Co & Sc recovery process.

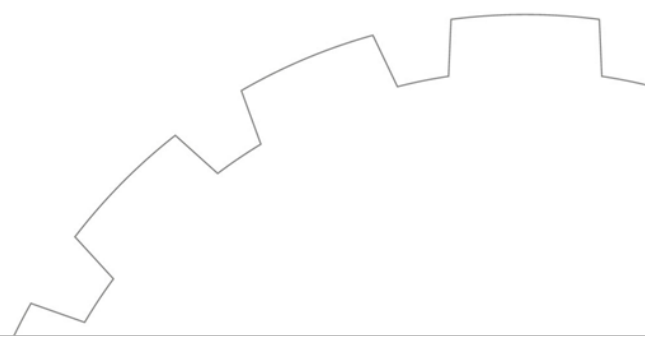
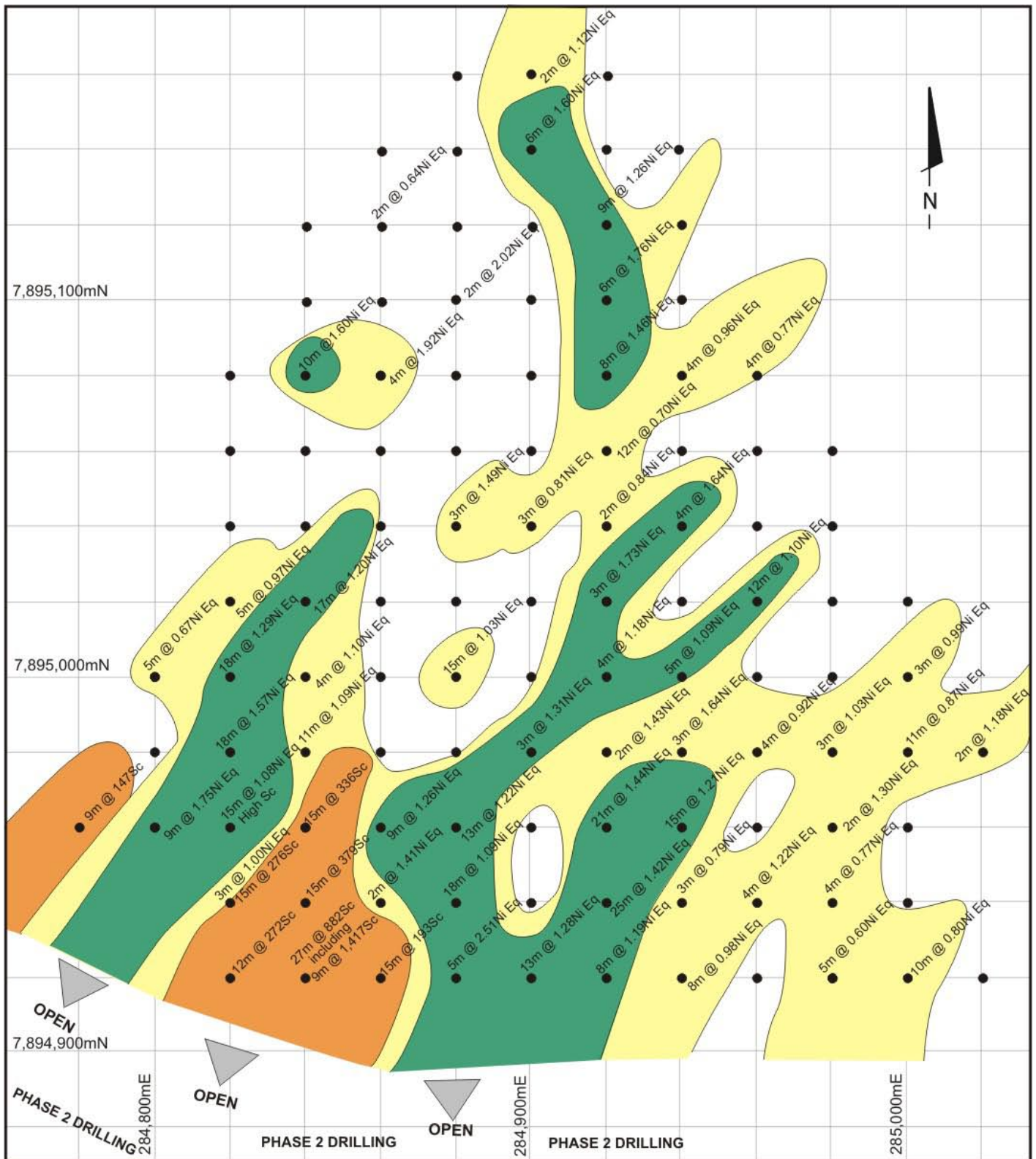


Figure 4: Grants Gully Ni-Co-Sc Zone - Metal Distribution Plan



**LUCKNOW: Grants Gully Ni - Co & Sc Zone - Metal Distribution Plan**



0 50m



## Scandium Background

Scandium (Sc) is a valuable rare earth metal which is used in Fuel Cells and as a major enhancer of the mechanical properties of aluminium alloys (even with small quantities of <1% Sc); it has the potential to become an important “Green Tech Metal” as it replaces the use of heavier materials in vehicles and aerospace applications.

The use of scandium in aluminium alloys for the aerospace industry was pioneered on a wide scale by the Soviet military in the 1970’s. Soviet fighters and inter-continental ballistic missiles utilised the superior strength (680MPa), lighter weight and excellent weldability that scandium-aluminium alloys offer. The Soviet’s knew that scandium alloys could provide material performance similar to Titanium in the west and so they developed a substantial stockpile of Scandia Oxide as a by-product material.

The Soviets had an exploitable deposit of scandium bearing material (containing ~100g/t Sc) which could be sourced locally. With scandium deposits (>100g/t Sc) being extremely rare, there was not the opportunity for Western aircraft manufacturers to gain significant and reliable quantities of scandium so the western aerospace industry developed around Titanium Aluminium alloys.

The advantages of scandium/aluminium alloys begin with its metallurgy. Scandium is a potent agent when added to aluminium because of its ability to refine grain size, inhibit crystallisation, increase plasticity, enhance fatigue resistance, and provide greater yield and ultimate strength to aluminium alloys. In fact, scandium provides the highest increment of strengthening per atomic percent of any alloying element when it is added to aluminium. When Sc-Al alloy is used in welding, the resulting joint exhibits a significantly reduced hot cracking susceptibility and heat affected zone.

Scandium has great promise when used in the Solid Oxide Fuel Cells, and high intensity lighting.

### Price

The average price in 2009 for metal ingot was US\$155 per gram and 99.9% Scandia sold for \$1,400 per kg (USGS –<http://minerals.usgs.gov/minerals/pubs/commodity/scandium/mcs-2010-scand.pdf>)

### Alloy Enhancer

Principally used with aluminium (0.3 to 3% Sc) for increased strength (up to 50%) and fatigue resistance with a weight reduction (up to 12%) over Aluminium Titanium alloys. ScAl is a “green economy” material due to the fuel and energy savings that result from its high strength to weight ratio particularly in transport industries – Aerospace, trains and vehicles.

### Current Supply

Scandium supply is very restricted as it is currently produced as a minor by-product from Ukrainian, Russian and Chinese mines. There has never been a reliable supply of scandium available to potential end-users and there are no western mines currently producing scandium in volume.

### Current Market

The world scandium market is small at around 2-5 tonnes per annum. This is because of the uncertainty and risks to the availability of supply due to scandium’s rarity, coupled with the high unit cost of scandium. The wider use of scandium has been limited however it is increasing because of scandium’s specific mechanical and chemical properties, plus the emergence of political and cultural shift towards a “greener and cleaner” economy.

### Uses

To date, the main use of scandium alloys has been in the aerospace and sporting goods markets where high cost components are justified. The small production volumes lead to a focus on the high value applications including lighting, and “super-alloy” products such as bicycles, baseball bats, golf clubs, and hand guns. The substantial growth opportunities for Scandium are in Solid Oxide Fuel Cell fuel cells and ScAl alloys for use in mobile consumer electronics.



## Opportunity

The development of Metallica's scandium resource at the same time as its Nickel-Cobalt ores offers a unique opportunity to become the long-term, reliable major supplier of scandium and scandium products for Fuel Cell and light metal alloy producers.

## Strategy

Our objective is to be the first and possibly the only major world scandium supplier for many years.

Our scandium resources occurs within and adjacent to our NORNICO Ni-Co ores. Using essentially the same processing route, the capital establishment and ongoing processing costs are largely paid for by the high volume Ni-Co operation. It would be extremely difficult for any organisation to justify a standalone scandium start up operation. Through our likely ability to guarantee delivery of significant quantities of scandium oxide at a competitive price, Metallica expects it will be in a position to rapidly grow the scandium market, open up new demand, particularly with Fuel Cells and higher tech aluminium based products. This places Metallica in a unique position to use this metal to develop specialised alloys and ceramics, knowing there will be long term access and ownership to this strategic metal at a known price. Metallica believes significant short term and huge long-term rewards are possible.

**Table 1: Kokomo Scandium Mineral Resource using a 70g/t Sc cut-off grade and excluding the scandium within the Kokomo Ni-Co resource.**

Category Classification	Million Tonnes	Density DBD t/m <sup>3</sup>	Sc g/t
Measured	0.70	1.72	154.0
Indicated	3.80	1.80	120.8
Inferred	4.40	1.82	91.0
Total	9.00	1.80	108.6

DBD= Day Bulk Density, ppm =g/t, COG = Cut off Grade  
See ASX Release dated 27 January 2010.

## Competent Persons

Technical information and exploration results contained in this report has been compiled by Metallica Minerals Ltd full time employees Andrew Gillies B.Sc Managing Director and Metallica Minerals Ltd Exploration Manager, Mr Pat Smith MSc. B.Sc (Hons),. Mr Gillies and Mr Smith are members of the Australasian Institute of Mining and Metallurgy and have relevant experience to the mineralisation being reported on to qualify as Competent Persons as defined by the Australasian Code for Reporting of Minerals Resources and Reserves. Mr Gillies and Mr Smith consent to the inclusion in this report of the matters based on the information in the form and context in which it appears.





## Metallica Minerals Ltd – Scandium Project Q & A

**Q. Why is the current world scandium market only around 5 tonnes per annum and production only 2 -5 tonnes per annum?**

A. The Soviet Union relied heavily on Scandium Aluminium alloys for their military aerospace (aircraft and missiles) requirements so maintained a 200+ tonne stockpile up until the end of the cold war. The West had very little Scandium but virtually limitless supplies of Titanium and so developed these alloys for high performance requirements. Since the collapse of the Soviet Union, the vast majority of Scandium supply has been provided from the military stock pile at prices that made it uneconomic to produce in the West. It is now estimated that only 10-15 tonnes of this supply remains so prices have increased substantially. Current production of Scandium in very small quantities as a by product from Rare Earth, Uranium, Tungsten, Tin, Titanium concentrates or special Iron ore deposits in China, Ukraine and Russia, so is produced in very small volumes and it is difficult to scale production.

**Q. Why hasn't someone done this already?**

A. Metallica and Straits Resources have been exploring for Scandium in Australian Nickel Laterites for approximately 10 years. Over that time, the MD of Metallica Andrew Gillies has continually told the Scandium story to anyone that would listen and developed customer relationships and partner relationships. During this time, the uses of Scandium have been supported by substantial industry and academic research and subsequently a large number of patents have been registered that utilise Scandium. The key barrier to the use of Scandium in western industrial uses is the availability of a clean, green and reliable supply from multiple resources in stable jurisdictions. With Lucknow and Kokomo, the supplier and jurisdictional risks with Scandium have been removed. Co-development of our Scandium and Nickel Cobalt resources with processing at Greenvale creates economies of scale that now (subject to completion feasibility studies) makes the extraction, processing and marketing of Scandium feasible and profitable.

**Q. The Chinese and Russians control the Scandium market – will they increase production to destroy the market premium that you claim?**

A. The production of Scandium with current producers is limited because it is a by-product. We would welcome the increase in available supply as the potential customers are indicating a capacity to immediately consume production of 30+ tonnes per annum of Scandium Oxide for purely fuel cell applications. Potential customers are requesting long term reliable supply agreements that will absorb any potential increase in production from current suppliers.

**Q. What makes the NORNICO Scandium project different from current and future producers?**

A. Current world supply comes from tailings treatment and certain mineral concentrates. These operations are only able to produce small amounts at a high cost with limited capacity to scale up production. Small amounts of scandium are tied in with complicated silicate minerals which are harder to extract and separate from other metals. The near surface high grade scandium deposits at Lucknow and Kokomo are separate nickel-cobalt Laterite deposits approximately 6km and 55km respectively from the proposed Ni-Co-Sc treatment plant at the Greenvale mine site. The Lucknow and Kokomo scandium laterite or oxide ore is easier to mine and process.

As a laterite (or oxide), the mining process is a very simple free dig “truck and shovel” at surface so does not require specialist equipment or techniques. Laterites are part of the weathered zone that can leach, enrich and concentrate some metals such as Scandium, Nickel and Cobalt (and deplete other metals) within the weathered or laterite zone above the basement hard rocks below. At Lucknow and Kokomo, by pure chance the fresh parent ultramafic rocks beneath the laterite zone contained relatively high levels of Scandium (~50-80g/t Sc) which was leached and reconcentrated in the laterite profile by regular tropical dry and wet conditions over millions of years. In this way the levels of Scandium have increased by perhaps 10 to 100 times. At these concentrations only small volumes of ore are required to produce substantial marketable quantities of Scandium. We are focused on high grades nickel (>1.5% Ni) and if the cobalt price continues to recover we can also access high grades of cobalt >0.2% Co with good nickel. There are some high grade Ni-Co zones which also carry high scandium (>100g/t Sc) and we



will access these zones at Lucknow and Kokomo early to maximise the value of the ore being treated. The other benefit is because the scandium is in oxide form and has already been naturally mobilised from silicate minerals, leached and reconcentrated in the laterite profile, and the scandium is readily extractable using diluted sulphuric acid leaching. The dissolved scandium in the pregnant liquor is recovered using standard solvent extraction techniques. The scandium is in the same ore as the Ni and Co, so there is shared capital and operating cost. To our knowledge, no other Nickel or cobalt project or other metal or scandium project has this benefit.

**Q. How do you know you will be able to sell what you produce?**

A. It is anticipated that a significant demand for Scandium will be realized for aluminum alloy and scandium stabilised zirconia for the structural ceramics and fuel cell industries once a reliable supply of Scandium has been established. Scandium has some remarkable properties in niche applications, many of which there is no commercial substitute. Preliminary early stage business development work indicates that all production for the first 5 years could be allocated to scandium oxide for the fuel cell industry. We could reasonably expect to have a forecast production of around say 10,000 kg scandium oxide in year 1 to over 40,000 kg scandium oxide in year 4 should the scandium market mature and we change from Ni-Co-Sc ore feed to predominantly Sc (+/-Ni-Co) ore feed. We can tailor the plant relative to demand of scandium and or Ni-Co-Sc prices and blend the ores accordingly.

**Q. Some of the Rare Earth miners don't even mention Scandium so is it really a Rare Earth Metal?**

A. Rare Earth Elements (REE) are defined by IUPAC (International Union of Pure and Applied Chemistry) as follows: "Rare earth elements or rare earth metals (REM) are a collection of seventeen chemical elements in the periodic table, namely scandium, yttrium, and the fifteen lanthanides (La Ce Pr Nd Pm Sm Eu Gd Tb Dy Ho Er Tm Yb Lu). Scandium and yttrium are considered rare earths since they tend exhibit similar chemical and physical properties as the lanthanides". In most REM ores of the world there is negligible scandium (unlike Yttrium), so a high grade scandium deposit on its own or with other REM is unique.

**Q. Where are the growth markets for scandium?**

A. The major growth markets is the supply of value added scandium products including ScAl master alloy and Scandia Stabilized Zirconia powders which are used in Solid Oxide Fuel Cells and structural ceramics. Commodity base load supply contracts for 99.9% Scandium Oxide to large trading houses should be simple to achieve, however this may limit the potential margins available. Scandium master alloy can be used for Aerospace and sporting goods applications, both of which are substantial growth opportunities. The mobile consumer electronics market place offers massive potential for use in monocoque cases and frames for product segments like iPods, iPhones and iPads.

While scandium is very expensive to buy (currently ~US\$1,500/kg), we do not envisage there being a major reduction in price with increased demand and volumes as the scandium price has small to negligible impact on the final product price.

**Q. Scandium is 35th most common in the Earth's crust – that doesn't seem so rare if Metallica was able to find two high quality resources. Perhaps there are many of deposits like Lucknow and Kokomo.**

A. Scandium is not uncommon and is found in typically small quantities and low concentration (typically <10g/t Sc) in mineral veins and in most rocks bound in silicate minerals, however enriched or significantly higher grades (say, over 80g/t Sc). Above those low levels normal are background - are rare. Unless the scandium bearing rock deposit is being mined and processed for another mineral, then it is unlikely to be economically feasible to extract the low concentration of Scandium. It is probable that there are other Ni (or other metal) laterites that have increased concentrations of Scandium (e.g. Jervois NSW Sc project), however this requires the occurrence of weathered ancient scandium rich bearing basement rocks in a laterite forming tropical environment of stable geology – these appear to be very rare.



**Should anyone know where there is significant tonnages (>1Mt) of laterite or scandium oxide >100g/t then please contact Metallica Minerals.**

**Q. Where can I find independent information on Scandium?**

A. [www.scandium.org](http://www.scandium.org) | [www.e21golf.com](http://www.e21golf.com) | [www.eastonbike.com](http://www.eastonbike.com)  
<http://minerals.usgs.gov/minerals/pubs/commodity/scandium/>

**Q. Where does Scandium get its name?**

A. Scandium was first isolated from the minerals gadolinite/ euxenite which were found in the Scandinavian Peninsula. Hence Scandium and Scandia (Scandium Oxide).

**Q. What is Scandium currently used for?**

A. Previous applications were in Russian Aerospace (Buran Space Shuttle, Mig 29 fighter nose, Mig 21 wings, missile fins on R series Intercontinental Ballistic Missiles). Currently Scandium Aluminium Alloys are used in sporting goods (Easton Baseball bats, Brine Lacrosse sticks, SC21 golf clubs, mountain bike frames, bicycle components, Smith&Wesson revolver). Scandium Aluminium alloys have superior strength (600MPa+) and weldability to Titanium Aluminium Alloys however the main market demand is for Scandia Stabilized Zirconia (ScSZ) for use in high temperature Solid Oxide Fuel Cells (SOFC). ScSZ has higher conductivity and higher oxygen permeability at lower temperatures than Ytria Stabilized Zirconia (YSZ) so provides a more efficient fuel cell (10-15%). Partially Stabilized Zirconia which is stabilized with Scandia has outstanding mechanical properties. This material can be used to make engines, gas turbine jet engine blades, rifles and body armor.

**Q. Can I buy some Scandium today? When will you start shipping Scandium?**

A. We are currently proving up the resources at Lucknow and have not completed a feasibility study for the NORNICO Ni-Co-Sc processing facility at this time. Subject to the completion of the feasibility study. At this time we envisage NORNICO stage 1 will produce metal products containing around 2,900 t Ni, >200t Co and >5,000 kg Sc per annum. We will produce Scandium, Nickel and Cobalt soon after the proposed plants' commissioning.

**Q. What type of fuel cells use Scandium Oxide?**

A. High temperature Solid Oxide fuel cells are able to use Scandium Oxide to Stabilize Zirconia. This has significant benefits over other electrolytes as Scandium Oxide Stabilized Zirconia (ScSZ) offers the highest conductivity at the lowest temperatures. Lower temperatures are important for reliability and high conductivity provides greater efficiency. SOFC's can use a range of fuels from methane through to compressed natural gas.

**Q. Is there really a significant market for scandium?**

A. Through very limited business development work, we have already identified a number of end users and trading companies that are actively seeking to be large players in Scandia.

If for example there were no reliable supply from proven deposits of platinum we would not be driving vehicles with efficient catalytic converters and we would perhaps be using some other less efficient metal. There was a big increase in platinum consumption from the 1970's when that market changed. We believe the benefits of Scandium are well understood and once there is a reliable supply, the market will grow accordingly.

**Q. If Scandium is going to change the world, why haven't I heard about it before?**

A. In science and research communities the benefits of Scandium's special chemical, mechanical and electrical properties are well known. Potential commercial users of Scandium have been reluctant to incorporate the use of scandia in their products until there is a defined clean and green, long term stable and secure supply.



**Q. Who are your customers and partners? You wouldn't be wasting the money to drill unless you had something in place.**

A. We are not wasting money on more drilling as we are already drilling these areas as part of our Ni-Co resource drilling. We have 11 elements assayed for in every sample our target metals are Ni, Co, and Sc. We cannot disclose who our prospective customers are as we are in preliminary commercial discussions, however we do anticipate being able to announce off take agreements around when we complete the planned feasibility study in Q1 2011. In terms of partners, we are working closely with established Asian trading houses on the supply of scandium and scandium products.

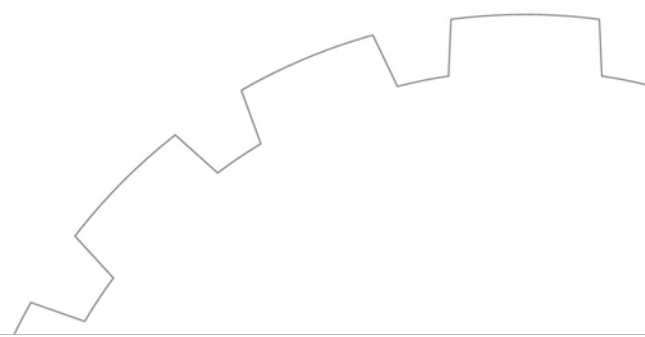
**Q. Why is scandium important to Metallica? These volumes are small compared to the Nickel and Cobalt.**

A. Scandium provides an additional revenue stream for the NORNICO project and allows it to gain economies of scale with the initial processing plant (NORNICO Stage 1). Whilst the volumes are modest the Scandium market is a high value (currently ~US\$ 1,500/kg) and unique opportunity with limited competition.

However while scandium is very expensive to buy, we do not envisage there being a major reduction in price with increased demand and volumes as the scandium price would most likely have a small to negligible impact on the final product price.

**Q. How does the government's proposed resource tax on "super profits" affect the scandium component of NORNICO?**

A. We have formed the view that the Government has made a big mistake with this currently proposed Super Tax on resource profits. After a lot of risk, expenditure and long haul effort to get a mine going - this new proposed tax is essentially a tax on hard earned success - and will burden future market sentiment, investment confidence and project viability. It is very early times to be discussing the proposed super profits tax as we are hopeful that industry consultation will be incorporated in the final plans.





**Table 2: Lucknow Ni-Co-Sc Project Phase 1 - 2010 drilling Results**

Hole Number	Easting	Northing	Depth	From	To	Intercept	Ni (%)	Co (%)	Sc (ppm)	NiEq	Fe (%)	Mg (%)
LKRC-013	284,720	7,894,180	27	0	24	24			287			
inc				15	19	4	0.46	0.34	380	1.14	18.25	3.46
LKRC-014	284,700	7,894,180	30	0	27	27			309			
inc				19	21		0.37	0.40	471	1.17	21.20	2.23
LKRC-015	284,720	7,894,200	21	0	21	21			206			
LKRC-016	284,740	7,894,180	27	0	21	21			260			
inc				17	19	2	1.01	0.67	290	2.35	15.85	3.57
LKRC-017	284,720	7,894,160	27	0	26	26			246			
inc				21	26	5	0.42	0.30	241	1.02	21.00	2.09
LKRC-018	284,880	7,895,060	27	NSR								
LKRC-019	284,880	7,895,040	27	0	3	3	1.07	0.21	26	1.49	23.03	2.37
LKRC-020	284,820	7,894,980	36	0	6	6			123			
inc				14	32	18	1.19	0.19	89	1.57	37.46	2.88
LKRC-021	284,840	7,894,980	18	4	12	8			327			
inc				6	11	5	0.65	0.22	262	1.09	15.06	5.43
LKRC-022	284,800	7,894,980	21	NSR								
LKRC-023	284,820	7,895,000	33	9	27	18	0.89	0.20	109	1.29	25.76	2.90
LKRC-024	284,800	7,895,000	24	15	20	5	0.25	0.21	113	0.67	25.76	0.33
LKRC-025	284,840	7,895,000	15	1	5	4	1.10	0.08	106	1.26	13.37	7.72
LKRC-026	284,860	7,895,000	27	NSR								
LKRC-027	284,880	7,895,000	30	1	16	15	0.60	0.21	46	1.03	33.57	0.48
LKRC-028	284,860	7,894,980	24	NSR								
LKRC-029	284,880	7,894,980	21	NSR								
LKRC-030	284,900	7,894,980	24	2	8	6	0.69	0.17	39	1.03	26.10	1.49
and				12	15	3	1.19	0.06	45	1.31	27.73	4.70
LKRC-031	284,920	7,894,980	30	19	21	2	1.27	0.08	29	1.43	25.85	5.71
LKRC-032	284,940	7,894,980	21	0	3	3	0.86	0.39	32	1.64	22.73	4.08
LKRC-033	284,980	7,894,980	24	4	7	3	0.73	0.15	14	1.03	25.13	5.74
LKRC-034	284,500	7,894,980	33	2	13	11	0.69	0.09	14	0.87	16.08	3.06
LKRC-035	284,520	7,894,980	27	1	3	2	0.45	0.11	9	0.67	16.40	0.46
				5	7	2	0.98	0.10	33	1.18	12.20	5.09
LKRC-036	284,960	7,894,980	24	8	12	4	0.82	0.05	49	0.92	14.36	7.08
LKRC-037	284,900	7,895,000	15	NSR								
LKRC-038	284,920	7,895,000	24	0	4	4	0.74	0.22	44	1.18	42.70	0.63
LKRC-039	284,940	7,895,000	21	2	7	5	0.97	0.06	15	1.09	18.84	5.14
LKRC-040	284,960	7,895,000	21	NSR								
LKRC-041	284,980	7,895,000	21	NSR								
LKRC-042	285,000	7,895,000	30	3	6	3	0.69	0.15	15	0.99	18.67	2.23
and				14	17	3	0.52	0.13	8	0.78	14.73	0.52
LKRC-043	285,020	7,895,000	21	NSR								
LKRC-044	284,820	7,895,020	15	0	5	5	0.63	0.17	33	0.97	32.30	1.63
LKRC-045	284,840	7,895,020	27	0	17	17	0.82	0.19	87	1.20	30.54	2.71
inc				5	9	4	1.00	0.45	255	1.90	43.07	0.28
LKRC-046	284,860	7,895,020	18	NSR								
LKRC-047	284,880	7,895,020	21	NSR								
LKRC-048	284,900	7,895,020	18	NSR								
LKRC-049	284,920	7,895,020	33	2	5	3	0.97	0.38	26	1.73	36.10	0.7
LKRC-050	284,940	7,895,020	21	NSR								
LKRC-051	284,960	7,895,020	24	0	12	12	0.68	0.21	33	1.10	32.68	0.38
LKRC-052	285,000	7,895,020	18	NSR						0.00		
LKRC-053	284,820	7,895,040	12	NSR						0.00		
LKRC-054	284,840	7,895,040	24	NSR						0.00		
LKRC-055	284,860	7,895,040	27	NSR						0.00		

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Hole Number	Easting	Northing	Depth	From	To	Intercept	Ni (%)	Co (%)	Sc (ppm)	NiEq	Fe (%)	Mg (%)
LKRC-056	284,900	7,895,040	27	0	3	3	0.51	0.15	24	0.81	27.23	2.12
LKRC-057	284,920	7,895,040	21	4	6	2	0.65	0.11	67	0.87	41.40	1.35
LKRC-058	284,940	7,895,040	21	5	9	4	1.06	0.29	29	1.64	32.67	3.47
LKRC-059	284,960	7,895,040	21	NSR								
LKRC-060	284,980	7,895,040	21	NSR								
LKRC-061	284,840	7,895,060	21	NSR								
LKRC-062	284,820	7,895,060	6	NSR								
LKRC-063	284,860	7,895,060	21	NSR								
LKRC-064	284,900	7,895,060	30	NSR								
LKRC-065	284,920	7,895,060	24	2	14	12	0.50	0.10	40	0.70	29.00	1.27
LKRC-066	284,940	7,895,060	21	NSR								
LKRC-067	284,960	7,895,060	21	NSR								
LKRC-068	284,980	7,895,060	18	NSR								
LKRC-069	284,520	7,894,180	33	14	27	13	0.78	0.27	65	1.32	32.32	2.14
inc				17	27	10	0.89	0.29	56	1.47		
also				4	14	10			153			
LKRC-070	284,540	7,894,180	18	9	13	4	0.33	0.09	14	0.51	24.67	2.46
LKRC-071	284,520	7,894,160	21	NSR								
LKRC-072	284,540	7,894,160	18	6	14	8			110			
and				14	16	2	0.59	0.31	163	1.21	10.21	5.41
LKRC-073	284,540	7,894,200	27	16	22	6	0.69	0.21	75	1.11	35.30	2.23
LKRC-074	284,560	7,894,200	18	1	12	11			169			
LKRC-075	284,520	7,894,200	18	0	9	9			168			
and				9	11	2	0.61	0.36	163	1.33	14.75	3.47
LKRC-076	284,820	7,894,960	36	17	32	15	0.64	0.22	485	1.08	43.05	0.29
				0	17	17			247			
LKRC-077	284,800	7,894,960	30	14	23	9	0.83	0.46	56	1.75	29.54	1.94
LKRC-078	284,780	7,894,960	15	3	12	9			147			
LKRC-079	284,840	7,894,960	18	3	18	15			336			
LKRC-080	284,860	7,894,960	36	2	11	9	0.82	0.22	40	1.26	39.60	1.76
and				14	20	6	0.75	0.21	41	1.17	43.30	0.73
and				28	31	3	1.00	0.41	43	1.82	36.10	1.22
LKRC-081	284,880	7,894,960	24	2	15	13	0.64	0.29	35	1.22	38.44	1.07
LKRC-082	284,900	7,894,980	21	NSR								
LKRC-083	284,920	7,894,980	27	1	22	21	0.78	0.33	80	1.44	41.81	0.94
LKRC-084	284,940	7,894,980	21	1	16	15	0.67	0.27	33	1.21	28.97	1.61
inc				5	12	7	0.74	0.45	33	1.64	37.06	0.75
LKRC-085	284,960	7,894,980	18	NSR								
LKRC-086	284,980	7,894,980	18	5	7	2	0.96	0.17	10	1.30	20.95	0.80
LKRC-087	285,000	7,894,980	18	NSR								
LKRC-088	284,820	7,894,940	15	8	11	3	0.50	0.25	347	1.00	14.35	5.46
and				0	15	15			276			
LKRC-089	284,840	7,894,940	15	0	15	15			379			
LKRC-090	284,860	7,894,940	30	11	13	2	0.75	0.33	76	1.41	47.90	0.42
				18	21	3	1.16	0.07	41	1.30	34.67	3.95
LKRC-091	284,880	7,894,940	24	0	18	18	0.67	0.21	146	1.09	44.10	0.90
inc				11	15	4	0.96	0.42	368	1.80	43.30	0.30
LKRC-092	284,900	7,894,940	27	NSR								
LKRC-093	284,920	7,894,940	30	0	25	25	1.06	0.18	120	1.42	31.59	1.66
inc				4	8	4	1.48	0.18	303	1.84	47.32	0.89
and				13	20	7	1.46	0.09	135	1.64	22.57	4.15
LKRC-094	284,940	7,894,940	18	2	5	3	0.47	0.16	64	0.79	40.40	0.43
LKRC-095	284,960	7,894,940	21	1	5	4	0.92	0.15	28	1.22	24.27	2.57
LKRC-096	284,980	7,894,940	21	1	5	4	0.49	0.14	10	0.77	19.10	0.36
LKRC-097	285,000	7,894,940		NSR								
LKRC-098	284,820	7,894,920	12	0	12	12			285			

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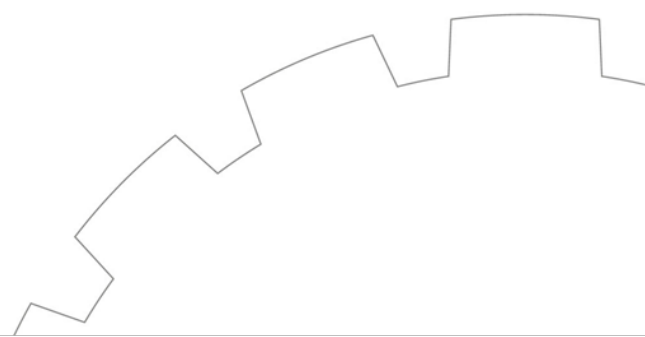
Hole Number	Easting	Northing	Depth	From	To	Intercept	Ni (%)	Co (%)	Sc (ppm)	NiEq	Fe (%)	Mg (%)
LKRC-099	284,840	7,894,920	27	0	27	27			882			
inc				18	27	9			1417			
LKRC-100	284,860	7,894,920	31	0	16	16			193			
LKRC-101	284,880	7,894,920	18	6	11	5	1.43	0.54	291	2.51	23.42	3.19
LKRC-102	284,900	7,894,920	33	3	7	4			244			
and				7	20	13	0.70	0.29	82	1.28	38.92	0.33
inc.				13	18	5	0.84	0.52	38	1.88	34.62	0.30
LKRC-103	284,920	7,894,920	30	11	19	8	1.01	0.09	111	1.19	26.67	2.80
inc				15	19	4	1.28	0.07	184	1.42	24.67	4.97
LKRC-104	284,940	7,894,920	24	4	10	6	0.56	0.21	38	0.98	30.89	0.41
LKRC-105	284,960	7,894,920	18	NSR								
LKRC-106	284,980	7,894,920	18	4	9	5	0.34	0.13	6	0.60	14.58	0.40
LKRC-107	285,000	7,894,920	18	1	11	10	0.46	0.18	8	0.82	16.85	0.34
LKRC-108	285,020	7,894,920	21	NSR								
LKRC-109	284,860	7,985,080	30	0	4	4	1.42	0.25	26	1.92	24.52	3.48
and				8	10	2	0.94	0.19	31	1.32	13.96	1.25
LKRC-110	284,840	7,985,080	18	0	10	10	0.72	0.14	64	1.00	34.73	2.21
LKRC-111	284,820	7,985,080	9	NSR								
LKRC-112	284,880	7,985,080	18	NSR								
LKRC-113	284,900	7,985,080	15	NSR								
LKRC-114	284,920	7,985,080	21	2	12	10	0.86	0.30	52	1.46	40.82	0.97
LKRC-115	284,940	7,985,080	18	0	4	4	0.62	0.17	21	0.96	25.23	1.17
LKRC-116	284,960	7,985,080	15	0	4	4	0.43	0.17	9	0.77	19.97	0.24
LKRC-117	284,840	7,895,100	12	NSR								
LKRC-118	284,860	7,895,100	30	NSR								
LKRC-119	284,880	7,895,100	15	6	8	2	1.84	0.09	2	2.02	26.06	6.43
LKRC-120	284,900	7,895,100	18	NSR								
LKRC-121	284,920	7,895,100	24	0	6	6	0.89	0.45	57	1.79	32.58	2.40
LKRC-122	284,940	7,895,100	15	NSR								
LKRC-123	284,860	9,895,120	24	0	2	2	0.42	0.11	30	0.64	9.18	1.26
LKRC-124	284,840	9,895,120	24	NSR								
LKRC-125	284,880	9,895,120	12	NSR								
LKRC-126	284,900	9,895,120	18	NSR								
LKRC-127	284,920	9,895,120	18	18	27	9	1.00	0.13	41	1.26	47.11	1.87
LKRC-128	284,940	9,895,120	33	3	6	3	1.11	0.27	19	1.65	36.10	1.03
LKRC-129	284,880	7,895,140	21	NSR								
LKRC-130	284,860	7,895,140	6	NSR						0.00		
LKRC-131	284,900	7,895,140	27	0	6	6	0.86	0.37	39	1.60	34.70	0.87
LKRC-132	284,920	7,895,140	33	NSR								
LKRC-133	284,940	7,895,140	18	NSR								
LKRC-134	284,880	7,895,160	21	NSR								
LKRC-135	284,900	7,895,160	24	1	3	2	0.78	0.17	24	1.12	11.10	0.62
LKRC-136	284,920	7,895,160	24	NSR								
LKRC-137	284,740	7,894,200	27	1	20	19			219			
inc.				17	20	3	0.51	0.31	167	1.13	24.83	2.18
LKRC-138	284,700	7,894,200	27	1	22	21			245			
inc				18	21	3	0.70	0.67	272	2.04	17.43	3.07
LKRC-139	284,700	7,894,160	27	0	27	27			228			
LKRC-140	284,740	7,894,160	30	0	13	13			200			
and				20	25	5	0.48	0.46	217	1.40	32.30	1.01
LKRC-141	284,780	7,894,160	24	6	24	18			201			
inc				19	21	2	0.69	0.72	237	2.13	14.40	3.34
LKRC-142	284,740	7,894,120	30	7	28	21			208			
inc				21	26	5	0.53	0.30	249	1.13	20.52	2.87
LKRC-143	284,780	7,894,120	21	5	21	16			265			
inc				17	21	4	0.73	0.53	272	1.79	16.55	3.61

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Hole Number	Easting	Northing	Depth	From	To	Intercept	Ni (%)	Co (%)	Sc (ppm)	NiEq	Fe (%)	Mg (%)
LKRC-144	284,700	7,894,120	24	13	21	8			179			
LKRC-145	284,660	7,894,120	21	7	21	14			207			
inc				18	20	2	0.34	0.14	297	0.62	13.60	4.64
LKRC-146	284,660	7,894,160	24	8	21	13			202			
LKRC-147	284,660	7,894,200	21	3	21	18			248			
inc				18	21	3	0.60	0.61	184	1.82	12.23	4.22
LKRC-148	284,620	7,894,200	27	12	18	6			104			
LKRC-149	284,580	7,894,200	24	0	6	6			138			
LKRC-150	284,660	7,894,240	24	0	20	20			227			
inc				15	17	2	0.25	0.20	256	0.65	13.10	1.56
LKRC-151	284,700	7,894,240	24	0	23	23			310			
inc				18	21	3	0.29	0.25	499	0.79	38.47	0.60
LKRC-152	284,740	7,894,240	27	0	20	20			219			
inc				19	23	4	0.45	0.20	106	0.85	28.60	1.22
LKRC-153	784,780	7,894,240	21	0	7	7			136			
and				10	17	7			252			
inc				15	17	2	0.75	0.68	148	2.11	6.64	2.09
LKRC-154	284,780	7,894,200	27	4	18	14			327			
inc				18	20	2	0.16	0.12	67	0.40	4.13	2.61
LKRC-155	285,375	7,895,555	24	NSR								
LKRC-156	285,375	7,895,575	36	2	26	24	0.94	0.43	29	1.80	45.28	0.83
inc				15	25	10	1.12	0.63	25	2.38	44.38	0.90
LKRC-157	285,375	7,895,595	30	7	24	17	0.82	0.28	23	1.38	36.21	0.99
inc				18	23	5	1.29	0.35	28	1.99	38.02	2.37
LKRC-158	285,375	7,895,615	24	6	19	13	0.80	0.25	23	1.30	39.81	0.87
inc				8	12	4	0.85	0.38	30	1.61	48.55	0.47
LKRC-159	285,375	7,895,635	30	11	20	9	0.63	0.12	19	0.87	27.50	0.80
LKRC-160	285,420	7,895,555	21	15	21	6	0.25	0.15	2	0.55	37.02	0.25
LKRC-161	285,440	7,895,540	21	NSR								
LKRC-162	285,380	7,895,515	21	NSR								
LKRC-163	285,390	7,895,475	21	15	20	5	0.39	0.20	7	0.79	15.04	0.29
LKRC-164	286,000	7,896,730	15	NSR								
LKRC-165	286,000	7,896,700	15	2	6	4	0.81	0.11	6	1.03	10.80	3.29
LKRC-166	286,000	7,896,660	15	NSR								
LKRC-167	286,000	7,896,630	18	NSR								
LKRC-168	286,020	7,896,940	12	NSR								

NSR (No Intercepts Greater than 1% Ni or 0.10% Co over 2m)







## MEDIA RELEASE

Monday 10 May 2010

### SIGNIFICANT “BONUS” DISCOVERY OPENS UP NEW OPTIONS FOR METALLICA’S EXPANDING QUEENSLAND MINERALS PROJECTS

A significant “bonus” discovery of high grade scandium mineralisation has been announced by Metallica Minerals Limited (ASX: “MLM”) following completion of the successful first phase drilling program to expand the Company’s Queensland nickel-cobalt project.

Metallica said the scandium discovery – made during drilling at the Company’s newly-acquired Lucknow tenements near the former Greenvale nickel mine in North Queensland – has the potential to position Metallica and Australia as the world’s major long-term supplier of scandium products.

*[Scandium (element 21) is a rare earth metal which has the potential to significantly enhance and possibly revolutionise the “Green Economy”. It is currently used in fuel cells, high strength, low weight aluminium alloys, high intensity lamps and structural ceramics. The lack of readily available and reliable long term scandium supply in the market has limited its commercial applications to date.]*

“These exceptional scandium (Sc) drill results (*see accompanying ASX Release*) are a bonus for the Company which also intersected high grade Nickel (Ni) and Cobalt (Co) during the recently-completed Phase 1 drilling program at Lucknow,” Metallica’s Managing Director, Mr Andrew Gillies, said today.

“When combined with our 80% ownership of the neighbouring Kokomo scandium deposit, the Lucknow drilling success has Metallica ideally placed to achieve its goal of becoming the world’s major long-term supplier of scandium products by developing its scandium projects alongside the Company’s proposed NORNICO Stage 1 Ni-Co (and Sc) project near Greenvale in Queensland,” Mr Gillies said.

“Our initial Sc development focus will be on the production of scandium oxide (99.9% Sc<sub>2</sub>O<sub>3</sub> Scandia) and we will also investigate “value added” scandium product opportunities including scandium aluminium master alloy (ScAl) and Scandia Stabilized Zirconia (ScSZ) which is a key component in Solid Oxide Fuel Cells,” he said.

“The Lucknow scandium boost for our existing Kokomo project is particularly significant as it has bulk mineable intercepts of >200g/t Sc and occurs close to or within the Ni-Co ore zones, one drill hole recorded a bonanza scandium intercept of 27m at 882 g/t Sc from surface and is open along strike and we are looking forward to follow-up drilling in a couple weeks.”

“This enables us to target not only high Ni & Co ores but also high Ni-Co and Sc bearing ores for exceptionally high plant feed grades, especially in the early years of the proposed operation to maximise revenues and margins.”

Mr Gillies said having access to high grade nickel, supported by high cobalt and uniquely scandium ores, could prove to be a major commercial advantage for Metallica.

“We are also very fortunate to have an excellent location, the old Greenvale Mine site close to infrastructure and Townsville acid supply,” he said.



Metallica's Lucknow nickel-cobalt (and now Scandium) laterite deposit is located approximately 2km southwest of the Greenvale township and approximately 6km southeast of the Greenvale Nickel Mine site in north Queensland (190km west of Townsville). Metallica Minerals Ltd (ASX:MLM) subsidiary, Greenvale Operations Pty Ltd, owns the two tenements (EPM's 10680 and 10860) that cover the Lucknow Ni-Co-Sc deposit.

Ownership of the Lucknow Ni-Co-Sc project was recently transferred to Metallica late last year when the Company significantly expanded its flagship nickel-cobalt portfolio and planned mining precinct through the purchase of 100% of the Greenvale Mine site tenements.

As well as 100% ownership of the Lucknow scandium rights, Metallica also has 80% of the Kokomo scandium rights. Joint venture partner, Straits Resources Ltd (ASX:SRL), holds 20% of the Kokomo scandium rights.

**For further information:**

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Metallica Minerals Limited  
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**Kevin Skinner**

Partner  
Field Public Relations  
(08) 8234 9555 or 0414 822 631

- **Editors please note:** The accompanying Metallica ASX announcement dated 10 May 2010 contains an expanded description of the history of scandium, its current use and potential. Also included in the attached ASX announcement is a comprehensive question-and-answer (Q & A) section on scandium, details of drill results, figures/plans and the high grade nickel-cobalt intersections also achieved during this latest drilling program.

**Competent Persons**

Technical information contained in this report has been compiled by Andrew Gillies B.Sc (Geology) (Managing Director of Metallica Minerals Ltd) and Metallica Minerals Ltd, Exploration Manager, Mr Pat Smith MSc. B.Sc (Hons), M.AusIMM, who are competent persons and Members of the Australasian Institute of Mining and Metallurgy (AusIMM).

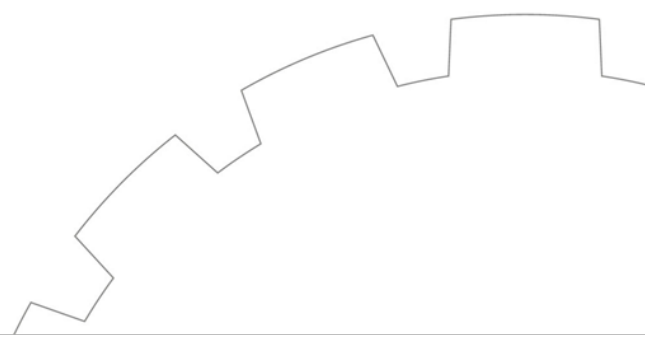




Figure 1: NORNICO Project Location

