MT THIRSTY COBALT PROJECT
NORSEMAN
WESTERN AUSTRALIA

INFORMATION MEMORANDUM

June 2016

Introduction

Welcome to the Mt Thirsty Cobalt Project, located 20km northwest of Norseman in the southern goldfields of Western Australia.

The project hosts the completely oxidised Mt Thirsty Cobalt Deposit with a JORC (2004) reported Total Resource of 32 million tonnes grading 0.13% cobalt (Co) and 0.56% nickel (Ni).

The project is held by the Mt Thirsty Joint Venture (MTJV) comprising Conico Ltd 50% (ASX: CNJ) (through its wholly owned subsidiary Meteore Metals Pty Ltd) and Barra Resources Ltd 50% (ASX: BAR). In addition to the cobalt deposit, the project also hosts nickel sulphide (Ni-S) mineralisation.

Demand for cobalt looks encouraging as the world becomes more dependent on rechargeable power sources. Cobalt is an important ingredient in most types of lithium-ion batteries. Innovations with portable electronics and electric vehicle design are adding to this surging demand. However, the battery industry is also competing with demand for cobalt from producers of super alloys, aircraft turbines and chemical industries.

Demand is likely to escalate exponentially with battery production; however, supply is uncertain due to:

- Over 60% of global supply coming from the politically unstable African countries such the Democratic Republic of Congo, Central African Republic and Zambia.
- Cobalt is largely a by-product of copper and nickel mining and there are an increasing number of mine closures and project deferments due to low commodity prices.

With potential supply constraints and surging demand many commentators see pricing pressure as a likely eventuality.

The undeveloped Mt Thirsty Cobalt Project has a significant JORC (2004) cobalt resource with the potential to have a long mine life. It is close to all necessary infrastructure (rail, road, power, water, and sea port) and, being in a mining orientated state, has the potential to attract a variety of interest.

Over many years the MTJV has assessed a variety of processes that would best fit the economic extraction of a cobalt product from the resource. These have ranged from high capital cost methods targeting nickel, cobalt and manganese to lower capex options focusing on extracting the high grade cobalt with nickel as a by-product. This IM provides a summary of some of the work undertaken.

Summary

Metallurgical testwork indicates that high recoveries of cobalt can be achieved through low temperature atmospheric leaching. A conceptual flowsheet based on a simple agitated leach has been developed that has the potential to recover approximately 80% of the cobalt and over 20% of the nickel with very low acid consumption of 25-50kg/tonne of ore over a leach time of 4 to 5 hours. An alternative high capital cost flowsheet is capable of recovering over 90% of the cobalt and almost 80% of the nickel.

The Mt Thirsty Cobalt Project is envisaged to be an open pit mine with on-site treatment via a hydrometallurgical processing plant. Ore will be mined by simple scrape and dig mining methods. Mined ore will be trucked to a processing plant located adjacent to the open pit. An extremely modest stripping ratio of 1:1 is expected as the resource starts from near surface.

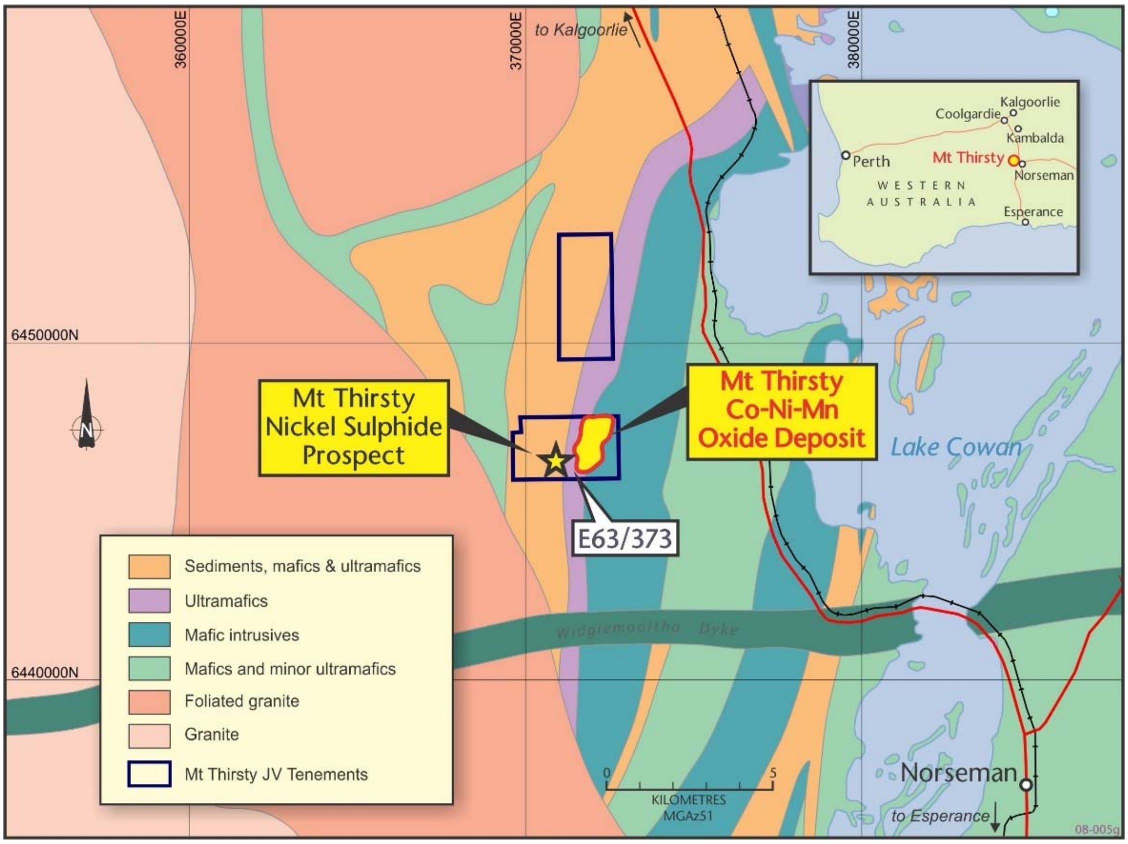

Figure 1: Location of Mt Thirsty Cobalt Project and regional geology

1. Tenement

The Mt Thirsty Cobalt Deposit is currently contained within exploration licence E63/373. A mining lease application (M63/527) is currently in place over E63/373. The MTJV has also applied for a retention licence (R63/4) over E63/373.

2. Geology & Resource

The Mt Thirsty Cobalt Deposit is hosted in a strongly weathered ultramafic peridotite rock located between a sediment-ultramafic-basalt sequence to the west and a thick gabbro-pyroxenite unit to the east. Weathering and supergene enrichment processes have produced the oxide deposit which is enriched in cobalt, nickel and manganese. The manganese and cobalt contents are particularly high compared to most nickel oxide deposits located in Western Australia.

The oxide mineralisation typically starts from near surface to around 12 meters below the surface where limonitic clays are present with an iron composition of around 30%. Deeper down the colour of the limonitic clays darken as the asbolane (manganese oxide mineral) content increases. This darkening marks the start of the cobalt enriched, high-grade portion of the deposit. Further down, the dark colouring due to the asbolane diminishes with greenish nontronite and serpentine minerals becoming dominant (lower saprolite). Near the bottom of the lower saprolite zone chalcedonic banding is common. High-grade cobalt is almost always associated with dark asbolane (Figure 2). A typical cross section through the mineralisation is shown in Figure 3.

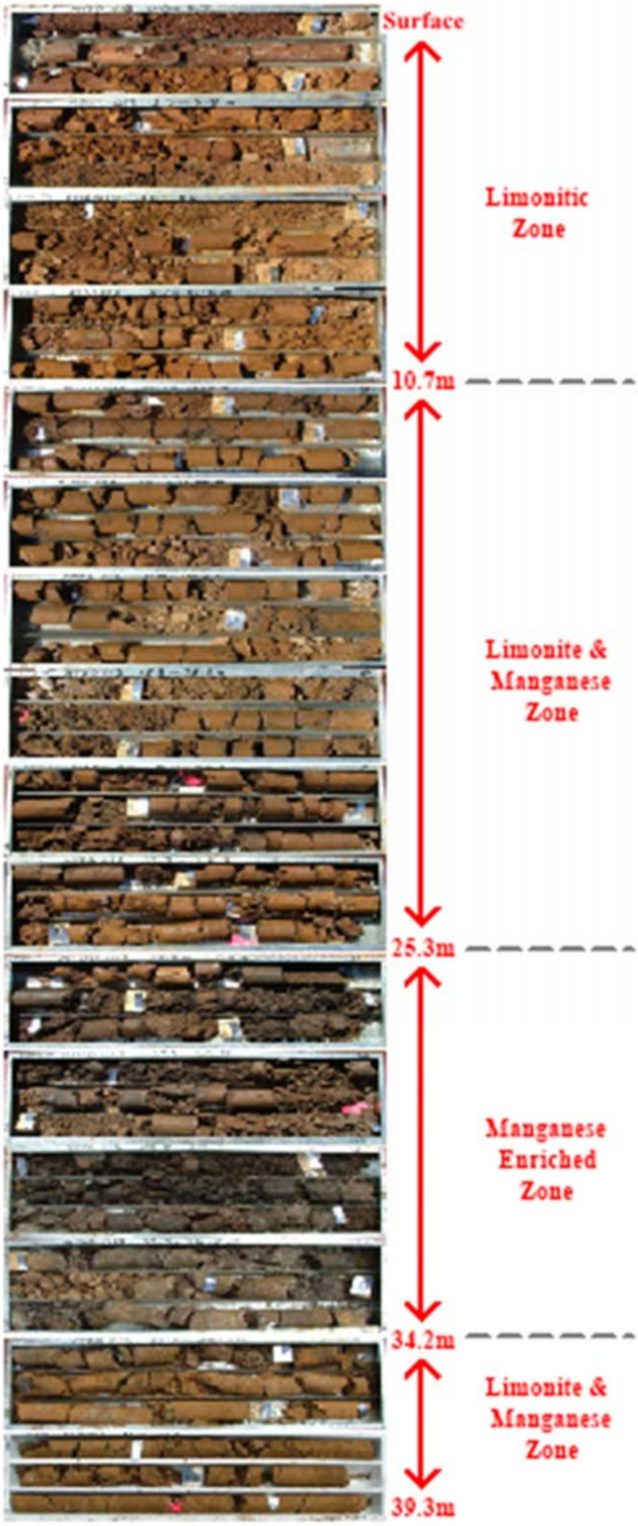

Figure 2: Hole MTDD013 - Surface to 39.3m, showing typical transition from limonitic zone through to manganese enriched zone (high-grade cobalt mineralisation).

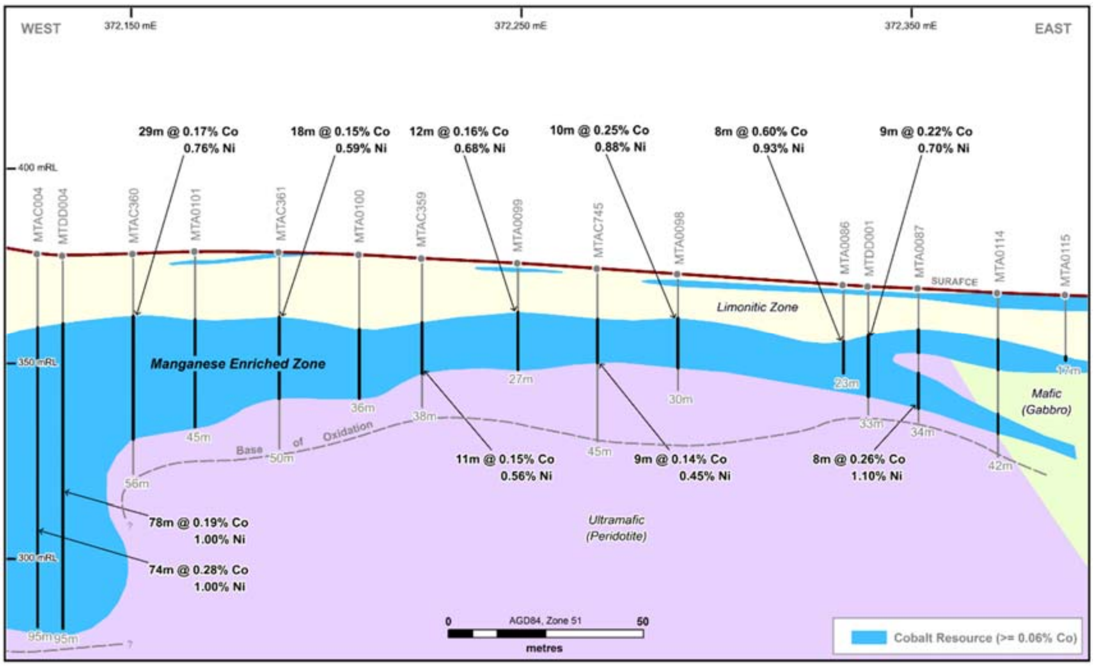

Figure 3: Representative cross-section through portion of Mt Thirsty Cobalt Deposit.

The moisture content of the deposit is low, with an average free moisture content of 4%. The water table is located below the mineralised zone, so no de-watering is expected during mining. Preliminary mining assessment also shows the deposit should be free digging. The low moisture content also results in a high in-situ bulk density of the ore with an average specific gravity of 1.8 observed for the deposit. The high bulk density in combination with the relatively large ore thickness results in a relatively large tonnage density per unit area for the project.

Geological development work was carried out by Barra Resources in 2007 and 2008, which resulted in a substantial increase in the resource base. In mid-2008 Conico Ltd purchased a 100% interest in Meteore Metals Ltd, the holder of the other 50% of the Mt Thirsty Cobalt Project. The MTJV carried out further infill drilling in 2009 & 2010 and in February 2011 the following updated JORC (2004) reported resource was announced for the Mt Thirsty Cobalt Deposit (Table 1):

The following resource was estimated by independent mining and geological consulting firm Golder Associates Pty Ltd using a cut-off grade of 0.06% Co.

Table 1: Mt Thirsty Cobalt Deposit Resource

Category	Million Tonnes	Co %	Ni %	Mn %	Fe %	Mg%	Al %
Indicated Resource	16.60	0.14	0.60	0.98	25.18	2.63	4.26
Inferred Resource	15.34	0.11	0.51	0.73	18.1	3.65	3.37
Total Resource	**31.94**	**0.123**	**0.55**	**0.86**	**21.64**	**3.14**	**3.81**

(This resource information was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported, refer ASX Announcement 8th March 2011: "Resource Upgrade", available to view on www.mtthirstycobalt.com.au).

The Total Resource contains approximately 40,000 tonnes of cobalt 177,000 tonnes of nickel, and 274,000 tonnes of manganese over a strike length of approximately 1.8km and a width up to 1km.

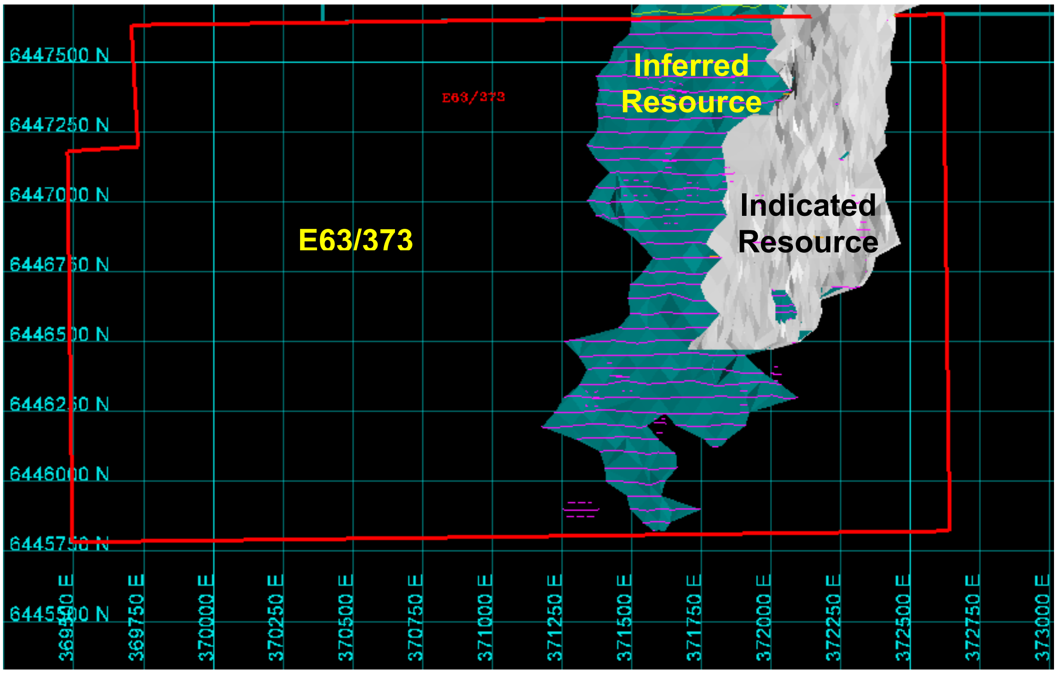

Figure 4: Distribution of Mt Thirsty Cobalt Resource (AGD84 Zone 51)

3. Mining

The deposit is shallow and relatively flat lying, gradually dipping from the east to the west. The ore is likely to be free digging with good geotechnical stability. The water table is located beneath the bottom of the deposit mitigating the need for mine dewatering. Storm water run-off control will be required to minimise water ingress into mining areas. This water may be captured for use in the processing plant.

Desktop studies indicate mining equipment required will include medium sized excavators, fixed body dump trucks, scrapers, mine watering trucks, graders and bulldozers. Western Australia has a well-established contract mining industry and the size of mining equipment required are standard and commonly available. This allows full contract mining to be selected to reduce the capital costs of the project.

3.1 Mineable Reserve

The geological resource to mineable reserve conversion rate for similar cobalt/nickel oxide deposits is typically 85%. This high conversion rate is due to the narrow grade range, considerable thickness and relatively flat lying disposition of this style of deposit. We anticipate a similar conversion rate at Mt Thirsty.

4. Process Development

Initial test work and flowsheet development was focused on low temperature atmospheric leaching of both cobalt and nickel at high acid concentrations which gave high metal extractions (+90% Co and +80% Ni) but at uneconomic capital and operating costs at prevailing metal prices. This work was carried out by Independent Metallurgical Operations (IMO) and is summarized below.

During the test work it was noted in diagnostic analysis of feed and tails samples that 85-90% of the cobalt was contained in the manganese mineral asbolane, which was less than 1% of the feed. Subsequent test work by RMDSTEM was then focused on selective leaching of this fraction of the ore using sulphur dioxide gas in an atmospheric, low temperature (<50ºC), low time (<8hrs) agitated leach. Larger scale laboratory tests confirmed the validity of this approach. The results of this work are summarised below.

4.1 IMO Testwork

In July 2009 the MTJV engaged Independent Metallurgical Operations (IMO) to perform a process development study which mainly involved metallurgical testwork, interpretation and flowsheet development. At the completion of the process development study in February 2010 a single flowsheet (Figure 7) had been identified and accepted for advanced process development. Testwork indicated this flowsheet was capable of extracting over 90% of the contained cobalt and around 80% of the contained nickel from the resource (Figure 5). IMO's testwork was carried out on various bulk samples comprising drill chips, diamond core and material dug from shallow pits.

4.2 IMO Process Description and Flowsheet

A novel method for leaching the ore at atmospheric conditions was developed by IMO specifically for the Mt Thirsty Cobalt Deposit which has some unusual mineralogy compared to typical oxide deposits. Conditions are controlled within the leaching process to reduce manganese minerals contained within the ore while allowing leached impurities such as iron to precipitate as jarosite during the leaching stage. Jarosite precipitation allows removal of a major impurity from solution in a form which is easy to settle and regenerates acid.

Downstream processing consists of separating the leach residue solids from the pregnant leach solution in a conventional counter current decantation circuit. The very good solid-liquid separation properties of the leach residues produced allow for low flocculent consumption and high underflow densities.

Cobalt and nickel are recovered from the pregnant leach solution via precipitation with sodium sulphide. This results in the formation of a high grade and high purity mixed sulphide product containing approximately 10% cobalt and 44% nickel. Manganese can be recovered from solution after a secondary neutralization process by precipitation with soda ash to yield a high purity carbonate product.

A cobalt-nickel mixed sulphide product and a manganese carbonate product is produced for sale to third parties for refining (Figure 6). This moves the more complex refining operations to a low cost environment with greater proximity to end markets.

Sulphuric acid requirements would be provided by a sulphur feed acid plant. In addition to producing acid the plant would also produce steam for power generation and sulphur dioxide gas which is used in the leaching process. The steam would be directed to onsite turbines which would generate enough electrical energy to meet the capacity of the processing plant and utilities.

Limestone is used as a low cost neutralising agent in this process. This can be supplied from an existing lime sand quarry located near Esperance and delivered to the plant site by road train.

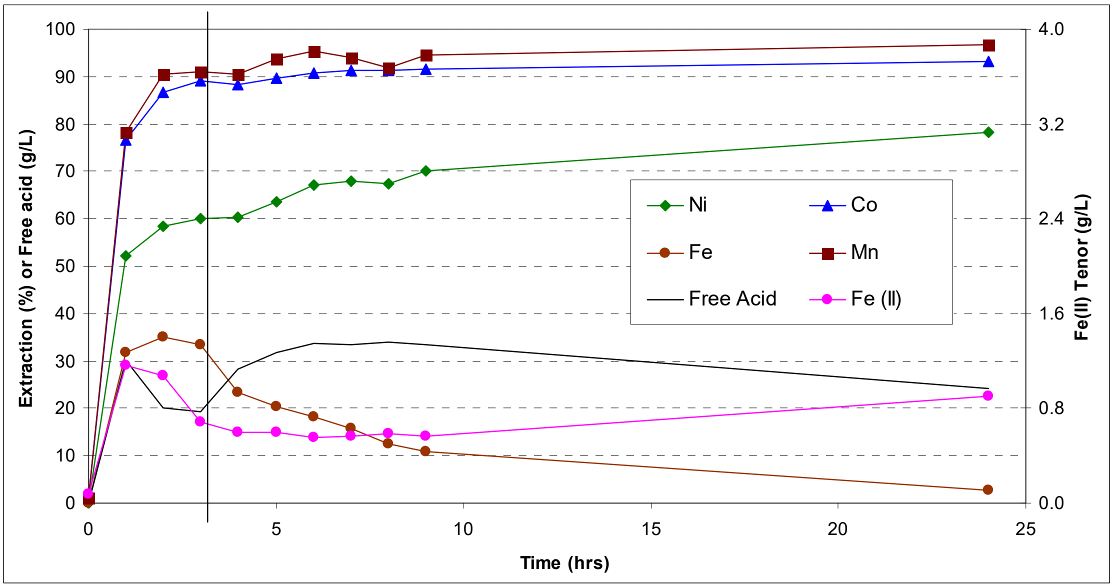

Figure 5: Single Stage Leach – Extraction/Time curves for Ni, Co, Mn & Fe

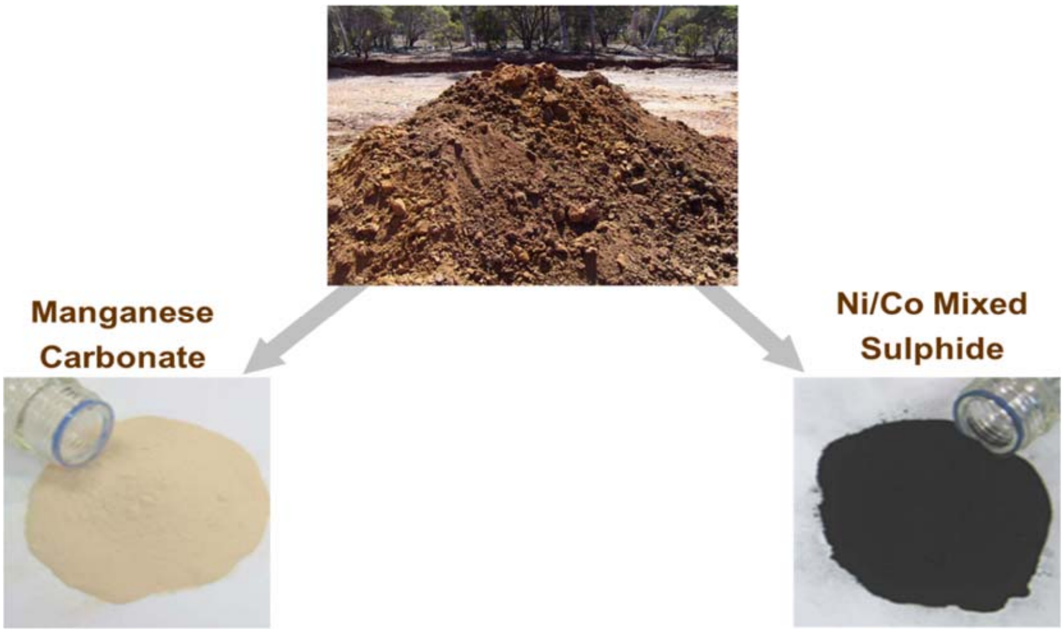

Figure 6: Mt Thirsty end products produced by IMO in laboratory scale testwork

A simple metallurgical diagram of the IMO process flowsheet is shown below (Figure 7):

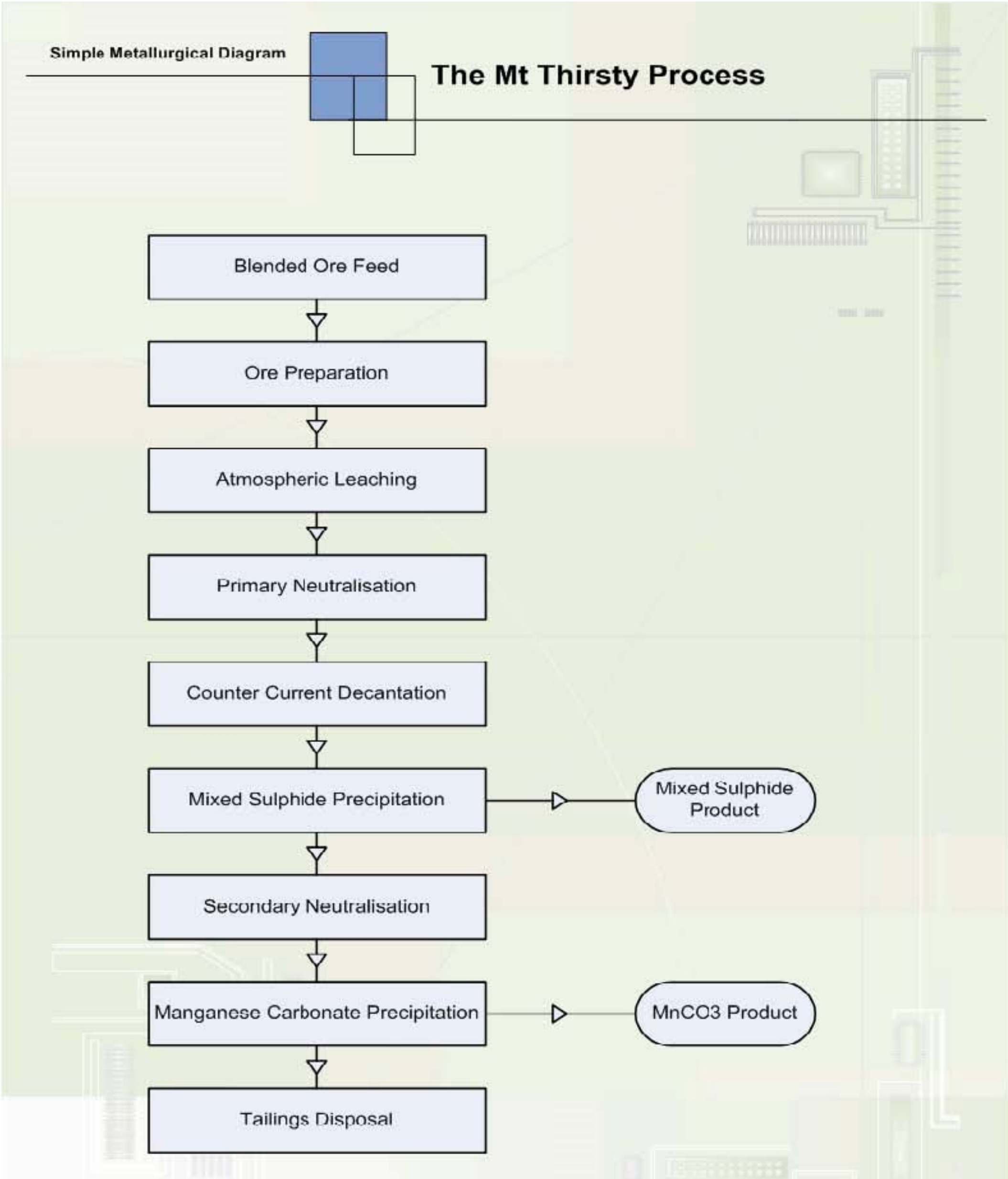

Figure 7: IMO Mt Thirsty Process Simplified Flowsheet

4.3 RMDSTEM Testwork and Conceptual Flowsheets

Several phases of metallurgical test work were conducted by RMDSTEM on split samples taken from a 200kg bulk sample composited from air core samples drilled in June 2012.

This test work demonstrated that approximately 80% of the cobalt and over 20% of the nickel (associated with manganese enriched ore) can be extracted in 4 to 5 hours from Mt Thirsty oxide ore using low temperature (40ºC) agitated leaching in closed tanks with very low acid consumption and low iron release. The low acid consumptions achieved of 25-50kg/tonne of ore compares favourably against previous studies targeting high nickel recoveries (as opposed to targeting cobalt), and this represented a major breakthrough for the Mt Thirsty Cobalt Project as acid consumption is a major operating cost item.

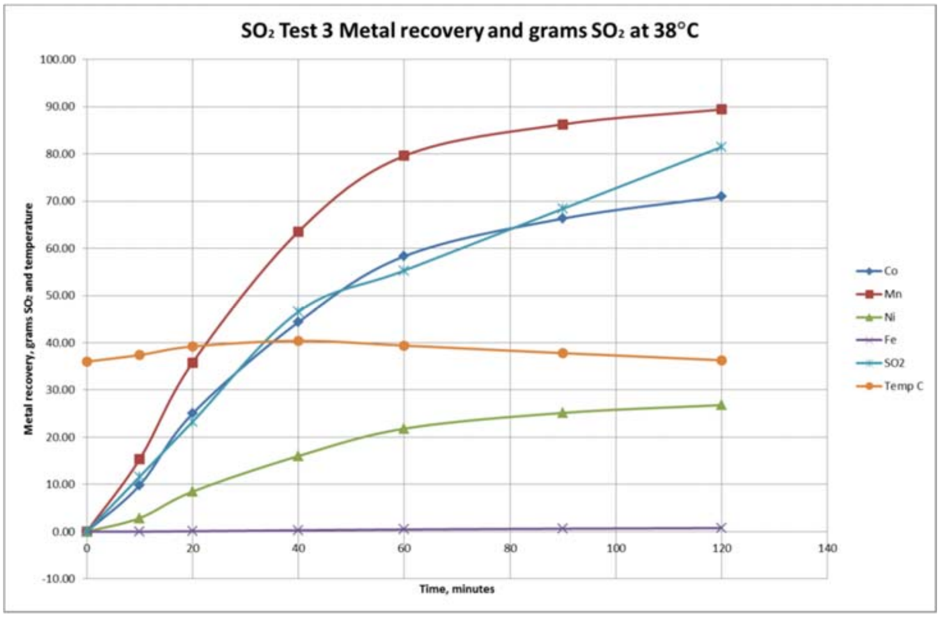

Figure 8: Agitated Leach Test 3; SO2 Metal Recovery and SO2 grams at 38ºC over 2 hours

Conceptual Flowsheets

Based on their test work results RMDSTEM proposed two simple conceptual flowsheets (refer Figures 9 and 10) representing a completely different, low cost chemical system for processing the oxide ore compared to previous flowsheets that were capital intensive and aimed at maximising both nickel and cobalt recoveries. The new flowsheets deliver a 500-micron pulp to the leach tanks which is then sparged with SO_2. The SO_2 is delivered by burning liquid sulphur and there is an SO_2 re-absorption system that recycles excess SO_2. Recovery of cobalt and nickel is by precipitation with MgO to form a hydroxide concentrate.

(a) Thickener Flowsheet

Since there are no nickel bonds to break, a leach time of 2 hours was indicated by leaching tests to extract the cobalt. The whole leach pulp and solution is transferred to either a single large or several smaller paste thickeners, mixed with a flocculent and a paste formed.

The overflow pregnant leach solution (PLS) will contain 86% of the leached metals. A wash with clean process water and thickening in a second paste thickener will recover a further 11% of the soluble metals with a total recovery of 97% of cobalt and nickel in solution. Cobalt and nickel can be precipitated as a hydroxide.

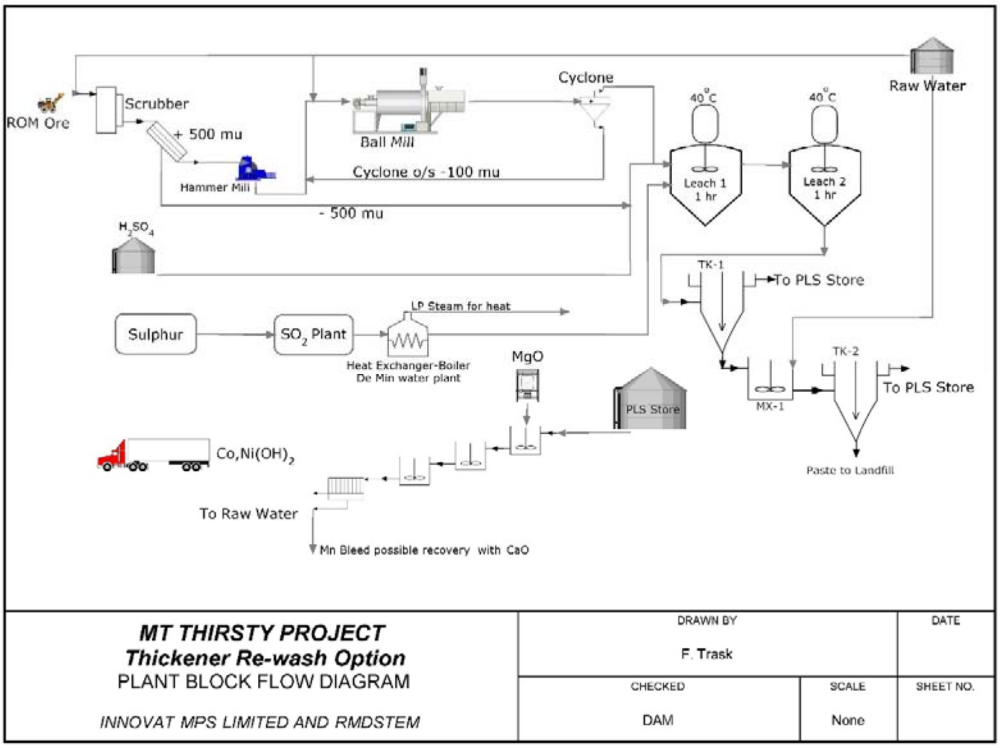

Figure 9: RMDSTEM Paste Thickener Flowsheet

(b) Resin in Pulp Flowsheet

In this scheme, the leached slurry is contacted with a broad spectrum Ion Exchange resin comprised of large beads. These can be recovered by the use of screens, and are handled similarly to carbon in a carbon in pulp gold plant. The initial resins studied appear to be able to recover + 99% of the combined cobalt and nickel in solution. This loaded resin is forwarded to an Ion Exchange Strip plant which produces a strong solution of cobalt and nickel sulphate. This is then precipitated as a combined Co-Ni hydroxide and shipped to the appropriate refineries. The capital cost of the equipment is marginally lower, but the large capital cost of a resin charge makes the two flowsheets almost equal cost wise.

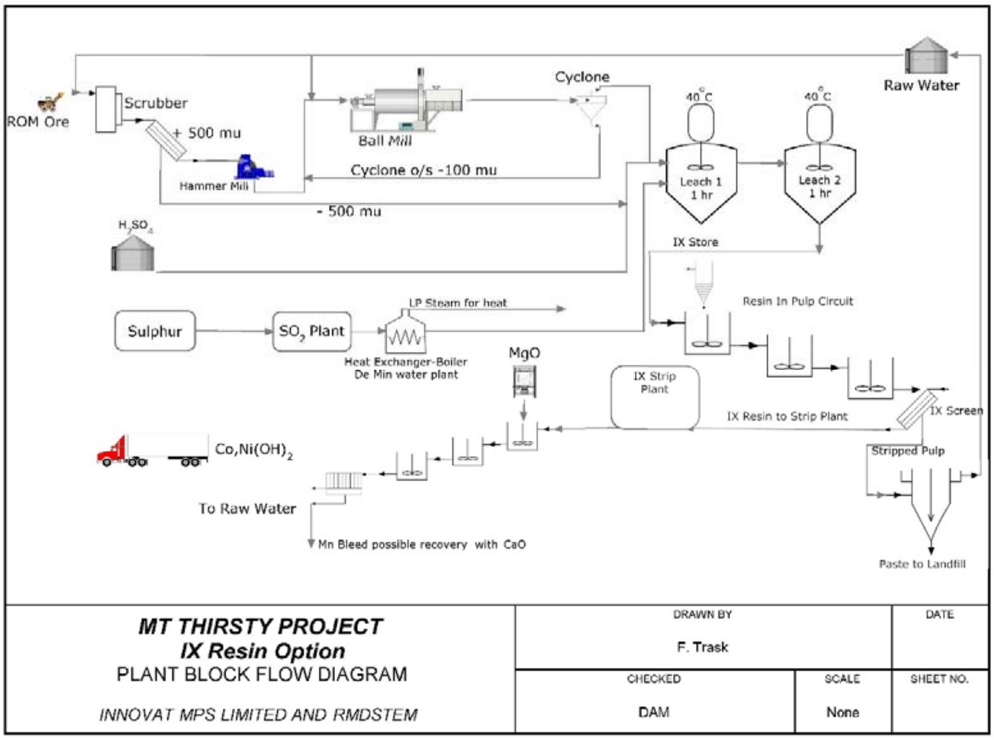

Figure 10: RMDSTEM Resin-In-Pulp Flowsheet

5. Infrastructure

A key advantage this project is its close proximity to existing infrastructure. Figure 11, a regional map of the Norseman area, highlights some of the prominent infrastructure available to the project.

Already in existence:

- ***Port Facilities*** which allow importation of large volumes of elemental sulphur and other key reagents. The Port of Esperance is located approximately 180km from the Mt Thirsty Cobalt Project and is almost completely connected via rail. The port has already established sulphur storage and handling facilities which could be utilised for the Mt Thirsty Cobalt Project. The Port already exports high value mineral concentrates so logistics and permitting are already in place.
- ***Rail*** is available connecting Norseman with both Kalgoorlie and Esperance. This will allow freight deliveries at a considerably lower cost than road transport.
- ***Fresh Water*** is available from the Kalgoorlie to Norseman pipeline which passes within 4 kilometers of the proposed plant site. Initial enquiries indicate that there is adequate capacity to provide fresh water requirements to the project.
- ***Gas*** is available from the nearby Goldfields-Esperance gas pipeline which passes within 4 km east of the proposed plant site.

- ***Highway*** The Goldfields –Esperance Highway runs approximately 4km east of the site.
- ***Town of Norseman*** is a mining town with a current population of approximately 900 residents. The town has previously maintained a population of over 3000 residents for a significant period of time. There is adequate capacity within the town of Norseman to establish new housing and a residential camp. Due to the previous mining legacy the local community and shire is supportive of mining developments.
- An ***Air Strip*** is available at Norseman.

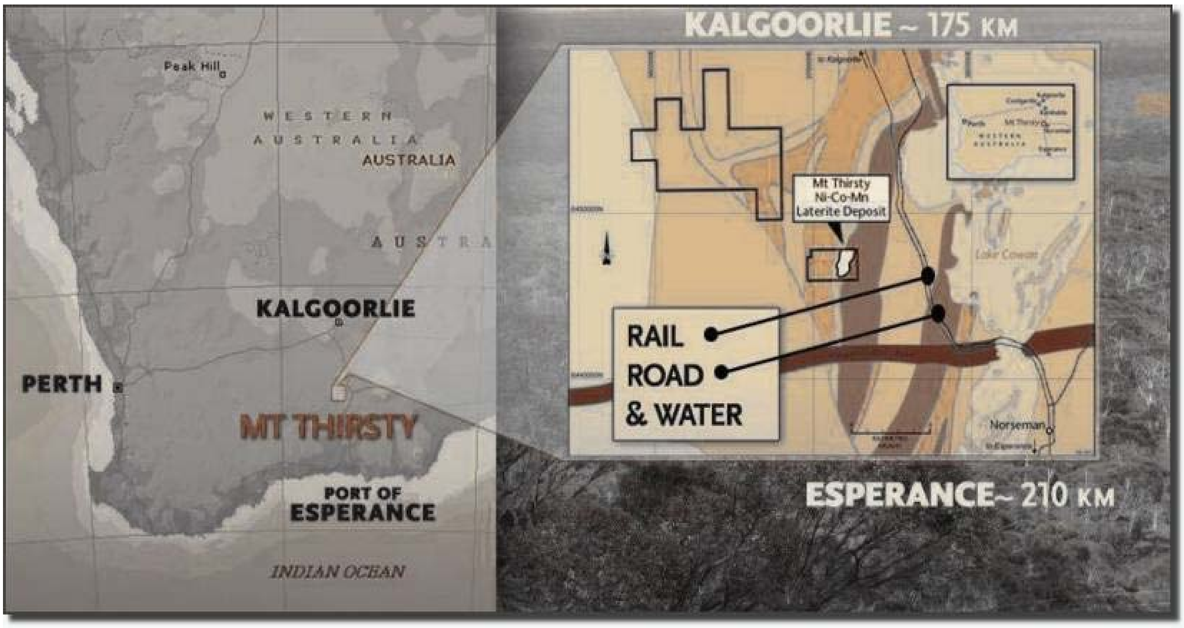

Figure 11: Mt Thirsty Cobalt Project proximal to existing infrastructure

6. Environment

6.1 Tailings Disposal

Regardless of the final flowsheet design a tailings impoundment facility will be required to contain plant tailings produced throughout the operation. The geologically stable environment will facilitate a simple lined tailings dam and will be located close to the mine site. The Western Australian Department of Mines (DMP) have clear guidelines on tailings dam construction and this should present no problem to the project.

6.2 Emissions

Dust control and storm water containment are the main environmental issues for operations. Water trucks will be required to water down all haul roads and other mine roads. This is common practice for many Goldfields mining operations. Tailings decant water could be potentially utilised for this application to reduce water consumption and remove evaporation load on the tailings dam.

Storm water run-off will be diverted around mining operations and diverted to storm water ponds. This will form a potential supply of potable water for the project to reduce scheme water consumption.

6.3 Surveys

Flora and fauna surveys have been completed over the Mt Thirsty area. No endangered or endemic species have been identified.

7. Royalties

The examples of potential final products that could be produced by the Mt Thirsty Cobalt Project are not currently produced within Western Australia. There is uncertainty as to what royalty the State Government may apply to an intermediate cobalt product but a pessimistic rate would be 4% and an optimistic rate would be 2%.

A NSR royalty of 1.75% is payable to the previous owners of the tenement (E63/373) for any ore mined from the tenement.

8. Conclusion

The Mt Thirsty Cobalt Project presents a unique opportunity to invest in an undeveloped but highly prospective stand-alone cobalt project. Global demand by end users of cobalt has strong growth potential.

The deposit is geologically well understood.

Under a variety of scenarios and flowsheets, mine life estimates are from 10 to 20 years, giving a high degree of tolerance for principal capital investments to be recouped.

With the deposit located near to surface and completely oxidised, this allows for simple low cost mining techniques.

Equally as fortuitous, the location of the majority of the necessary infrastructure support is within 4km of the deposit, allowing for a low predevelopment infrastructure budget.

The State of Western Australia is well known on the global stage and offers a strong legal and commercial backdrop to the projects development.