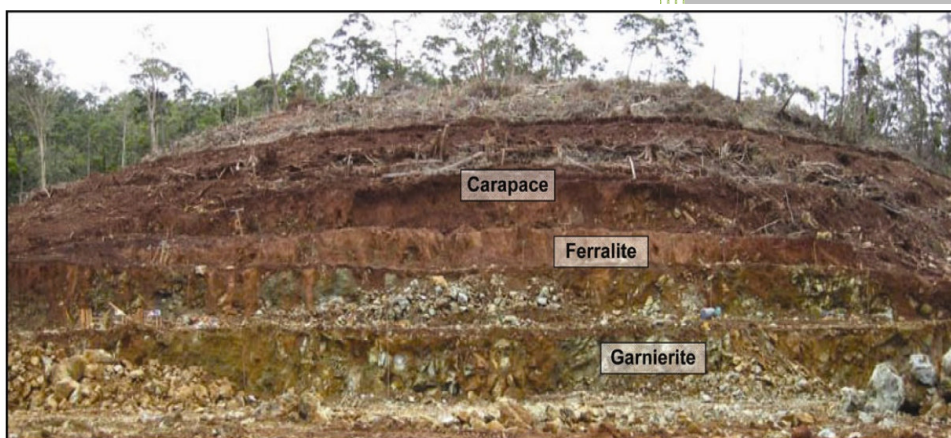




LOWER QUARTILE SOLUTIONS



To MBMI Resources Inc.  
**NI43-101 Technical Report, May 2009**  
**Alpha Nickel Project**  
**Palawan Island, Philippines**



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For the purposes of this Technical Report I am a Qualified Person as defined in National Instrument 43-101. I have read NI43-101F1 and Form 43-101F1, and this technical report has been prepared in compliance with that instrument and form.

As of the date hereof, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

I consent to the public filing of the technical report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes of the Technical Report.

Dated at Vancouver this 14<sup>th</sup> day of May 2009.

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As of the date hereof, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

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I conducted a site visit during December 2008.

As of the date hereof, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

I consent to the public filing of the technical report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes of the Technical Report.

Dated at Kalgoorlie this 14<sup>th</sup> day of May 2009.

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### 3 Executive Summary

LQS conducted a site visit to the Alpha Project in the Philippines during December 2008 after being commissioned by MBMI Resources Inc. to conduct an audit of the Mineral Resource Estimate completed by Mr. W. Rosario in November 2007. MBMI Resources Inc. is a Canadian-based mining company focused on the exploration and development of nickel mineral properties in the Philippines.

The Alpha nickel project is located in the Municipality of Narra, Province of Palawan in the Philippines (approximately 500km south-southeast of Manila). It lies approximately 110km southwest of Puerto Princessa. Directly and indirectly MBMI through its shareholdings in Patricia Louise Mining & Development Corp (PLMDC) and Narra Nickel Mining & Development Corporation (NNMDC) owns 60.4% of the 3277 hectares Tenement (APSA-IVB-12). PLMDC is 66% owned by Palawan Alpha South Resource Development Corporation (PASRDC) and 34% by MBMI. NNMDC is 60% owned by PLMDC and 40% by MBMI.

The nearest town is Narra (20km to the northeast), which has three piers, one of which was recently constructed by MBMI Resources for the Alpha project. A local (Philippines) independent consulting laboratory, Ostrea Mineral Laboratories, have constructed a 100+ sample/day capacity assaying facility in the Narra township.

Under Philippine law a Small Scale Mining Permit (SSMP) allows for the mining and shipping of 50000 dry tonnes of processed ore per year. An SSMP is granted for a two year term renewable once for an additional two years. There are three contiguous SSMP's current in respect of the Alpha project; collectively covering the eastern and southern extremities of the C and C<sup>1</sup> Blocks in the southwest of the Property:

- Narra Nickel (held by NNMDC)
- Palawan Alpha (held by, PASRDC)
- Patricia Louise (held by PLMDC)

Small scale mining law restricts the number of SSMP titles owned by a single entity within any given municipality to one.

The central to southern portion of Palawan consists of ophiolitic mafic and ultramafic units thrust over metamorphosed sedimentary sequences. The Alpha Project comprises a sequence of variably serpentinised peridotites and dunites. Gabbroic units are present in the southern and eastern margins of the project area. Approximately 60% of the project area has well developed lateritic regolith present over the ultramafic cumulates. The Ni-Co mineralisation at the Alpha Project is typical of a tropical (wet) laterite with strong vertical zonation, with grade generally increasing with depth. The upper unit, locally termed "laterite", is typically 1.5 metres thick and grades 1.0 to 1.4% Ni. The horizon immediately below this is the "lat-sap" unit (or ferralite), and may vary between 2.0 to 2.5 metres thick with grades commonly above 2.0% Ni. The basal unit at the Alpha Project is the "sapolite" horizon, which is the garnierite zone up to 20 metres thick with grades 1.5% Ni and over.

The resource was estimated using wireframe models constructed in a General Mining Package (GMP). The block model was created with dimensions of 5m x 5m x 3m (easting, northing and

elevation). Drillhole samples composited to 1m lengths were used to interpolate grades into the block model using the inverse distance squared methodology with an omni-directional search strategy. The dimensions of the search ellipsoids used for classifying the resource were:

Measured (35 x 35 x 6m)

Indicated (60m x 60m x 10m)

Inferred (75m x 75m x 16m)

The dry tonnes for the resource estimate at 0.5% Ni cut-off as at 31 December 2008 are presented in the following table:

	Dry Tonnes	Ni (%)	Co (%)	Fe (%)
Measured	1 782 000	1.34	0.031	13.7
Indicated	646 000	1.22	0.039	17.6
Total	2 428 000	1.31	0.033	14.7
Inferred	293 000	1.23	0.044	19.1

It should be noted that the above figures have taken depletion into account.

The LQS audit revealed that although the local estimates could be improved, the global means delivered by the resource model appear to be sufficiently robust for resource reporting, but not for mine planning. Some recommended improvements and further work include:

- Trimming the dataset at appropriate thresholds. Outliers with grades greater than 2.5% Ni adversely affect the estimation. Use ordinary kriging in place of the inverse distance algorithm.
- Specific gravity measurements should be performed more routinely with a view to interpolation in the blockmodel.

## **4 Introduction**

Lower Quartile Solutions Pty Ltd (LQS) was commissioned by MBMI Resources Inc. to conduct an audit of the Mineral Resource Estimate developed by Mr. W. Rosario in November 2007 for the Alpha Project in the Philippines. LQS conducted a site visit in December 2008 and audited the resource model.

## **5 Reliance on Other Experts**

LQS relied on the Mineral Resource Estimate of Mr Willy F. Del Rosario as reported on November 17, 2007 in the report titled, "RESOURCE ESTIMATE FOR THE 3 SMALL SCALE MINING AREAS."

Density information was sourced from an internal MBMI report by Mr Willy F. Del Rosario dated April 17, 2008 and titled, "DETERMINATION OF DENSITY".

## **6 Property Description and Location**

Alpha is located within Barangays of San Isidro and Calategas, Municipality of Narra, Province of Palawan, and centred approximately 19 km southwest of the township of Narra at 118° 17' E; 09° 14' N (Figure 1).



Figure 1: Location Plan and Alpha Project location.

Access is via community feeder road off the National Highway at a point 16 km south of Narra. It comprises a single tenement, APSA-IVB-12, covering 3,277 hectares, and applied for by *Patricia Louise Mining & Development Corp.* on 4th July 2005. PLMDC subsequently transferred its interest in the Property to NNMDC on February 7, 2006.

On May 19, 2005, MBMI entered into an agreement with *Palawan Alpha South Resource Development Corporation* (“PASRDC”) (the “Property Agreement”) with respect to the property. Under the terms of the Property Agreement PASRDC would transfer the property to a newly formed holding company. This company, *Patricia Louise Mining & Development Corp.* (“PLMDC”) was incorporated on June 20, 2005 to accept the property which was transferred by Deed of Assignment dated May 25, 2005 which was accepted for registration by the MGB for APSA-IVB-12, over an area of 3,277Ha (the “Tenement”) on July 5, 2005. Pursuant to Property Agreement, PLMDC was to transfer the Tenement to a development company *Narra Nickel Mining & Development Corporation* (“NNMDC”) which was incorporated on September 6, 2005. PLMDC transferred the Tenement to NNMDC on February 7, 2006.

PLMDC is 66% owned by PASRDC and 34% by MBMI. NNMDC is 60% owned by PLMDC and 40% by MBMI. Directly and indirectly MBMI through its shareholdings in PLMDC and NNMDC owns 60.4% of the Tenement. Pursuant to the Property Agreement MBMI has the right to convert PASRDC’s remaining 39.6% interest in the Tenement to a royalty provided that such conversion would not breach any Republic of the Philippines law.

NNMDC and its associated companies, PLMDC and PASRDC have each obtained Small Scale Mining Permits (“SSMP”) each covering 20 Ha within the Tenement. Under Philippine law a SSMP allows for the mining and shipping of 50,000 dry tonnes of processed ore per year. An SSMP is granted for a two (2) - year term renewable once for an additional two years. There are three contiguous SSMP’s current in respect of the Alpha project; collectively covering the eastern and southern extremities of the ‘C’ & ‘C1’ Blocks in the southwest of the Property (Figure 2):

- Narra Nickel (held by NNMDC)
- Palawan Alpha (held by PASRDC)
- Patricia Louise (held by PLMDC)

Small scale mining law restricts the number of SSMP titles owned by a single entity within any given municipality to one.

The history of the Tenement title and current permit status is somewhat complex and accordingly a summary follows:

- January 6<sup>th</sup>, 1972 – Alpha Resources Development Corporation lodges an application for PMPSA-IV-(1)-12 (‘Alpha’) covering an area of 3,288ha.
- April 14<sup>th</sup>, 1999 – PMPSA-IV-(1)-12 is assigned to Ami Alagag Mining, Inc.
- April 2<sup>nd</sup>, 2005 – Ami Alagag transfers title in the tenement to PASRDC.
- May 25<sup>th</sup>, 2005 – PASRDC transfers title to PLMDC.
- July 4<sup>th</sup>, 2005 – DENR / MGB registers said transfer and PLMDC applies for APSA-IVB-12, over an area of 3,277Ha, in its own right.
- February 7<sup>th</sup>, 2006 – PLMDC transfers title for APSA-IVB-12 to NNMDC
- April 21<sup>st</sup>, 2006 – Strategic Environmental Plan (“SEP”) Clearance for Small Scale Mining Permit received from the Palawan Council for Sustainable Development (PCSD) for 20 hectare portions of the 3,277 Ha tenement for each of NNMDC, PASRDC, and PLMDC

- August 18<sup>th</sup>, 2006 - Environmental Compliance Certificate (“ECC”) approval for the Small Scale Nickel Ore Mining Project of PLMDC granted by the DENR-Environmental Management Bureau after complying with the Environmental Impact Assessment (“EIA”).
- August 28<sup>th</sup>, 2006 – ECC approval for the Small Scale Nickel Ore Mining Project of NNMDC and PASRDC granted by the DENR-Environmental Management Bureau after complying with the EIA.
- September 6<sup>th</sup>, 2006 –SSMP to mine and ship under small scale mining law and regulations up to 50,000 dry tonnes per year for a period of two years renewable for a further two years granted by the Office of the Governor of Provincial Government of Palawan for NNMDC and PASRDC.
- September 21<sup>st</sup>, 2006 – SSMP to mine and ship under small scale mining law and regulations up to 50,000 dry tonnes per year for a period of two years renewable for a further two years granted by the Office of the Governor of Provincial Government of Palawan for PLMDC.
- September 29<sup>th</sup>, 2006 - PCSD approval for the Construction of Access/Hauling Road, Rock Causeway, and Ore Stockyard granted to PLMDC for the three SSMP’s granted by the DENR.
- December 5<sup>th</sup>, 2006 – ECC approval for the construction, development, operation and maintenance of an Access and/Hauling Road for use by the three SSMP’s granted to PLMDC by the DENR-Environmental Management Bureau after complying with the Environmental Impact Assessment (EIA).
- December 15<sup>th</sup>, 2006 - SEP Clearance for Timber-Cutting Permit – to cut trees for SSMP of NNMDC, PASRDC, and PLMDC granted by PCSD.
- December 21<sup>st</sup>, 2006 – ECC approval for the construction, development, operation and maintenance of the Ore Stockyard Project and Causeway Jettison Project for use by the three SSMP’s granted to PLMDC by the DENR-Environmental Management Bureau after complying with the Environmental Impact Assessment (EIA).
- December 22<sup>nd</sup>, 2006 - Special Land Use Permit (Road-Right-of-Way) granted to NNMDC, PASRDC, and PLMDC for Road-Right-of-Way by DENR.
- April 13<sup>th</sup>, 2007 - Timber-Cutting Permit for the cutting of trees within the SSMP’s of NNMDC, PASRDC, and PLMDC granted by the DENR.
- April 24<sup>th</sup>, 2007 - Timber-Cutting Permit for Road-Right-of-Ways granted to NNMDC and PLMDC by the DENR.
- April 25<sup>th</sup>, 2007 - Foreshore Lease Permit for the temporary occupation and provisional use for pier, causeway on a parcel of foreshore land situated in Barangay San Isidro, Narra, Palawan granted to PLMDC by the DENR for use by the three SSMP’s.
- May 29<sup>th</sup>, 2007 - Timber-Cutting Permit for Road-Right-of-Ways granted to PASRDC by DENR
- An application for the granting of an FTAA on the Tenement was made by NNMDC on March 30, 2006. The receipt of an FTAA will allow full scale mining pursuant to its terms and conditions.

Other than those the subject of the current Issuer agreement, the writer is unaware of any residual royalties, payment or other encumbrances outstanding on the property. Enquiries by the writer with MBMI representatives indicated that the following environmental liabilities are applicable to Alpha under the terms specified in the EIA submitted in respect of ECC requirements:

- Road and stockyard rehabilitation or their transfer to the local municipalities
- Slope stability of excavated areas including redeposit of any stored material in the area of the excavated regions.
- Replanting of excavated areas with trees
- Topsoil reclamation of disturbed areas
- Regeneration of vegetation of disturbed areas

## **7 Accessibility, Climate, Local Resources, Infrastructure and Physiography**

### **7.1 General Information**

The island province of Palawan is centered approximately 500km south-southeast of Manila in the Republic of the Philippines (Figure 1). It comprises the westernmost portion of the Philippines and belongs to administrative Region IVB.

Palawan lies within the “Western Pacific Monsoon Climatic Zone”, with alternating dry and wet seasons stretching respectively from December to May and June to November. Annual precipitation varies from 2,000mm to 2,200mm. Average temperatures are in the range of 27 °C, with subequatorial humidity levels.

Palawan is located in the western part of the Philippine Archipelago and belongs to the Palawan Physiographic Province, comprising a tectonically stable region of crustal uplift. Comprising over 14,000 square kilometers, Palawan is the third largest of the Philippine islands (Figure 1). It is long and narrow, consisting mainly of steep mountain ranges whose highest point is 6,840 feet (2,085 m). Created as the result of tectonic plate movement, the region is marked by volcanic rocks and karst landscapes. Vegetation types on Palawan are diverse and include beach forests, tropical lowland evergreen dipterocarp rain forests, lowland semi-deciduous forests, montane forests, and limestone forests.

The Provincial capital is Puerto Princesa, a city of some 160,000 inhabitants located approximately half way along the east coast of the Island. This represents around 20% of a total provincial population currently estimated at 800,000. Small landowner farming, primarily rice, coconut and banana (with minor corn) is the dominant subsistence activity, with the rural population concentrated along the eastern coastal plains.

The Province is culturally complex and is a highly sought after destination for tourists, primarily in the north. This has resulted in a degree of wealth disparity and infrastructure development between the regions north and south of the Provincial capital. The relative poverty and poor infrastructure in the south have resulted in a more pragmatic view of local inhabitants towards potential mining projects – namely as potential sources of improvements to existing infrastructure.

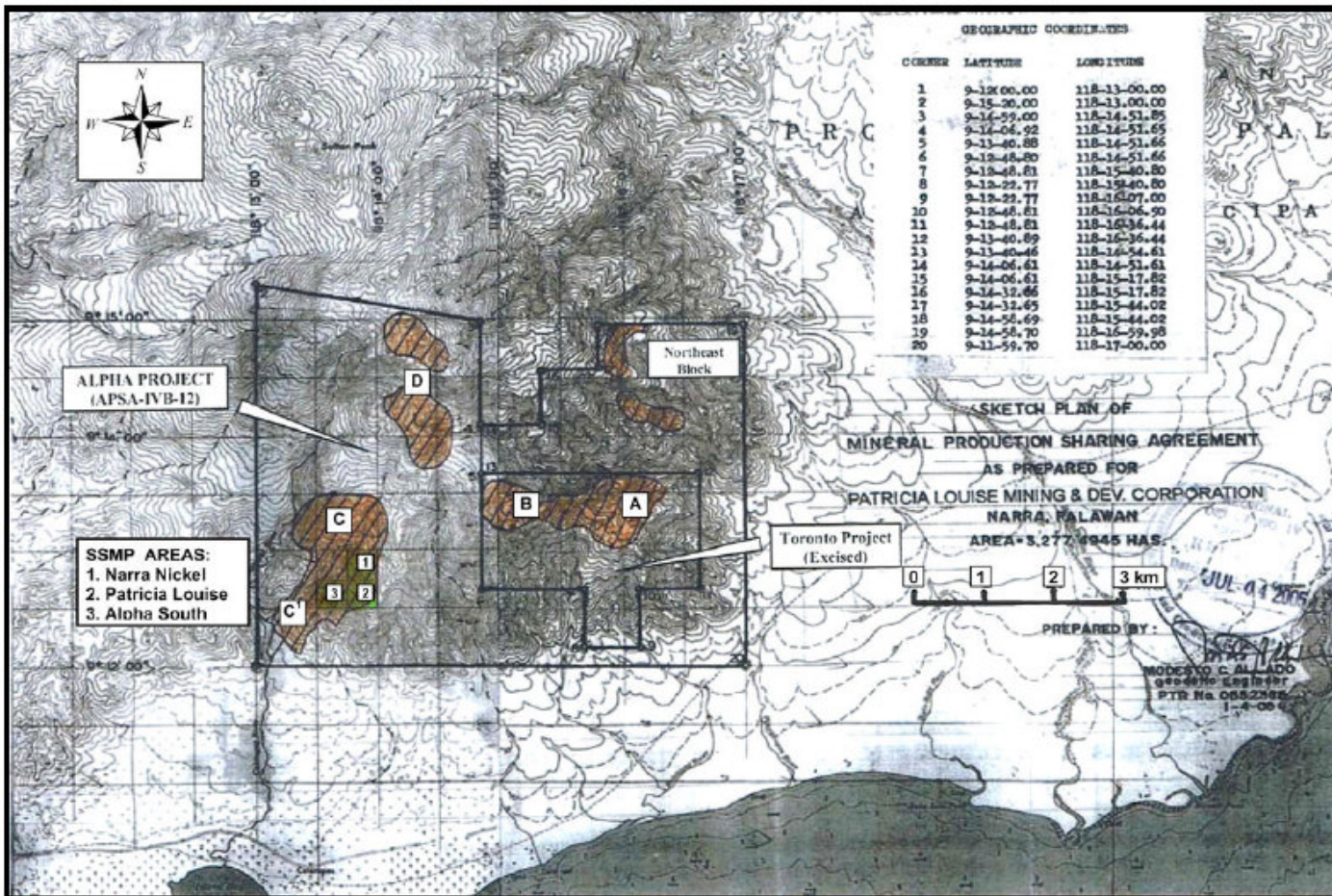


Figure 2: Alpha Project showing mineralised areas and SSMP's.

## 7.2 Alpha Project

Alpha is located 110km southwest of Puerto Princesa City (Figure 1). Puerto Princesa is serviced by two daily flights from Manila.

The prospect lies on the East Coast of Palawan Island, centered on 118° 17' E and 9° 14' N. From the national highway, primary access to the area is seven kilometers by haul road that intersects the National Highway at a point 16 km south of Narra. The haul road accesses the 'C' Block area covered by the various SSMP's in the southwest of the Property (Figure 2). Additional access is provided by the haul road to the (excised) Toronto project (Figure 2), which intersects the National Highway at a point approximately 9 km south of Narra, and thence 8 km west to the central Toronto area. This links into a network of historical exploration roads that cover much of the Alpha area, though these have fallen onto disrepair and do not support vehicular traffic.

The prospect overlies an area of moderate topographic relief varying from 300 to 600 meters. Vegetal cover primarily comprises dipterocarp rainforest and secondary growth hardwoods. There is a marked decrease in general topographic gradient and drainage dissection going from east to west within the project area.

The nearest town is Narra, a population center of approximately 10,000 people that serves as a local administrative, commercial and support centre for the central eastern Palawan region. There are numerous equipment and other retailers represented in the town, as well as a Fire Service and (broadband) internet / IT facilities.

There are currently three piers in the Narra area; one operated by (OMDC-affiliated) Citinickel (Toronto Project – Figure 2) for dispatch of their DSO material, a disused and unserviceable public unit, and one recently constructed by MBMI Resources for the Alpha project. Additionally, a local (Philippines) independent consulting laboratory, Ostrea Mineral Laboratories, have constructed a 100+ sample/day capacity assaying facility within Narra Township.

MBMI have constructed a 265 meter pier complete with 30 meter turnaround area directly across from the mining area. The pier is serviced by an extension of the haul road which also traverses the ore stock yard and shipping ROM pad located adjacent to the coast. Additionally, the company has constructed an operations base in a compound immediately adjacent to the haul road-National highway intersection. This facility incorporates site offices, logistical support, limited staff accommodation, a contract site laboratory (Ostrea) and a nursery for EIA ("Environmental Impact Assessment") reclamation purposes.

## 7.3 Political Risk

To assess the political and economic risk for the project LQS relied on the most recent opinions of risk and economic experts on the Philippines.

It is noted that Palawan is relatively free of rebel activity and the government is attempting to minimise regulatory obstacles in order to attract foreign investment. The following extracts from relevant websites highlight the perceived risks associated with doing business in the Philippines.

A rating scale applied to the individual policies gives a good categorised overview of the situation. Table 1 (<http://www.mkeever.com/philippines.html>) summarises these aspects:

- 5.0 Perfect Facilitation of Wealth Creation
- 4.0 Midway between Perfect and Neutral
- 3.0 Neutral Effect on Wealth Creation
- 2.0 Midway between Neutral and Obstructionist
- 1.0 Perfectly Obstructionist to Wealth Creation

**Table 1: Policy ranking**

<b>INDIVIDUAL POLICIES</b>	
Effective Police Force	1.0
Social Mobility	1.0
Border Control	1.0
Honest Government	1.0
Government Debt	1.0
High Wage Policies	1.0
Environmental protection	1.0
Strong Army	1.0
Government enterprises	1.0
Common Laws	1.5
Central Bank	1.5
Domestic budget management	1.5
Education	2.0
Cultural, Language Homogeneity	2.0
Protection of Public health and safety	2.0
Management of foreign currency budget	2.0
Freedom of Speech	3.0
Political Effectiveness	3.0
Freedom from internal control	4.0
Commercial Banks	4.0
Communication Systems	4.0
Transportation	4.0
Currency	4.0
Institutional Stability	4.0
Economic statistics	4.0
International Security Agreements	4.0

Private Property	4.5
Protection of foreign currency earning enterprises	4.5
Layers of Collective Action	4.5
Pro Business Climate	4.5
Protection of domestic enterprises from government mandated costs	4.5
Freedom from outside control	5.0
Foreign currency transactions	5.0
Foreign trade impact	5.0

Reference to the business monitor website ([http:// www.businessmonitor.com/philippines\\_bfr.html](http://www.businessmonitor.com/philippines_bfr.html)) reveals that: "We have been forced to significantly revise down our 2008 growth forecast for the Philippines after Q208 GDP data revealed that the economy grew by just 4.6% y-o-y, and Q108 growth was revised down from 5.2% to 4.7%. Having retained a still bullish forecast of 6.3% prior to the most recent data release, we are now expecting economic expansion to cool to just 4.4% in 2008, as domestic demand continues to suffer in line with double-digit inflation and attendant tighter monetary conditions. Moreover, we highlight that against a backdrop of slowing global growth, significant downside risks to the Philippines' external sector still persist.

Growth is, however, expected to rebound to 5.5% in 2009, although we caution that risks to this, and indeed our 2008 forecast, remain weighted to the downside.

An end to the peace talks between the Philippine government and the Moro Islamic Liberation Front (MILF), which were abandoned after 11 years of negotiations on September 3, has significantly raised the prospect of an extended period of violence in the south of the country, posing considerable risks to both political stability and economic development in the region. From here, it is very difficult to see any resolution to the problems in Mindanao, and the Philippines now finds itself back where it started, with a myriad of complex issues still to be addressed.

Meanwhile, the Philippines' fiscal position is set to continue deteriorating in H208 as government spending rises to combat sagging economic growth and revenues continue to flag.

The Philippines' score of 45.0 (out of 100) in BMI's Business Environment ratings sees the country lie in 86th place out of 167 ranked nations, underscoring the frailties of its investment climate.

Corruption, weak institutions and inadequate public infrastructure all conspire to constrain the Philippines' overall score, as highlighted by scores of just 37.1 for 'Institutions' and 40.1 for 'Infrastructure', although on a more positive note, a score of 57.6 for 'Market Orientation' underscores the Philippines' willingness to attract foreign investment by minimising regulatory obstacles."

The Market Research website (<http://www.marketresearch.com/map/prod/2065407.html>) hosts the following relevant quote: “Although real GDP growth accelerated to 4.6% year-on-year (y-o-y) in Q308, from 4.4% in the previous three months, we still retain our downbeat view of the Philippine economy, and continue to caution that risks to our current 4.3% growth forecast for 2009 remain firmly weighted to the downside. Indeed, domestic demand remains on rocky ground amid slowing remittances and growing economic uncertainty, with increased government spending (which leapt from a 1.5% y-o-y contraction in Q208 to a 12.5% expansion in the third quarter of the year) unlikely to be able to pick up the slack. Moreover, the performance of net exports remains lacklustre, and will continue to do so as the Philippines’ major export markets slide towards recession.” The same website goes on to say, “The war on terrorism has raised geopolitical, political and social risks in the Philippines. The placement of US troops in the Philippines has increased insurgent activity. Insurgency is expected to continue increasing as both the US and Philippines militaries combat well established insurgent forces. Militarization of long-standing domestic conflicts and the arrival of US troops in the Philippines is weakening governance, leading to rising political risk. Popular resistance to the return of US troops to the Philippines, along with deteriorating social conditions, is raising social risk. Economic, fiscal and balance of payments risks are also increasing. Domestic investment is very weak and unemployment is rising. These factors will eventually push private consumption lower, as will increasing social instability. Fiscal revenue is collapsing, pushing the fiscal deficit and the debt stock higher. Finally, the build-up of short term foreign portfolio investment combined with rising investment risk increases balance of payments risk. This risk is being led higher by building pressure on the peso exchange rate. Overall, investment risk in the Philippines is expected to increase over the medium-term.” (<http://www.marketresearch.com/product/display.asp?productid=959597&SID=99210569-439031528-532857761>).

## 8 History

Historical exploration within the Alpha project area was completed in the early to mid 1970s by OMDC as an integral part of what is now the excised Toronto project. This work comprised a detailed (100m x 100m) test pitting and “vibro drilling” programme, the latter technique comprising a patented dry coring technique developed by then JV partner Pacific Metal Company (“PAMCO”) of Japan.

The JV programme successfully defined several areas of mineralisation within the project area; designated Blocks ‘A’ to ‘D’; inclusive of sub-Block ‘C<sup>1</sup>’ (Figure 2). These areas are discussed in more detail in Section 11.0 of this report.

Other than sporadic chromite exploration, the project area remained dormant until 2001 when QNI (“*Queensland Nickel Inc.*”, the nickel subsidiary of BHP Billiton) conducted a

detailed scoping study of the Toronto area, an exercise that resulted in the current mining operation at that project. Further information in respect of this operation is located in Sub-Section 17.1 of this report.

No follow-up sampling or data validation of the historical exploration within Areas 'C' and 'D' has been completed. A summary of the exploration and development history of the project area follows:

- 1969            Formation of OMDC
- 1969/71       Acquisition of various project areas within the Philippines, including Alpha.
- 1971 –  
1976            OMDC explores Alpha area under auspices of Santa Monica Exploration Corp. & Toronto Exploration Corp. – collectively termed 'Toronto Project'.  
JV with PAMCO of Japan – detailed test pitting and 'vibro' drilling to 100m x 100m density delineates four (4) mineralised zones: 'A' & 'B' (present-day Toronto project) and 'C/C<sup>1</sup>' & 'D'. Global resource estimate of 4.6 Mt grading 1.50% Ni & 0.07% Co utilising a 1.00% Ni lcg produced for project (NB: which is not NI 43-101 compliant and should not be relied upon but is significant from an exploration point of view).
- 1976 –  
1979            OMDC exploration for chromite in western central are of project. Approximately 60 tonnes of disseminated metallurgical chromite material stockpiled in 'C' Block area.
- (1977)        Trial mining of Blocks 'A' & 'B' by OMDC / PAMCO JV – 6,000 tonnes grading 2.5% Ni & 1.86% Co stockpiled but not shipped for treatment.
- 1989            2,000 tonnes of chromite material stockpiled by OMDC for local interests.
- 1996            OMDC personnel recalculate resource within Blocks 'C' & 'C<sup>1</sup>' utilising historical assay data – yielding a figure of 6.3Mt grading 1.50% Ni & 26.5% Fe (Ferralite) and 0.5Mt grading 2.35% Ni & 19.2% Fe (Saprolite) – SG not specified. (NB: this figure is not NI 43-101 compliant and should not be relied upon but is significant from an exploration point of view).
- 2001/02       QNI completes a scoping study on the Toronto area (Blocks 'A' & 'B') yielding a combined resource estimate (NB: which is not NI 43-101 compliant and should not be relied upon but is significant from an exploration point of view) of 3.06Mt grading 1.92% Ni ,0.063% Co & 21% Fe (weighted avg. SG – 1.31).
- 2004/05       PASRDC offers the Property to MBMI for consideration. MOA signed in May 2005, with JV agreement executed in May 2005.
- 2005            PGMCO (OMDC partner) commences mining operations within Toronto in May 2005, extracting DSO ferralite and saprolite for shipping to Australia and Japan respectively.  
MBMI enters into a JVA with PASRDC to explore and develop the Alpha project.'s
- 2005-07       MBMI (through NNMDC) completes extensive drilling of Alpha and commences mining under SSMP's in July 2007. 30KT mined and stockpiled by September 2007.

Previously classified (i.e. in September 2005) as an *Advanced Exploration Area* (VALMIN Code, 2005).

## 9 Geological Setting

### 9.1 General Overview

Palawan is located in the western extremity of the Philippine Archipelago and belongs to the Palawan Physiographic Province, comprising a tectonically stable region of crustal uplift. It comprises an assemblage of Mesozoic to recent sedimentary and igneous rocks together with an intermediate phase of overthrusting by oceanic crust.

Geologically, the province is divided into distinctly differing northern and southern regions, bounded by the Sabang Thrust, which laterally bisects the island at a low angle north of Puerto Princessa. Northern Palawan comprises pre-Cretaceous, variably metamorphosed sedimentary sequences, whilst the southern portion of the Province has experienced extensive overthrusting of these units by post-Cretaceous ophiolitic mafic – ultramafic crustal units ('Palawan Ophiolite' – Figure 3). Subsequent erosion has exposed the underlying Mesozoic crystalline and sedimentary assemblages. Overlying the basement and ophiolitic rocks are variably metamorphosed clastic and chemical sedimentary units, covering approximately 40% of the southern portion of the Province. Geological interpretation for southern Palawan is summarised in Figure 4.

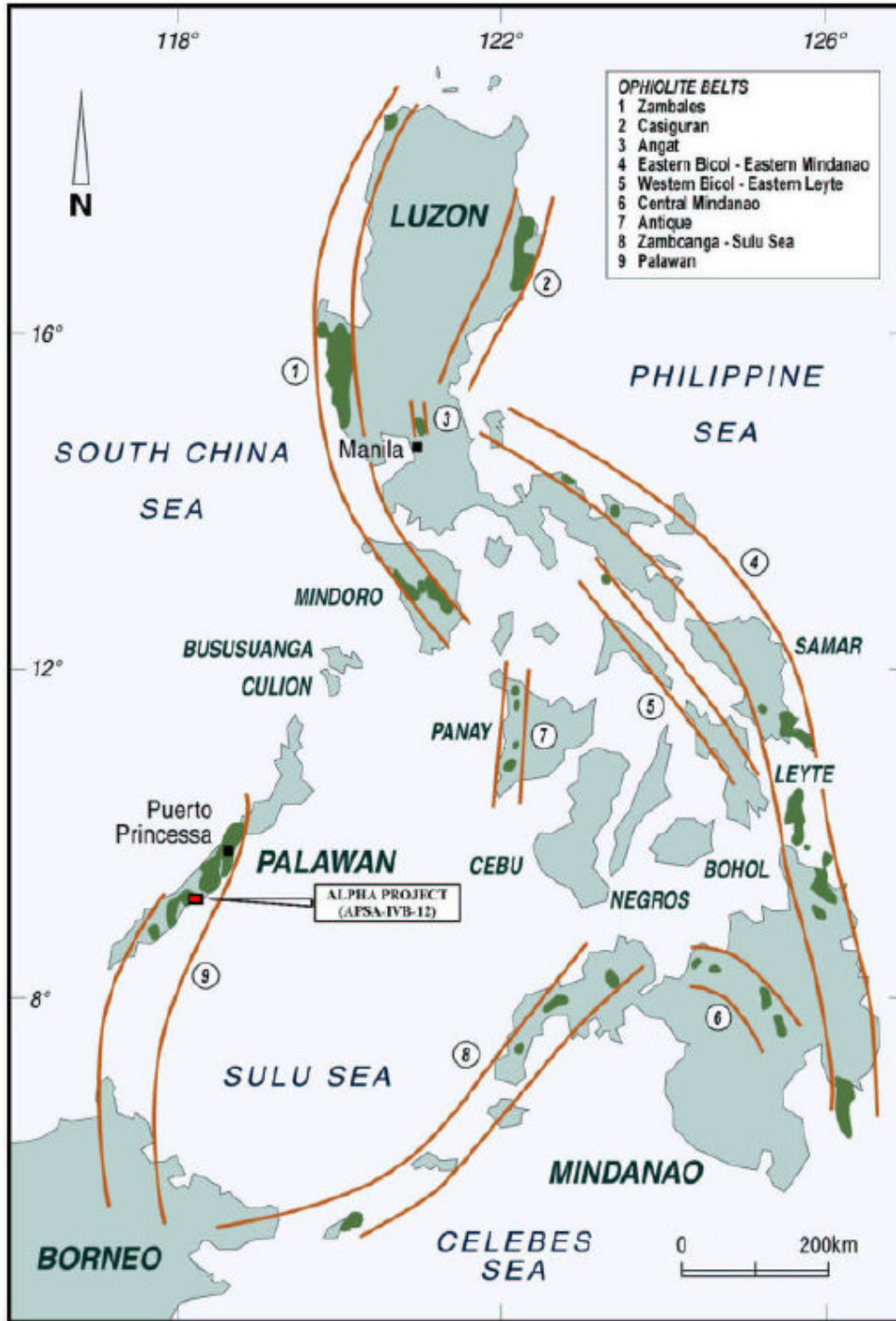


Figure 3: Ophiolite Belts of the Philippines.



The Palawan Ophiolite is comprised of the “Mt. Beaufort Ultramafics” (‘Ebu’- light blue in Figure 3) and the Stavely Range Gabbro, a suite composed of intercalated massive and layered gabbroic units (‘Esg’- purple in Figure 4). They occur in massifs of varying size throughout southern and central Palawan, diminishing in areal extent towards the southern tip of the Province.

The Mt. Beaufort Ultramafics comprise a variably serpentinised sequence of olivine cumulates of predominantly harzburgite composition with irregular patches and lenses of dunite. Local disseminations and lenses of chrome spinel are common. It is this unit that hosts the lateritic nickel- cobalt mineralisation in southern Palawan. The ultramafics are believed to be of Eocene age (Okubo, 1989).

The Stavely Range Gabbro, together with the Mt. Beaufort Ultramafics, was overthrust onto Eocene – Oligocene clastic sediments during the mid-Tertiary.

## 9.2 Alpha Project

The Alpha prospect overlies a sequence of variably serpentinised cumulates of peridotite to dunite composition, within the central massif of the Palawan Ophiolite. The southern and eastern margins of the project overlie gabbroic units.

Residual lateritic regolith is well developed over the ultramafic portions of the property, covering approximately 60% of the prospective ultramafic cumulates.

## 10 Deposit Type

The targeted deposit type for all projects is tropical (wet) lateritic nickel and cobalt. Particular emphasis is placed on the definition of reasonable thicknesses (i.e. >4m) of (garnieritic) saprolite. The objective is to delineate a minimum of eight million tonnes of combined garnierite averaging at or above 2.0% nickel and ferralite averaging at or above 1.5% nickel to be exploited as direct shipping ore (‘DSO’).

This style of mineralisation is best developed in areas of moderate topographic gradient over olivine-rich ultramafic cumulates; particularly in areas of relatively higher bedrock fracture density. Regional lineaments interpreted from Landsat imagery are summarised in Figure 5. Further details of formational controls and processes are described in Section 11.0 below.

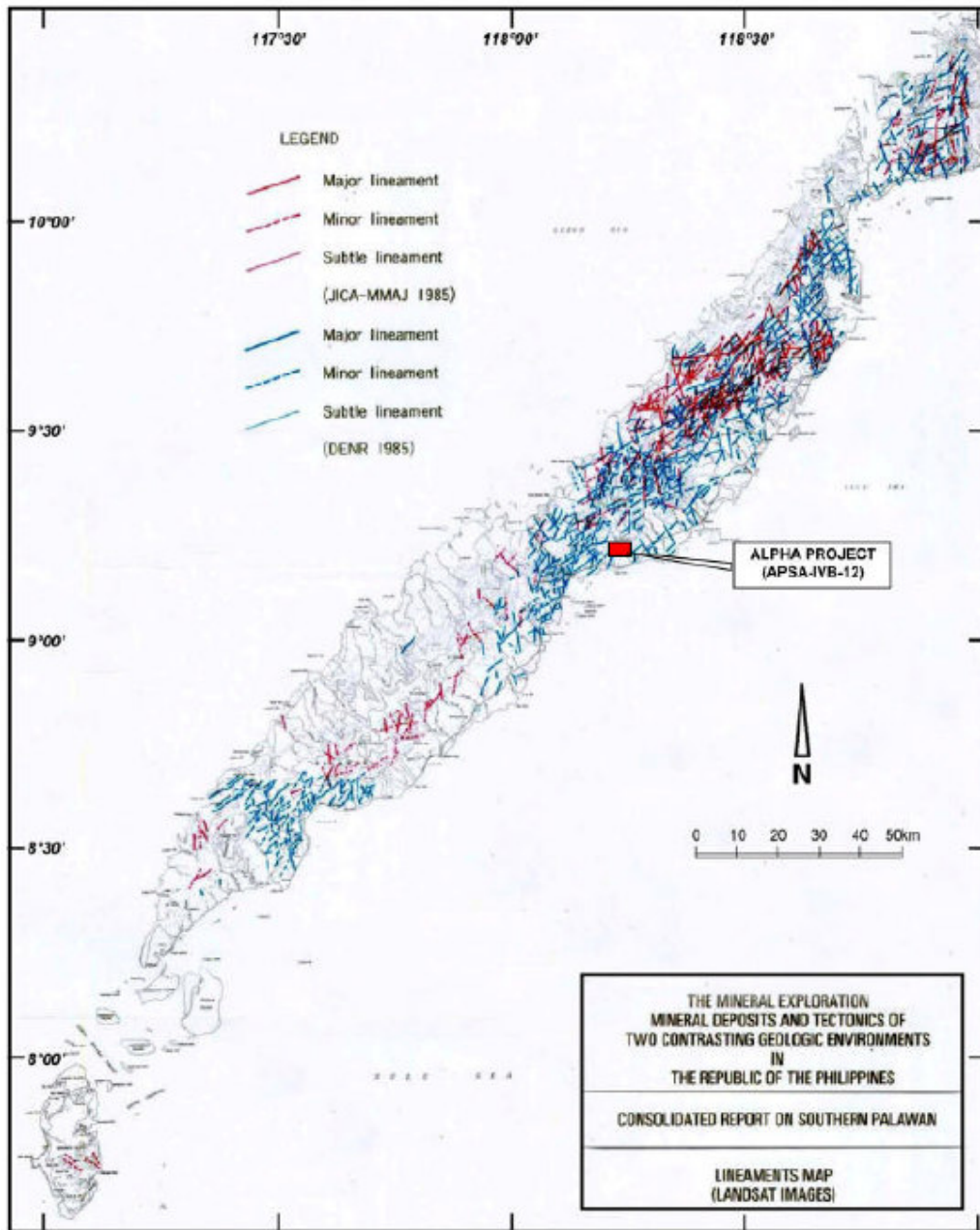


Figure 5: Lineaments from Landsat interpretation - southern Palawan (JICA, 1989).

## 11 Mineralisation

### 11.1 General Overview

Lateritic nickel – cobalt mineralisation is developed in the residual regolith overlying serpentinised cumulates of the Mt. Beaufort Ultramafics. Weathering processes acting upon these rocks produce the residual regolith profile in which the nickel concentration is increased from 0.20% to 0.25% bedrock concentration to in excess of 0.5% to 3% Ni.

Areas of moderate topographic relief, where residual regolith profiles are best developed (i.e. thickest), provide the most prospective target areas for nickeliferous laterite deposits (Santo-Yñigo & Esguerra, 1961). Additionally, since vertical percolation of meteoric water is a primary formational mechanism of this style of mineralisation, regions of comparatively higher density faulting / fracturing of the bedrock are generally more prospective.

Vertical zonation within nickeliferous laterite is distinct, with nickel content generally increasing with depth. Garnierite, the principal saprolite nickel host mineral, is a variety of serpentine, a silicate mineral developed below base of total oxidation in the weathering profile. Overprinted on the saprolite is an iron oxide zone of massive, microscopic scale goethite (limonite) needles termed “ferralite”. This zone is characterized by higher iron and manganese and lower magnesium content than the saprolite (garnierite) horizon. The presence of higher proportions of manganese oxides (“asbolite”) can frequently result in bonanza grades of cobalt (up to 3% locally), which readily incorporates into the asbolite crystal structure. Nickel content is generally lower than in the saprolite. A typical example of this vertical zonation is pictorially represented in Figure 6 (taken of the northern wall of the Patricia Louise SSMO, within the Alpha project area – refer Figure 2).

The uppermost portion of the profile is characterised by hematite replacing limonite/goethite in a higher oxidation environment. Where indurated, this zone is termed the “carapace”. The comparatively rigid crystal structure of hematite precludes the incorporation of larger metal cations such as nickel and cobalt and as such the carapace is notably deficient in these elements.

The carapace and ferralite zones are commonly referred to by the collective term ‘Laterite’, whilst that portion of the profile below base of total oxidation is termed ‘Saprolite’.

Aside from anomalous chromite related to the lateritic nickel – cobalt mineralisation, there are probably no other mineralisation occurrences within the reported projects. MBMI is currently focused solely on delineating deposits of nickel-bearing laterite.

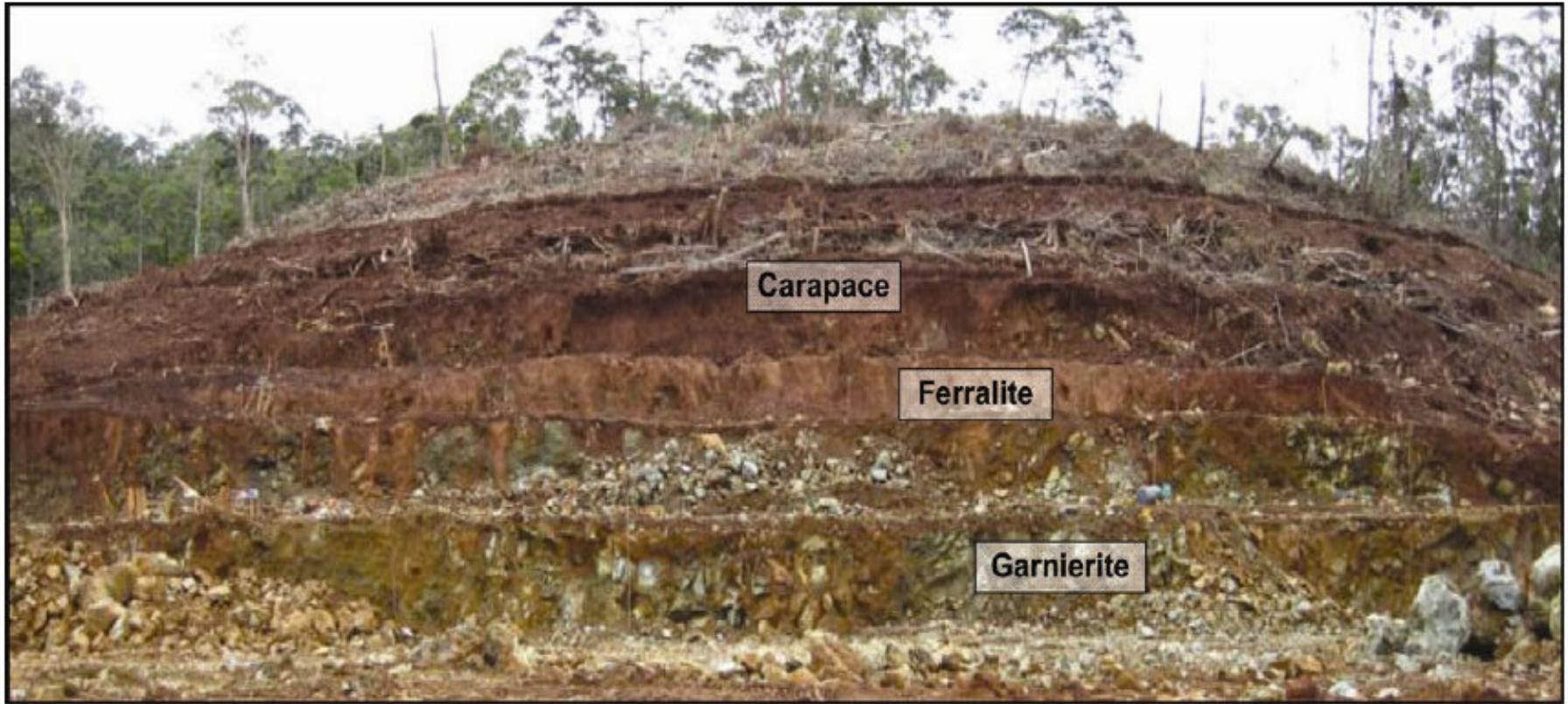


Figure 6: Vertical zonation in PL-SSMO North Wall showing nickel-bearing horizons.

## 11.2 Alpha Project

The bulk of known lateritic nickel / cobalt mineralisation within the Alpha project is located within the western portion of the tenement (Figure 2). Exploration completed by OMDC and its affiliates in the 1970s generated an in-situ resource (that is not NI43-101 compliant) from a detailed test pitting and “vibro-drilling” programme. Details of this programme are summarised in Section 8.0 of this report. Figure 6 shows a typical sequence of bench faces within the Patricia Louise SSMP mining area; clearly showing the vertical zonation of the lateritic regolith as well as the (irregular) distribution of garnierite (boulders) and ferralite zones.

In addition to Blocks ‘C’ and ‘C<sup>1</sup>’, there was an additional block ‘D’ outlined to the north and well as a third mineralised zone (untested and unnamed) located in the northeastern portion of the APSA, immediately north of the (excised) Toronto project (refer Figure 2).

Historical (non-NI43-101 compliant) resource figures for the Alpha project were generated as part of the OMDC / PAMCO Toronto exploration programmes of the 1970s. The following data were reported by Goertz (2005) as part of the initial assessment of the Alpha project. For continuity they are summarised again in Table 2:

**Table 2: Non NI41-101 compliant resource data (Saprolite) at 2% Ni lower cut-off.**

Block ID	%Ni	%Fe	DMT
Block C	2.40	20.92	295,000
Block C <sub>1</sub>	2.30	17.17	252,500
Sub-Total	2.35	19.19	547,500
Total	1.57	25.87	6,811,450

**NB:** The resource categories used in the above (historical) estimations are unknown and therefore cannot be compared to current NI43-101 categories. To the best of the author’s knowledge, (i) no Qualified Person has verified the historical resource estimate, (ii) there are no other recent estimates or data available, and (iii) the original sampling on which this work was based are not reliably available for a determination of their accuracy by a Qualified Person.

## 12 Exploration

Field exploration completed by MBMI (through NNMDC) since September 2005 has primarily comprised extensive core drilling (preparatory to ‘grade-control’ infill drilling), with limited surface geological mapping also reported. The extent and density of drilling is detailed in Section 13.0 below. Basic mapping of outcrop has been carried out. Outcrop tends to occur in the more siliceous zones. Test pits were also mapped.

## 13 Drilling

A “Spindle” drill rig was used at the Alpha Project. This is a hybrid rig capable of drilling “H” or “N” size diameter core. A local drilling contractor Georock was used to drill core of a 2 inch diameter or “N” series core. Dry drilling is employed to prevent in-hole slurring and core loss. Exploration drilling at the Alpha South Project is spaced on 50 metre centres, of which the “exploration model” has been built. The drill pattern is tightened up to 10 m x 10 m centres for grade control drilling

Commencing late 2005, MBMI (through NNMDC) have completed extensive drilling programmes within the Block ‘C’ area currently covered by three SSMP’s. Total drilling completed is 628 holes for 7,678 metres/samples. A breakdown of the various programmes follows in Table 3:

**Table 3: Details of drilling campaigns.**

<b>2005-06</b>	<b>Holes</b>	<b>Metres</b>	<b>Samples</b>
Exploration	298	4,378	4,378
Grade Control	Nil	Nil	Nil
Total	298	4,378	4,378

<b>2007</b>	<b>Holes</b>	<b>Metres</b>	<b>Samples</b>
Exploration	Nil	Nil	Nil
Grade Control	330	3,300	3,300
Total	330	3,300	3,300

Grade control holes averaged ten (10) metres termination depth on a 10m x 10m collar density, whilst exploration holes were drilled to an average of 14.7 metres on 100m x 100m (initial) and 50m x 50m (infill) collar densities. Exploration and ‘grade control’ (infill) drill collars are plotted respectively on Figures 8 and 9 .

## 13.1 Drilling Data Management

Drill core is stored in site-constructed wooden core boxes with 5 x 1 metre runs. A plywood cover is nailed to the top of the core box; protecting the core during transport and storage. Core blocks are placed in the core trays by the drilling contractor when core loss is experienced, denoting run of loss. When elevated moisture is encountered and the drill return becomes a slurry, the material collected is placed in plastic bags, with a block denoting drill hole number and interval.

The core and plastic bags are transported to a substation by the drilling contractor, where a Narra Nickel employee collects the core and transports it to the core logging shed at site. The holes are prefixed as PL (Patricia Louise), AS (Alpha South) and NN (Narra Nickel) and are sequentially numbered. Historical holes have apparently been renumbered using this system.

The diamond drill holes are prefixed as PL (Patricia Louise), AS (Alpha South) and NN (Narra Nickel) and are sequentially numbered. Historical holes have been renumbered using this system, subsequent to a recommendation of Goertz 2007. Geological logs are input into a site database and later entered into a central database managed by Datashed. Drill logs are produced for each hole as a hard copy record at site (Figure 50).

## 13.2 Surveying

The survey grid system used at the Alpha Project in Palawan is based on the Luzon Datum 1911. The local survey control at the project was established using GPS. A file note by NNMDC was obtained describing the method employed when establishing the control survey stations at site (refer Section 20.3).

A total station is used to survey all collar positions prior to drilling and once the holes are complete. The elevation for each drill collar is subsequently adjusted to fit the NAMRIA digital topographic contour file (which is the national agency covering all maps in the Philippines, a US Military map dating to 1945). Down hole surveying of drill holes is not undertaken due to the shallow nature of the drilling.

## 14 Sampling Method & Approach

With limited exception, all holes were sampled every metre via manual split of core into halves. Cores are stored in locally manufactured wooden boxes of solid construction.

These were observed to be racked in a sheltered annex to the laboratory building in multi-tiered racks of solid construction.

Sampling procedures employed since January 2007 are detailed in Section 15 of this report, as part of an overall assessment of the Ostrea assay facility within the NNMDC compound at Narra.

Sample labelling procedures were previously determined to be deficient as they comprised a complex alpha-numeric convention related to the hole-collar numbering system; resulting in an unwieldy and inconsistent nomenclature that was neither readily readable nor comprehensible; a situation resulting in an inherently higher probability of error. It is understood that the nomenclature has recently been improved.

## 15 Sample Preparation, Analysis & Security

Sample preparation and assaying procedures are discussed in detail as part of an overall assessment of the Ostrea site laboratory facility within the NNMDC compound at Narra.

Procedures employed by the on-site Ostrea laboratory facility were deemed adequate for the purposes of NI43-101, subject to the recommendations made in the 2007 report (Goertz, 2007). A summary of findings and observations during the September 2007 tour of the laboratory is as follows:

- Sample throughput is limited to 260 sample units per 24-hour period.
- After logging by site geologists, (BQ) drill cores are manually (half) split, with 50% submitted for assay (remaining 1/2-core retained for reference/resample purposes).
- Incoming samples (average 2kg) are oven-dried for 16 hours at +105 degrees centigrade followed by (whole sample) crushing to minus 1/4".
- Resultant product is passed through two-stage riffle-split to produce a 300g – 500g sample for two-stage pulverizing to minus 447µ and minus 75µ (200M). Final grind is accomplished with a second-hand 'Bico-Braun' disc pulveriser utilising an average five minute residence time. No barren flush is employed as part of the pulveriser cleaning process; the grind case is simply blown out with compressed air.
- Interim re-drying of pulp-assay fraction for one hour at >105 degrees centigrade prior to weighing of (0.25g) digestion charge.
- Digestion via single stage, three - acid digest for two hours at 200 degrees centigrade.
- Analysis by AAS (Hitachi Z2300) for Ni and Fe.
- Internal QAQC involves digest & analysis of: 1 blank per 30-sample batch and 1 duplicate every 10<sup>th</sup> sample.

## 16 Data Verification

A batch of 533 (QAQC check assay) samples was sent to Ultratrace Laboratory (UTL) in Perth Australia in May 2007. The UTL samples were analysed by XRF for Ni / Co / Cu / Cr / Mg / Mn / Fe / Al / Ca / Zn & As; with results comparing very favourably with equivalent original assays. An X-Y scatter plot, showing good 1:1 correlation is shown in Figure 7.

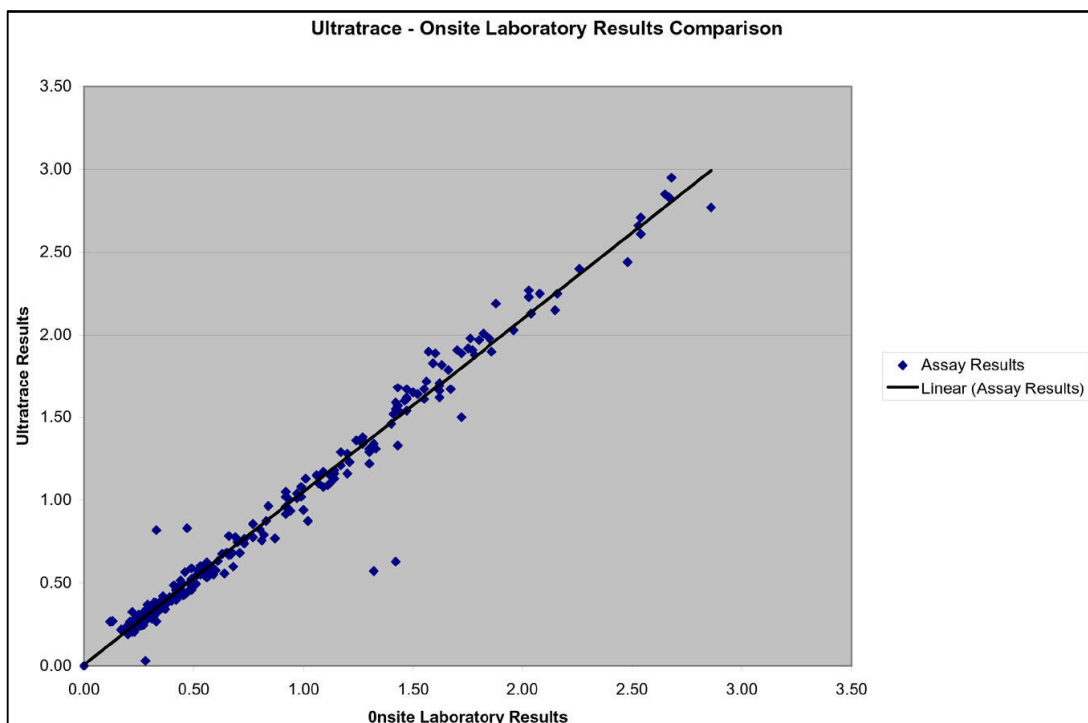


Figure 7: X-Y Scatter Plot Showing Comparative Assay Response between (UTL) XRF & (Ostrea) AAS Analytical Methods.

Additionally, 61 samples were analysed locally by Ostrea Mineral Laboratory for nickel utilising three-acid (i.e. HCl/HNO<sub>3</sub>/H<sub>2</sub>ClO<sub>4</sub>) versus four-acid (i.e. HCl/HNO<sub>3</sub>/H<sub>2</sub>ClO<sub>4</sub>/HF) digest methods. Results of this exercise showed an excellent 1:1 correlation (Figure 8) and provided justification for utilising three-acid digest protocol going forward; simultaneously resulting in both cost saving and reduction in materials handling hazards (Hydrofluoric acid - 'HF' - is extremely toxic).

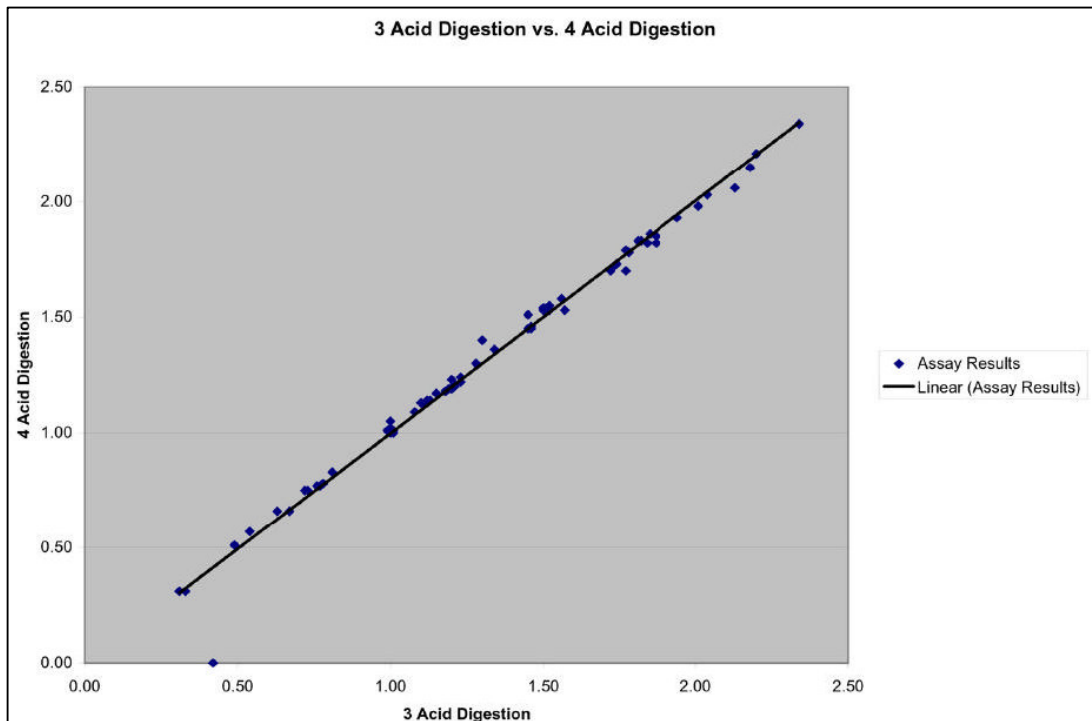


Figure 8: X-Y Scatter Plot Showing % Ni Correlation Utilising 3-Acid vs. 4-Acid Digest Technique.

MBMI have recently prepared three sample standards of 0.90% Ni, 1.60% Ni and 2.00% Ni tenor. These have not yet been commissioned into service though plans are reportedly in place to have the standards in service within one month.

As part of the recent site assessment, Cedarwood, with the assistance of MBMI and Ostrea personnel, selected and extracted a total of 26 pulps and residues were extracted from site storage and dispatched to UTL Perth for analysis via multi-acid digest and ICP-OES analysis for Ni / Co / Cu / Cr / Mg / Mn / Fe / Al / Ca / Zn / Si & As. A full list of samples is included in Appendix 3: ).

## 17 Adjacent Properties

The information contained within this Section is based upon data compiled from published DENR, Japan International Co-operation Agency (JICA) and Issuer related - party reports and communications. (NB: The author is unable to conclusively ascertain the veracity of these data, nor are these data indicative of specific mineralisation potential within the actual reported properties. In accordance with NI 43-101 therefore these results should not be relied upon.)

## Toronto Project

The most significant and proximal project to Alpha is the Toronto project. It comprises a 1,000 Ha excised block in the southeast quadrant of the Alpha tenement and is currently the subject of a disputed option agreement between Filipino stakeholders (Figure 2).

Between May 2005 and December 2006, Toronto was operated under the auspices of two SSMP's by *Platinum Group Metals Corporation* ("PGMC"). In the 18 months to December 2006, the operation produced 400,000 wet tonnes combined ferralite/saprolite DSO material at a rate of 750 tonnes per day; for shipment to a Japanese partner company (saprolite), and QNI Limited for refining in Australia (ferralite).

Due to various regulatory violations (including extraction tonnages well in excess of the combined tonnage allowance of 200,000 tonnes over the first two years – PGMC produced 400,000 tones in 18 months), the project was shut down in December 2006 by the DENR and remains in suspension at time of writing. The abovementioned option agreement is currently the subject of a civil proceeding between the (Filipino) stakeholders.

Other projects in the Alpha project area are summarised below:

<b>Prospect Name</b>	<b>Location</b>	<b>Notes (Source JICA-1989; DENR/OMDC-2004/5)</b>
Bethlehem	118° 19' E _09°18' N	Central Massif. Area: 3.4km <sup>2</sup> . Evaluated between 1970 and 1990. Estimated (1990) 7.4MT avg. 2.21% Ni & 0.05% Co (nb: which is not NI43 -101 complaint and should not be relied upon, but is significant from an exploration point of view).
Bethlehem West	118° 16' E _09° 18' N	Central Massif. Area: 3km <sup>2</sup> . Thickness: <5m. Average NiO: 1.66%.
Santa Monica	118° 16' E _09° 13' N	Central Massif. Average NiO: 1.64%.
Toronto	118° 17' E _09° 14' N	Central Massif. Evaluated 1977 and 2001. (1977) 6kT test mining avg. 2.5% Ni / 1.86% Co stockpiled but not processed. (2001) QNI estimates 3.1MT resource (NB: which is not NI 43-101 complaint and should not be relied upon but is significant from an exploration point of view) averaging. 1.92% Ni / 0.063% Co (Caballero, 2002). PGMC produced 400kT between May '05 & Dec '06.
Laramie	118° 18' E _09°18' N	Central Massif. Evaluated between 1970 & 1990. Currently under exploration by China Nickel Mining

## **18 Mineral Processing & Metallurgical Testing**

In the opinion of the Issuer, the reported project operating basis does not mandate these procedures. The Issuer has indicated that its main focus on the Property is to sell blended saprolite and ferralite ('laterite') ore from the properties on a DSO basis, a process which will not require any bulk materials assessment or processing beyond product grading (i.e. from control assaying) to meet contract specifications. Included in the product blending is some screening and crushing of larger material.

## **19 Mineral Resource and Mineral Reserve**

The Mineral Resource estimate was performed by MBMI and audited by LQS.

At the time of writing this report no Mineral Reserve had been estimated for this project.

### **19.1 MBMI Mineral Resource Estimate**

The resource evaluation for the 3 small scale mining areas namely, Alpha South, Narra Nickel and Patricia Louise are based on the information gathered from the exploration drilling activities conducted post September 2006 to early 2007 with completed core logs and assay results. Some 201 drill holes including 12 offset holes and 6 test pits were used to define the extent of laterization within the 3 small scale mining areas.

Average assay results for the 2005 - 2007 drilling programmes were:

1.24% Ni and 12.56% Fe (100% of samples)

1.56% Ni and 13.78% Fe (1.00% Ni lower cut – 67% of samples)

1.82% Ni and 14.82% Fe (1.25% Ni lower cut – 52% of samples)

The mineral resource inventory for the 3 SSMP's is presented in Table 4.

Table 4: MBMI resources based on dry tonnes.

	Dry Tonnes	Ni (%)	Co (%)	Fe (%)
Measured	1 782 000	1.34	0.031	13.7
Indicated	646 000	1.22	0.039	17.6
Total	2 428 000	1.31	0.033	14.7
Inferred	293 000	1.23	0.044	19.1

The following densities were utilised:

0.9 for LAT

0.7 for LATSAP

1.1 for SSAP

These figures result in a weighted density of around 1.05 as the SSAP is volumetrically dominant. The high water content in these materials (around 33%) is a factor in these low densities.

### 19.1.1 Exploration Drill Holes

Exploration drilling activities for the 3 small scale mining areas conducted post September of 2006 up to the 1st quarter of 2007 covers a total area of 60 hectares with a grid spacing of 50m x 50m, and 25m x 25m on interesting areas.

The total resource estimate utilizes only the available data gathered from the drilling information which includes the core logs and assay results.

A summary table for the exploration drilling data and sample location map are shown in Table 5 and Figure 9 respectively.

Table 5: Exploration data.

AREA	DDH	TP	DDH / TP	METERAGE
ALPHA SOUTH	46	2	48	1082
NARRA NICKEL	91	2	93	2145
PATRICIA LOUISE	64	2	66	1414
TOTAL	201	6	207	4641

The core logs are classified into 3 different rock types. The following rock type classifications used in generating the geological solids is as follows:

1. LATERITE (LAT).

Old truncated Laterite/ Laterite In-Situ (Blood Red) High Iron; >1.00-1.40% Ni.

2. LATERIZED SAPROLITE (LAT SAP).

A. Laterized Saprolite (Yellow Orange/ Brown) Medium Iron; -2.00% Ni.

B. On going Laterized Saprolite (Apple Green) Low medium Iron; +2.00% Ni.

3. ENRICHED SUPERGENE SAPROLITE (SSAP).

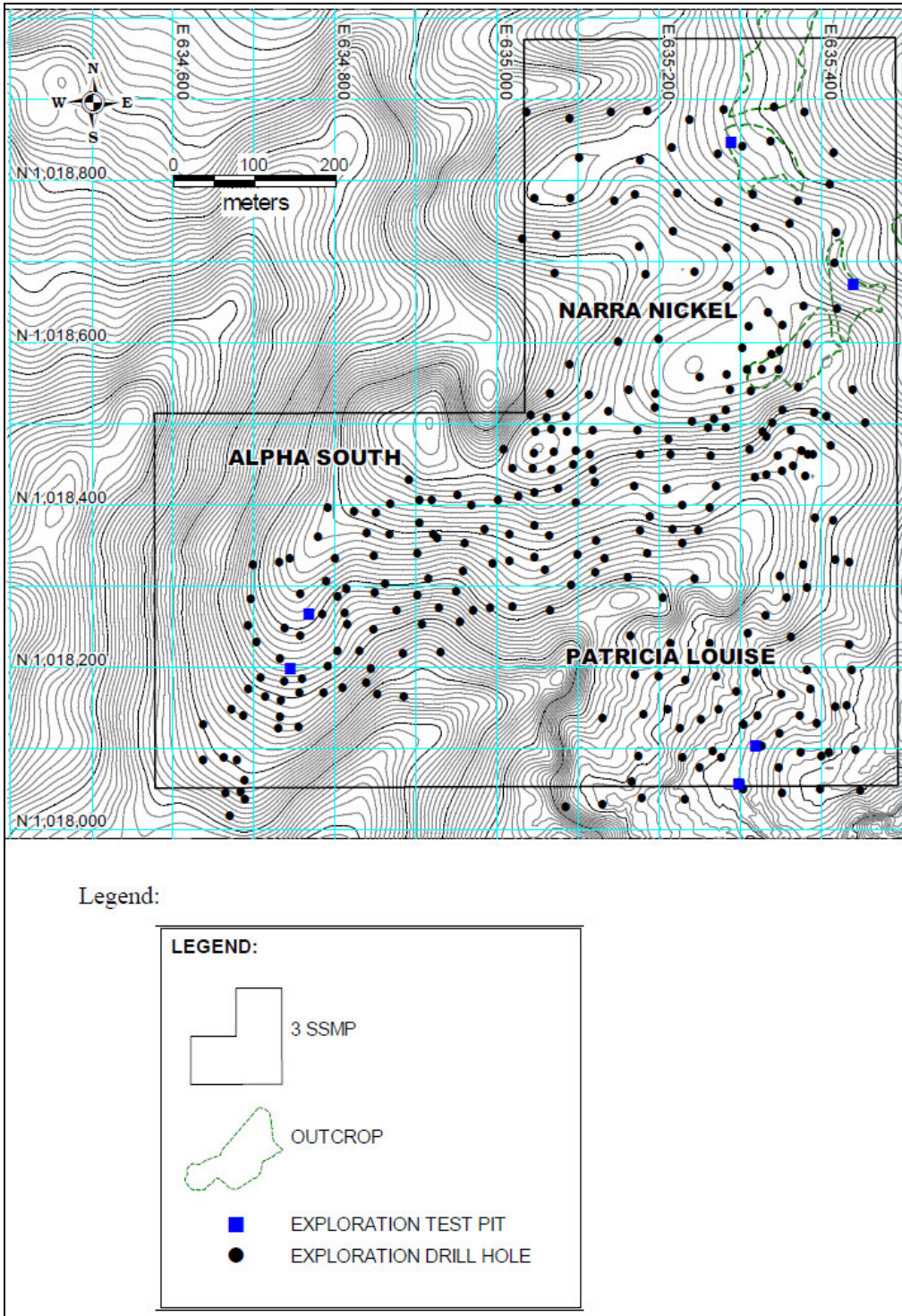


Figure 9: Sample location map.

### 19.1.2 Isograd and Isopach

Based on the rock type classification and assay results, grade and thickness contour maps were generated – these are presented in Figure 10 to Figure 18. These maps help us better understand the trend and orientation of the mineralization. They delineate the ore and outline the target areas for mine development.

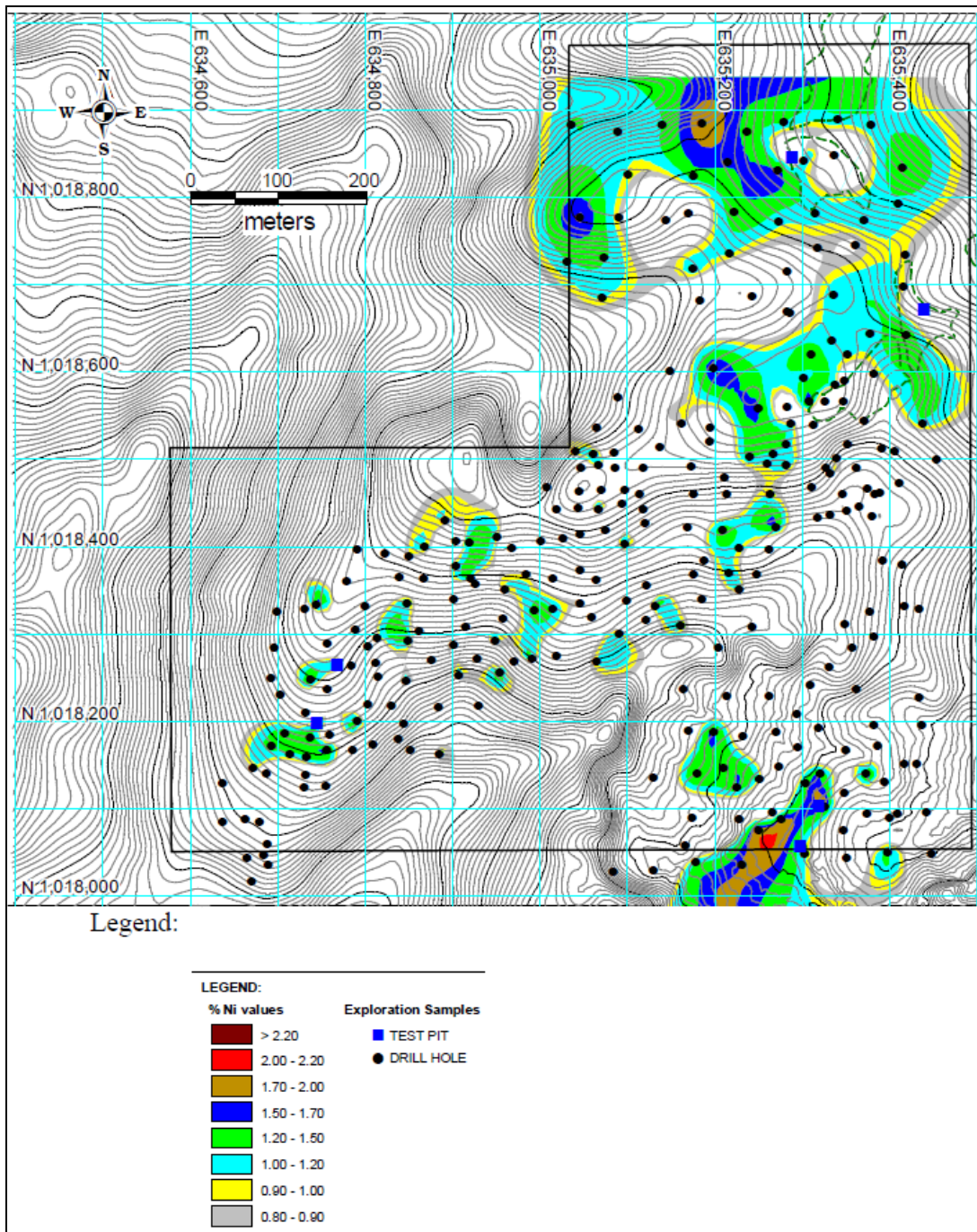


Figure 10: ISOGRAD Ni – LATERITE (Blood Red).

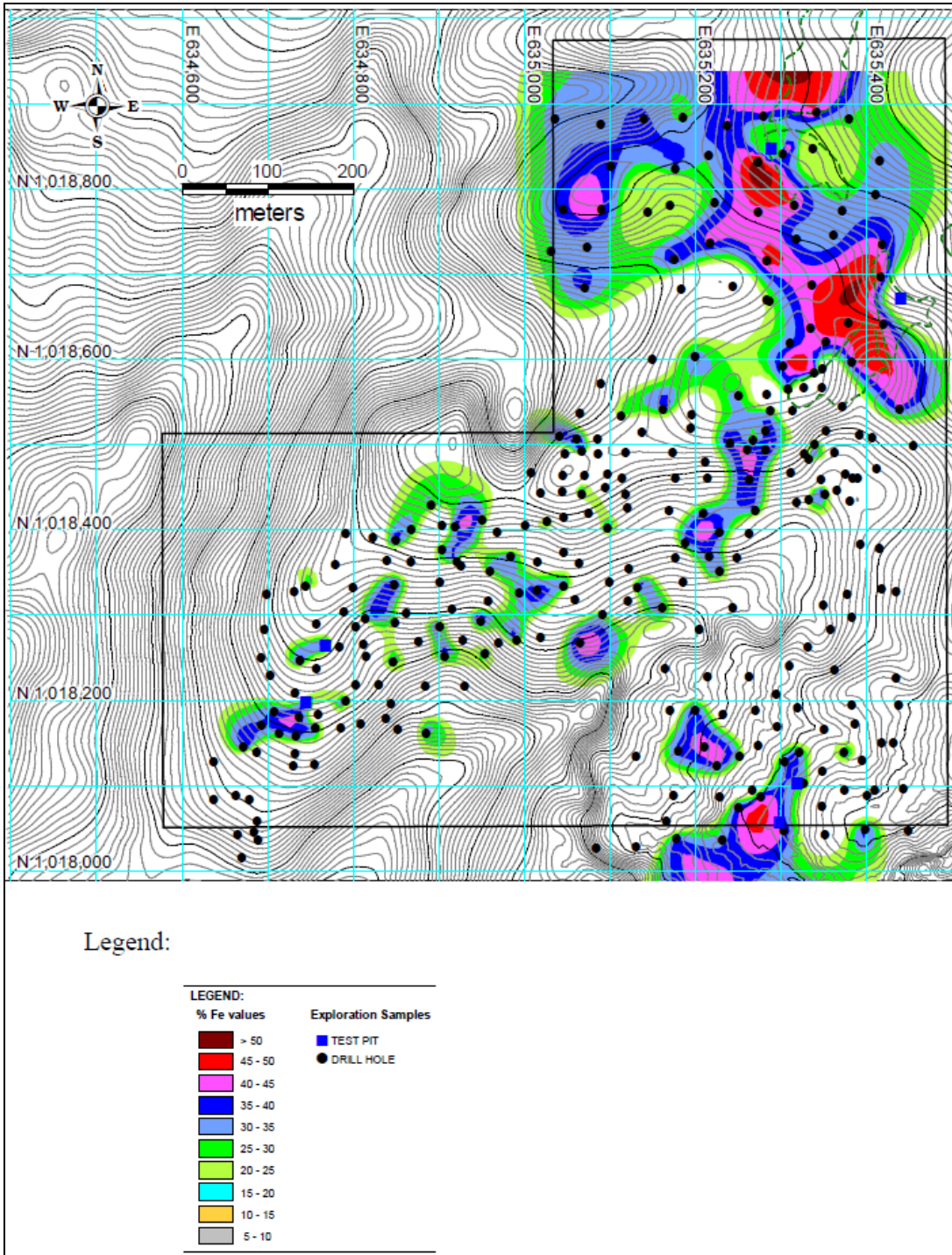


Figure 11: ISOGRAD Fe – LATERITE (Blood Red).

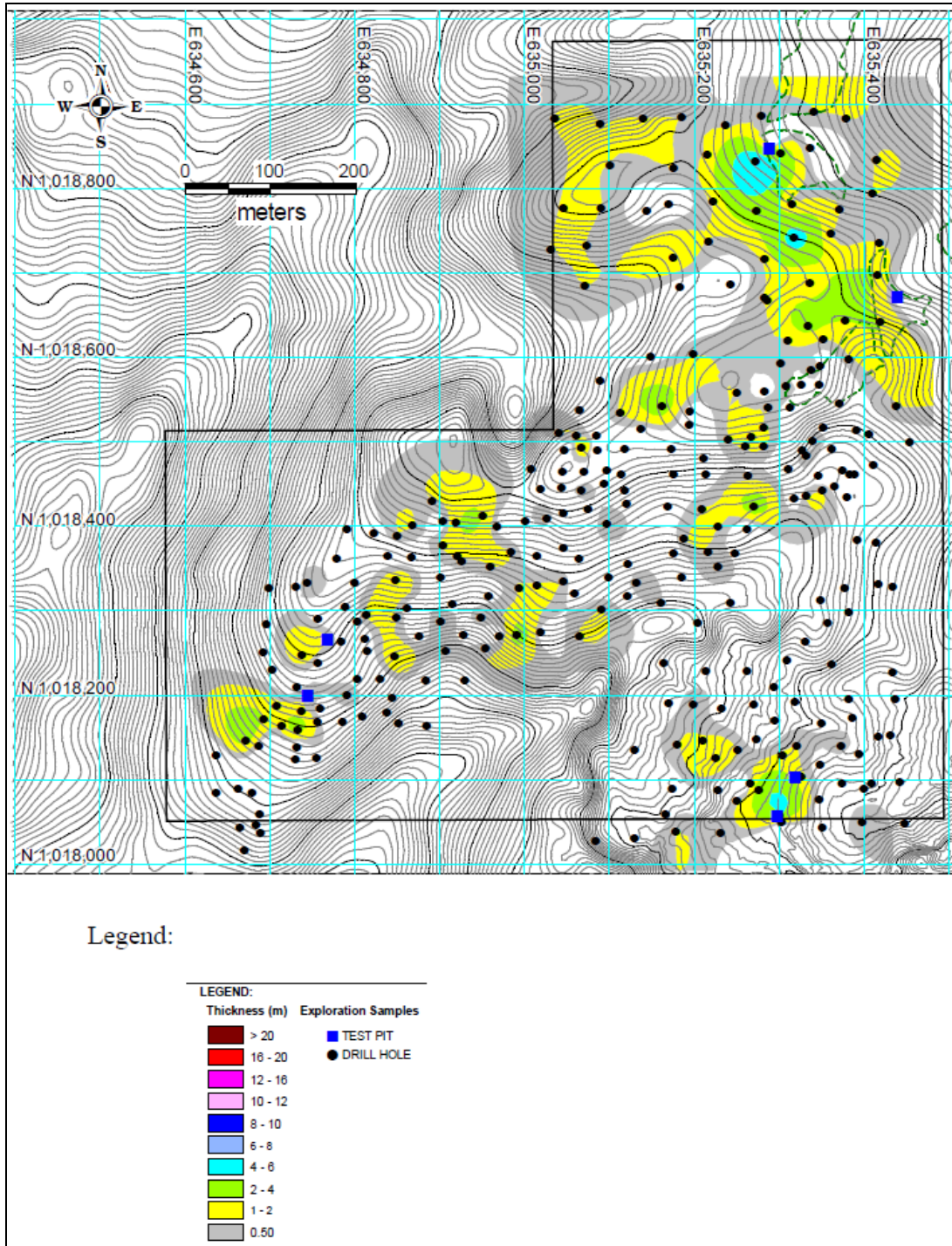


Figure 12: ISOPACH – LATERITE (Blood Red).

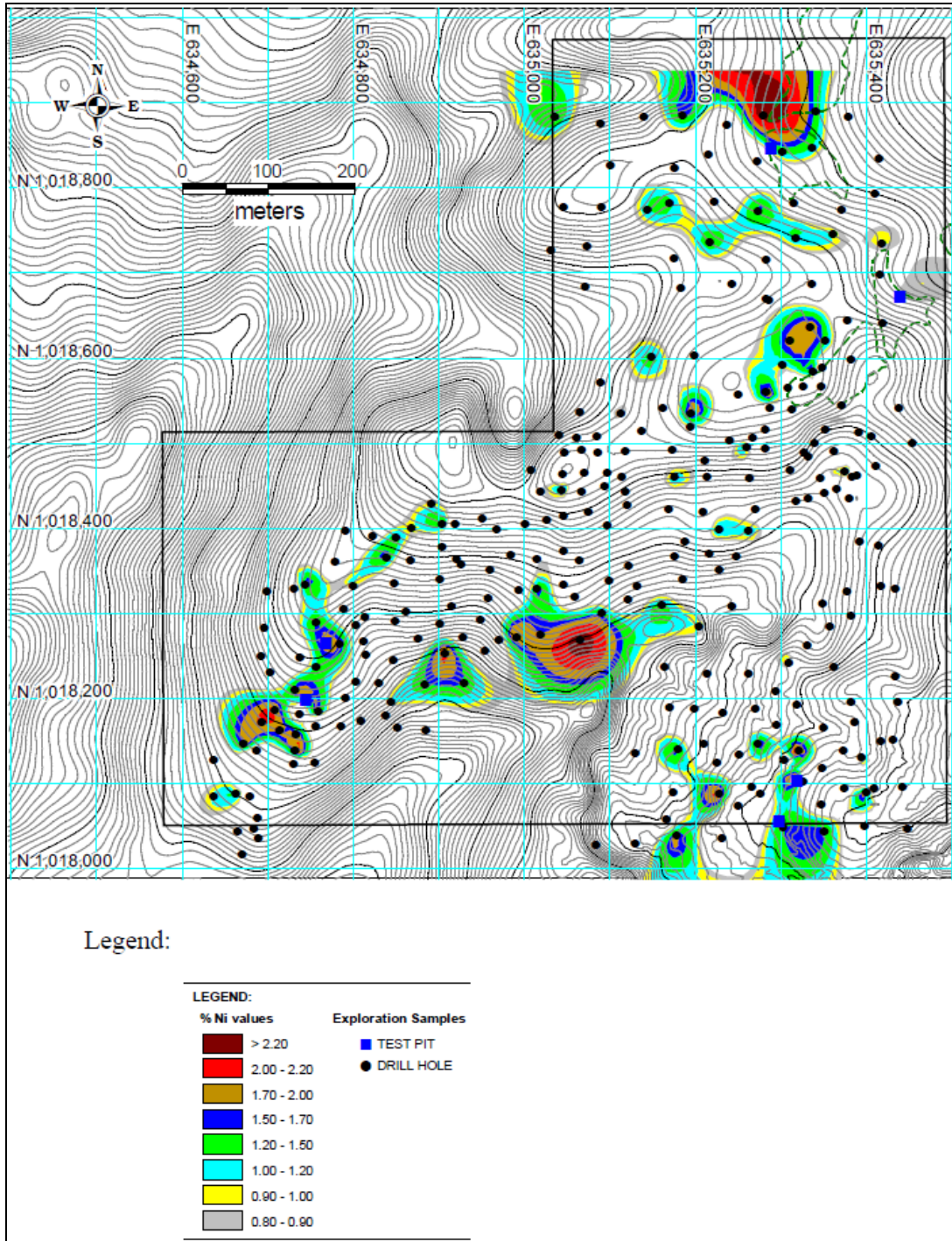


Figure 13: ISOGRAD Ni – LATERIZED SAPROLITE.

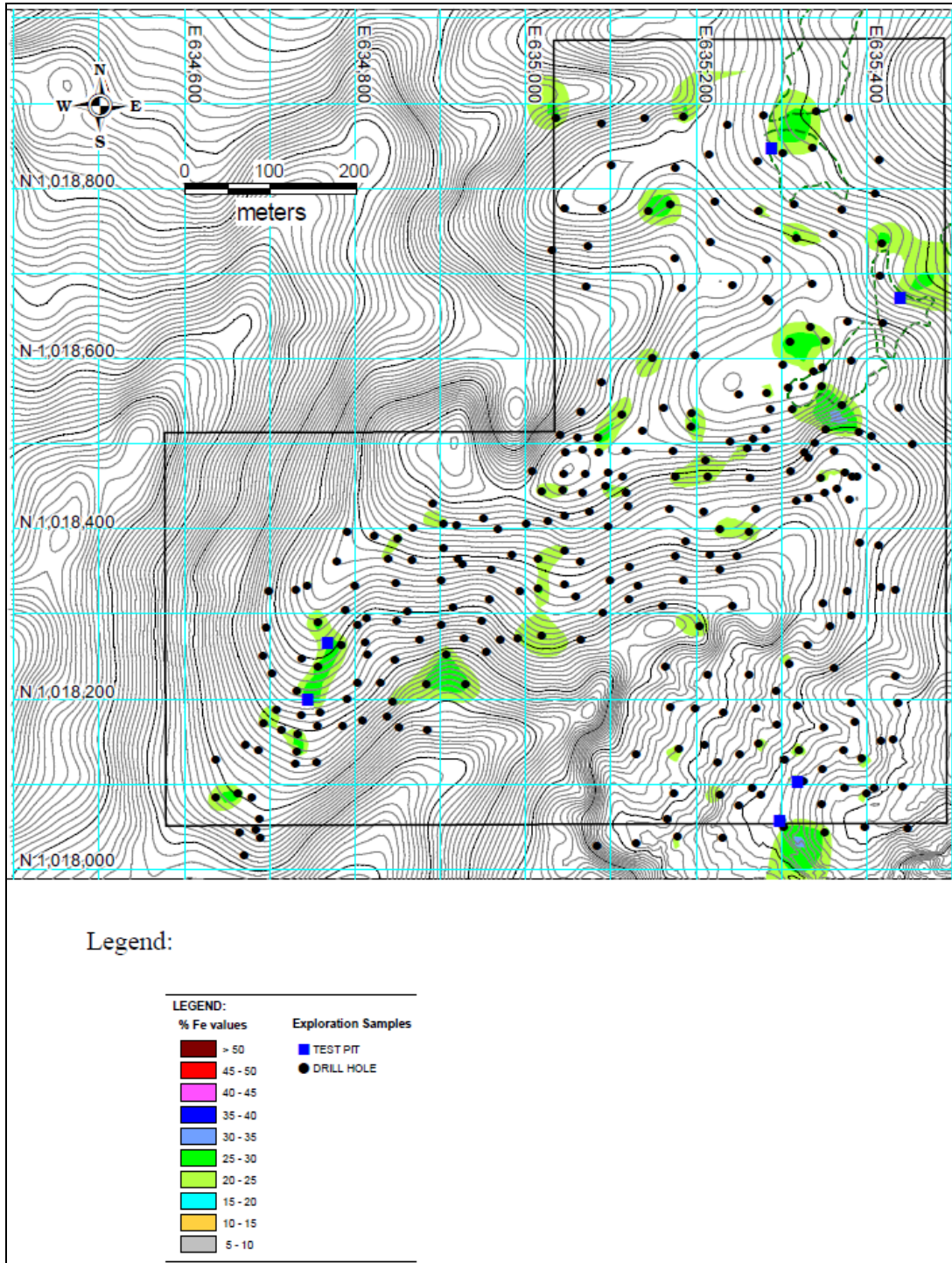


Figure 14: ISOGRAD Fe – LATERIZED SAPROLITE.

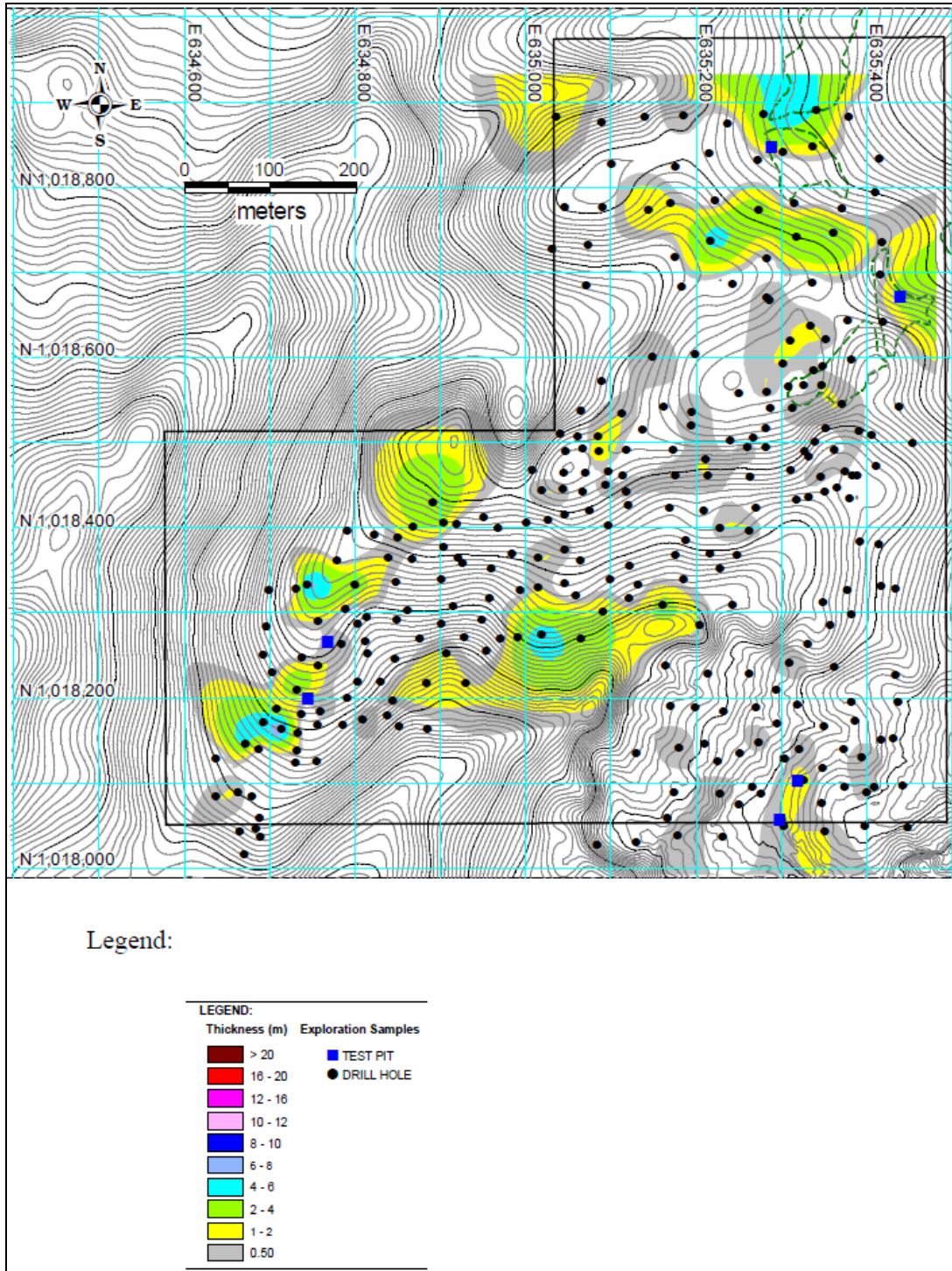


Figure 15: ISOPACH – LATERIZED SAPROLITE.

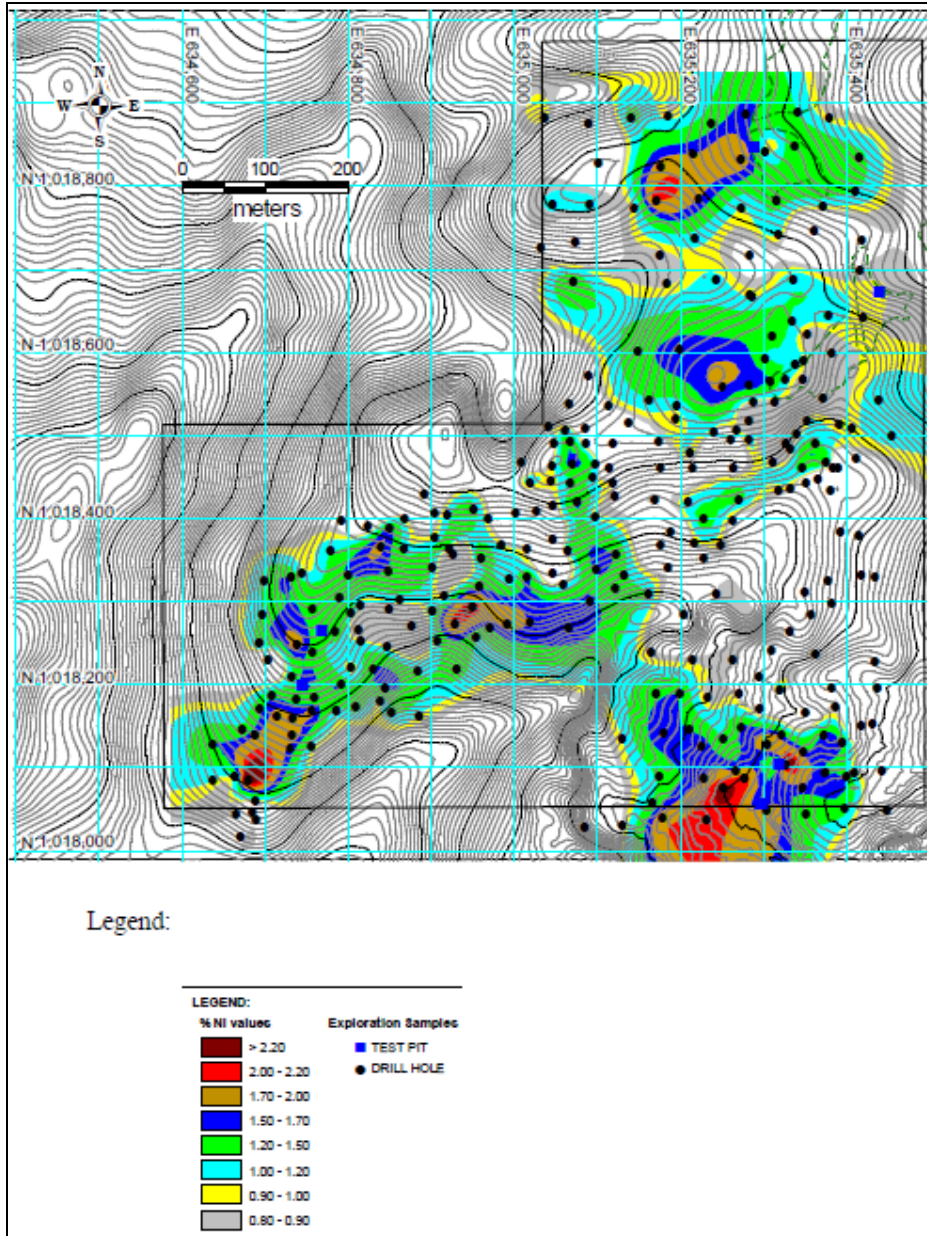


Figure 16: ISOGRAD Ni – SUPERGENE SAPROLITE.

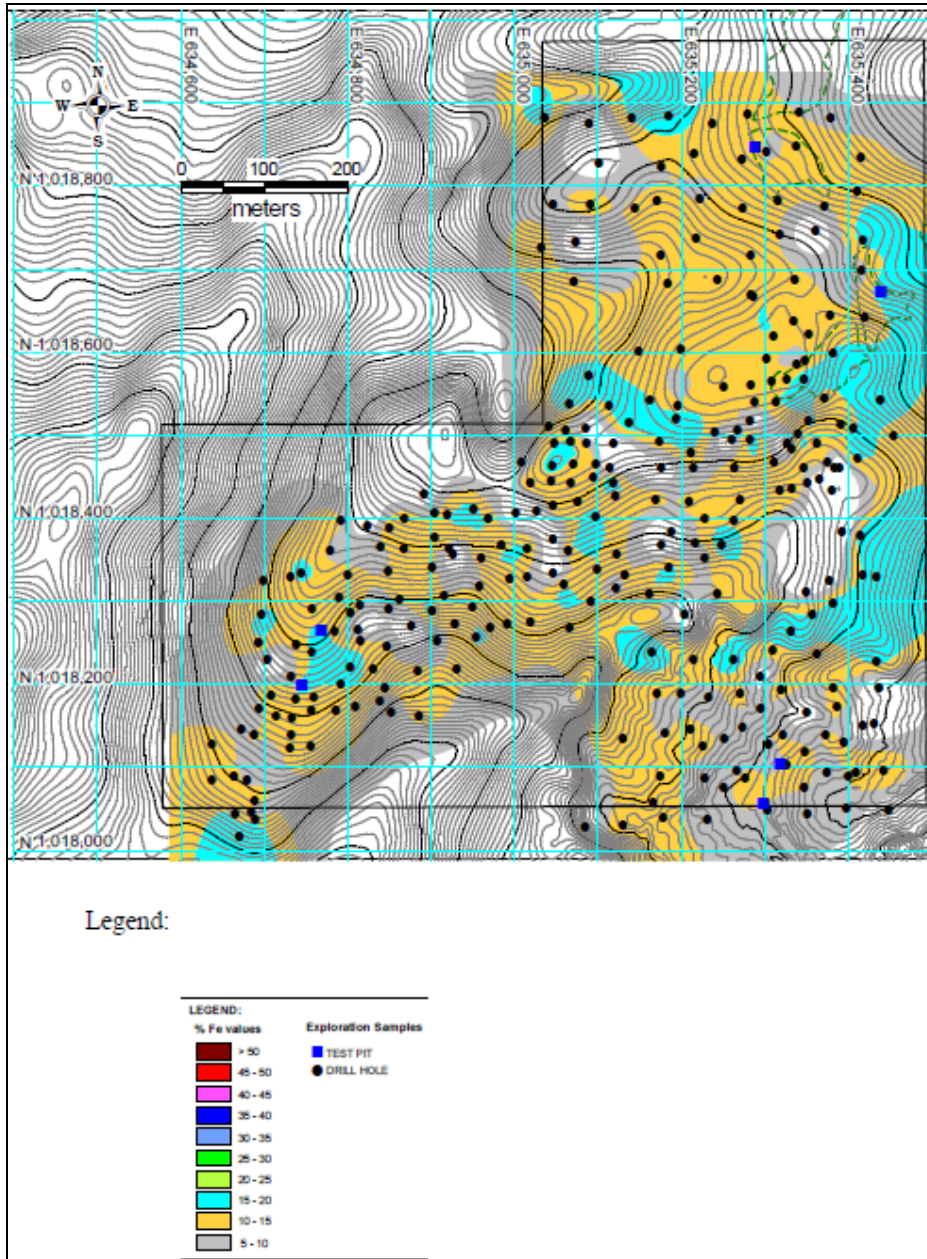


Figure 17: ISOGRAD Fe – SUPERGENE SAPROLITE.

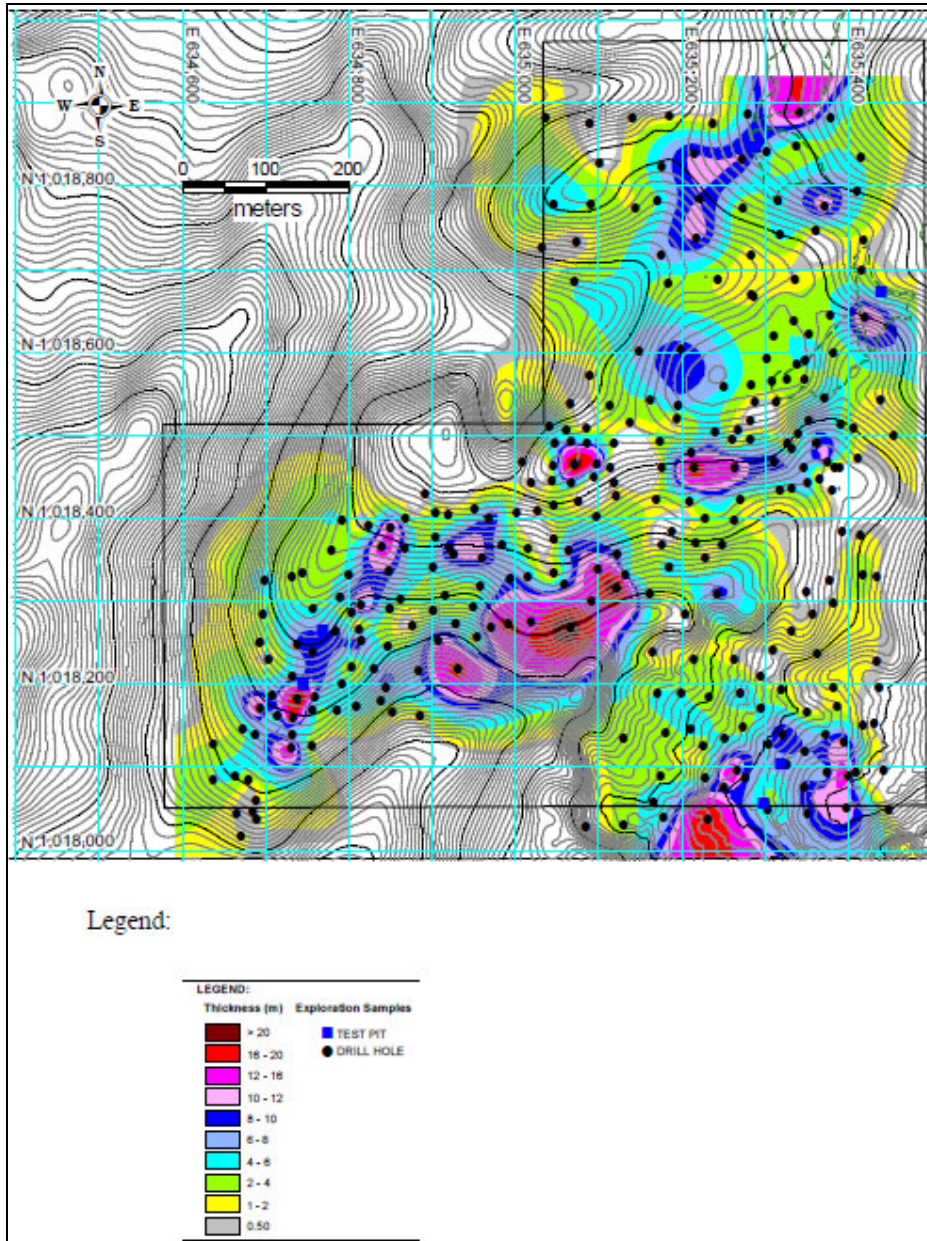


Figure 18: ISOPACH – SUPERGENE SAPROLITE.

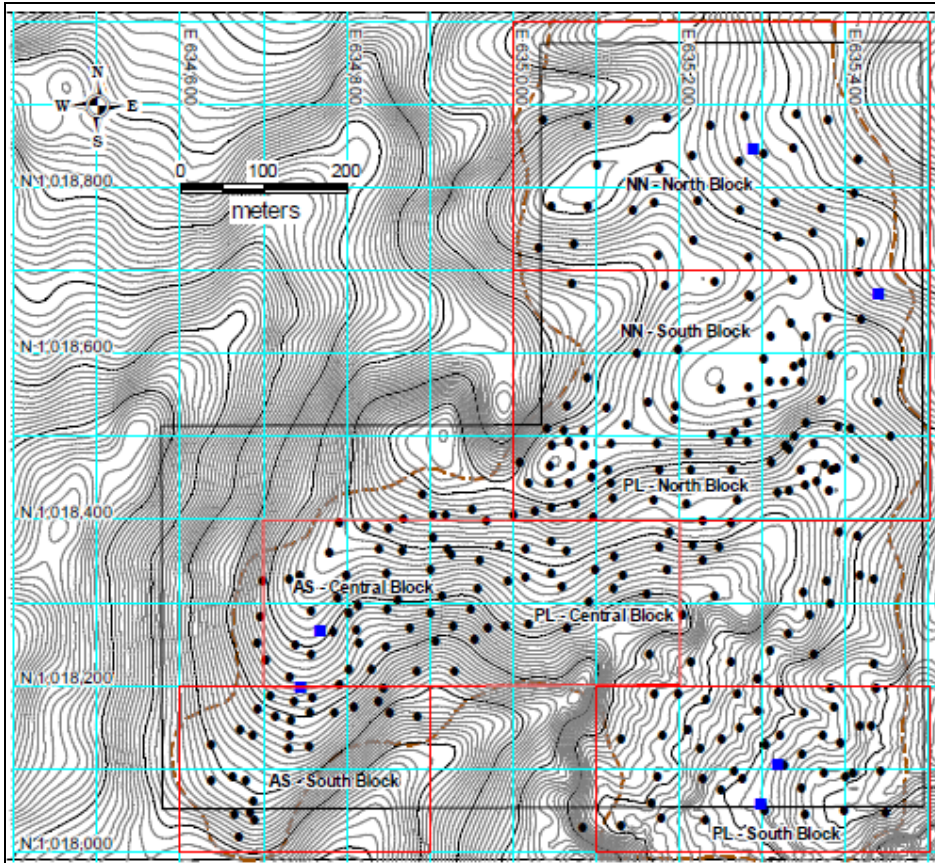


Figure 19: TARGET BLOCK AREAS FOR THE 3SSMP.

The Patricia Louise South Block initially proposed for mine development is now the bench mark for mining operations with completed grade control drill holes. The target blocks that need confirmatory drill holes for grade control purposes are based on the priority program defined as follows;

1. Narra Nickel South Block down to Patricia Louise North Block.
2. Alpha South and Patricia Louise Central Block.
3. Alpha South South Block.
4. Narra Nickel North Block.

All target blocks are programmed with confirmatory drill holes at 10 meter x 10 meter grid spacing and at 10 meter depth per hole.

### 19.1.3 Mineral Resource Estimate

Results of the depleted resource calculation for the 3 small scale mining areas are shown in Table 6.

**Table 6: Depleted mineral resources for the three SSMP's.**

	Dry Tonnes	Ni (%)	Co (%)	Fe (%)
Measured	1 782 030	1.34	0.031	13.69
Indicated	646 369	1.22	0.039	17.59
Total	2 428 399	1.31	0.033	14.73
Inferred	292 977	1.23	0.044	19.14

The undepleted breakdown by material type (as a total for the three areas) is given in Table 7 to Table 10.

**Table 7: Undepleted measured resources totalled over the three areas (DMT = dry metric tonnes; Ni, Co and Fe are percent values).**

<b>MEASURED</b>						
<b>LATERITE</b>						
<b>CUT OFF</b>	<b>VOLUME</b>	<b>DENSITY</b>	<b>DMT</b>	<b>Ni</b>	<b>Co</b>	<b>Fe</b>
> 2.00						
> 1.60	7 563	0.90	6 807	1.71	0.087	36.42
> 1.00	75 067	0.90	67 560	1.29	0.105	40.19
> 0.50	98 695	0.90	88 826	1.19	0.097	39.54
<b>LATERIZED SAPROLITE</b>						
<b>CUT OFF</b>	<b>VOLUME</b>	<b>DENSITY</b>	<b>DMT</b>	<b>Ni</b>	<b>Co</b>	<b>Fe</b>
> 2.00	19 475	0.70	13 633	2.42	0.072	18.38
> 1.60	54 164	0.70	37 915	2.02	0.055	20.61
> 1.00	111 007	0.70	77 705	1.67	0.052	21.38
> 0.50	125 244	0.70	87 671	1.57	0.051	21.29
<b>SUPERGENE SAPROLITE</b>						
<b>CUT OFF</b>	<b>VOLUME</b>	<b>DENSITY</b>	<b>DMT</b>	<b>Ni</b>	<b>Co</b>	<b>Fe</b>
> 2.00	125 900	1.10	138 490	2.20	0.024	11.34
> 1.60	452 850	1.10	498 135	1.90	0.024	11.55
> 1.00	1 261 324	1.10	1 387 456	1.51	0.025	11.54
> 0.50	1 634 032	1.10	1 797 435	1.36	0.026	11.63
<b>TOTAL</b>						
<b>CUT OFF</b>	<b>VOLUME</b>	<b>DENSITY</b>	<b>DMT</b>	<b>Ni</b>	<b>Co</b>	<b>Fe</b>
> 2.00	145 375	1.05	152 644	2.23	0.030	12.28
> 1.60	514 577	1.05	540 306	1.91	0.028	12.87
> 1.00	1 447 398	1.05	1 519 767	1.51	0.031	13.78
> 0.50	1 857 971	1.05	1 950 870	1.37	0.031	13.76

Table 8: Undepleted indicated resources totalled over the three areas.

<b>INDICATED</b>						
<b>LATERITE</b>						
<b>CUT OFF</b>	<b>VOLUME</b>	<b>DENSITY</b>	<b>DMT</b>	<b>Ni</b>	<b>Co</b>	<b>Fe</b>
> 2.00						
> 1.60	6 963	0.90	6 267	1.68	0.077	33.23
> 1.00	81 810	0.90	73 629	1.29	0.092	37.49
> 0.50	105 475	0.90	94 928	1.19	0.089	37.74
<b>LATERIZED SAPROLITE</b>						
<b>CUT OFF</b>	<b>VOLUME</b>	<b>DENSITY</b>	<b>DMT</b>	<b>Ni</b>	<b>Co</b>	<b>Fe</b>
> 2.00	15 770	0.70	11 039	2.42	0.082	18.86
> 1.60	31 456	0.70	22 019	2.10	0.066	20.57
> 1.00	80 651	0.70	56 456	1.65	0.058	21.93
> 0.50	96 488	0.70	67 542	1.52	0.055	22.05
<b>SUPERGENE SAPROLITE</b>						
<b>CUT OFF</b>	<b>VOLUME</b>	<b>DENSITY</b>	<b>DMT</b>	<b>Ni</b>	<b>Co</b>	<b>Fe</b>
> 2.00	18 193	1.10	20 012	2.15	0.023	9.33
> 1.60	69 955	1.10	76 950	1.86	0.025	10.85
> 1.00	326 940	1.10	359 634	1.40	0.025	11.55
> 0.50	488 922	1.10	537 814	1.23	0.024	11.83
<b>TOTAL</b>						
<b>CUT OFF</b>	<b>VOLUME</b>	<b>DENSITY</b>	<b>DMT</b>	<b>Ni</b>	<b>Co</b>	<b>Fe</b>
> 2.00	33 962	1.05	35 661	2.28	0.050	13.75
> 1.60	108 373	1.05	113 792	1.92	0.040	15.11
> 1.00	489 401	1.05	513 871	1.42	0.041	17.60
> 0.50	690 885	1.05	725 429	1.26	0.038	17.21

Table 9: Undepleted measured+indicated resources totalled over the three areas.

<b>MEASURED + INDICATED</b>						
<b>LATERITE</b>						
<b>CUT OFF</b>	<b>VOLUME</b>	<b>DENSITY</b>	<b>DMT</b>	<b>Ni</b>	<b>Co</b>	<b>Fe</b>
> 2.00						
> 1.60	14 526	0.90	13 074	1.70	0.083	34.89
> 1.00	156 877	0.90	141 189	1.29	0.098	38.78
> 0.50	204 170	0.90	183 753	1.19	0.093	38.61
<b>LATERIZED SAPROLITE</b>						
<b>CUT OFF</b>	<b>VOLUME</b>	<b>DENSITY</b>	<b>DMT</b>	<b>Ni</b>	<b>Co</b>	<b>Fe</b>
> 2.00	35 245	0.70	24 671	2.42	0.076	18.59
> 1.60	85 620	0.70	59 934	2.05	0.059	20.60
> 1.00	191 658	0.70	134 161	1.66	0.054	21.61
> 0.50	221 732	0.70	155 212	1.55	0.053	21.62

SUPERGENE SAPROLITE						
CUT OFF	VOLUME	DENSITY	DMT	Ni	Co	Fe
> 2.00	144 093	1.10	158 502	2.20	0.024	11.09
> 1.60	522 804	1.10	575 085	1.89	0.024	11.45
> 1.00	1 588 264	1.10	1 747 090	1.49	0.025	11.54
> 0.50	2 122 954	1.10	2 335 249	1.33	0.025	11.67
TOTAL						
CUT OFF	VOLUME	DENSITY	DMT	Ni	Co	Fe
> 2.00	179 337	1.05	188 304	2.24	0.034	12.56
> 1.60	622 950	1.05	654 098	1.91	0.030	13.26
> 1.00	1 936 799	1.05	2 033 639	1.49	0.034	14.74
> 0.50	2 548 856	1.05	2 676 299	1.34	0.033	14.70

Table 10: Undepleted inferred resources totalled over the three areas.

INFERRED						
LATERITE						
CUT OFF	VOLUME	DENSITY	DMT	Ni	Co	Fe
> 2.00						
> 1.60	3 893	0.90	3 503	1.69	0.075	33.30
> 1.00	47 771	0.90	42 994	1.24	0.087	36.16
> 0.50	55 980	0.90	50 382	1.23	0.089	36.33
LATERIZED SAPROLITE						
CUT OFF	VOLUME	DENSITY	DMT	Ni	Co	Fe
> 2.00	12 157	0.70	8 510	2.48	0.082	18.88
> 1.60	19 685	0.70	13 779	2.21	0.069	20.68
> 1.00	41 650	0.70	29 155	1.76	0.064	22.48
> 0.50	51 824	0.70	36 277	1.58	0.060	22.71
SUPERGENE SAPROLITE						
CUT OFF	VOLUME	DENSITY	DMT	Ni	Co	Fe
> 2.00	1 482	1.10	1 630	2.20	0.022	11.16
> 1.60	12 793	1.10	14 073	1.90	0.025	11.72
> 1.00	94 626	1.10	104 089	1.34	0.019	11.67
> 0.50	171 222	1.10	188 344	1.13	0.024	12.44
TOTAL						
CUT OFF	VOLUME	DENSITY	DMT	Ni	Co	Fe
> 2.00	13 640	1.05	14 321	2.45	0.076	18.04
> 1.60	36 371	1.05	38 189	2.04	0.054	18.88
> 1.00	184 047	1.05	193 249	1.41	0.047	20.47
> 0.50	279 026	1.05	292 977	1.23	0.044	19.14

The amount of depleted material (Table 11) was derived from shipped and stockpile tonnes as well as the material that was used as base matting for the stockpile. The estimate of the amount of depletion is based on survey wireframes.

**Table 11: Estimate of extracted material.**

	<b>Wet Tonnes</b>	<b>Moisture</b>	<b>Dry Tonnes</b>	<b>Ni (%)</b>	<b>Co (%)</b>	<b>Fe (%)</b>
MEASURED	252 000	33%	168 840	1.66	0.032	14.55
INDICATED	118 000	33%	79 060	1.65	0.029	14.15
TOTAL	370 000	33%	247 900	1.66	0.031	14.42

Moisture content is based on the comparison of wet and dry tonnes shipped which compares favourably to the moisture measurements on the exploration holes.

An amount 228152 WMT (154448 DMT) has been shipped and 114865 WMT (77758 DMT) remains on stockpile.

228152 WMT + 114865 WMT = 343017 WMT  
 370000 WMT - 343017 WMT = 27983 WMT which is accounted for as stockpile base or matting.

## 19.1.4 Resource Parameters

### 19.1.4.1 Geological Solids Modelling

The model was built by first creating a model of each rock type thickness from the interpreted drillhole logs then subtracting that thickness from the previous rock type floor. Thus, LAT thickness was subtracted from the topography surface to create a LAT floor. The process was repeated for LAT SAP and SSAP. The topography surface and the LAT floor were joined to create a series of solids which approximately parallel the topography.

### 19.1.4.2 Block Modelling

Set up of the block model for the 3 small scale mining areas is presented in Table 12.

**Table 12: Block model setup for the three SSMP's.**

GEOMETRY	
BLOCK SIZE	5m x 5m x 3m
EASTING	634534.5
NORTHING	1017897.5
ELEVATION	480.0
ORIENTATION	0.0
No. of Columns	210
No. of Rows	242
No. of Levels	86

#### ***19.1.4.3 Grade Modelling***

The grade distribution method used in this exercise was an Inverse distance weighting to the 2nd power (ID2).

A first pass of approximately 38 meters search range was used in the grade estimation while a second pass was employed to update any blocks with zero grades.

#### ***19.1.4.4 Block Model Plans***

The following block models in % Ni and % Fe grades for different rock type are shown in Figure 20 to Figure 25.

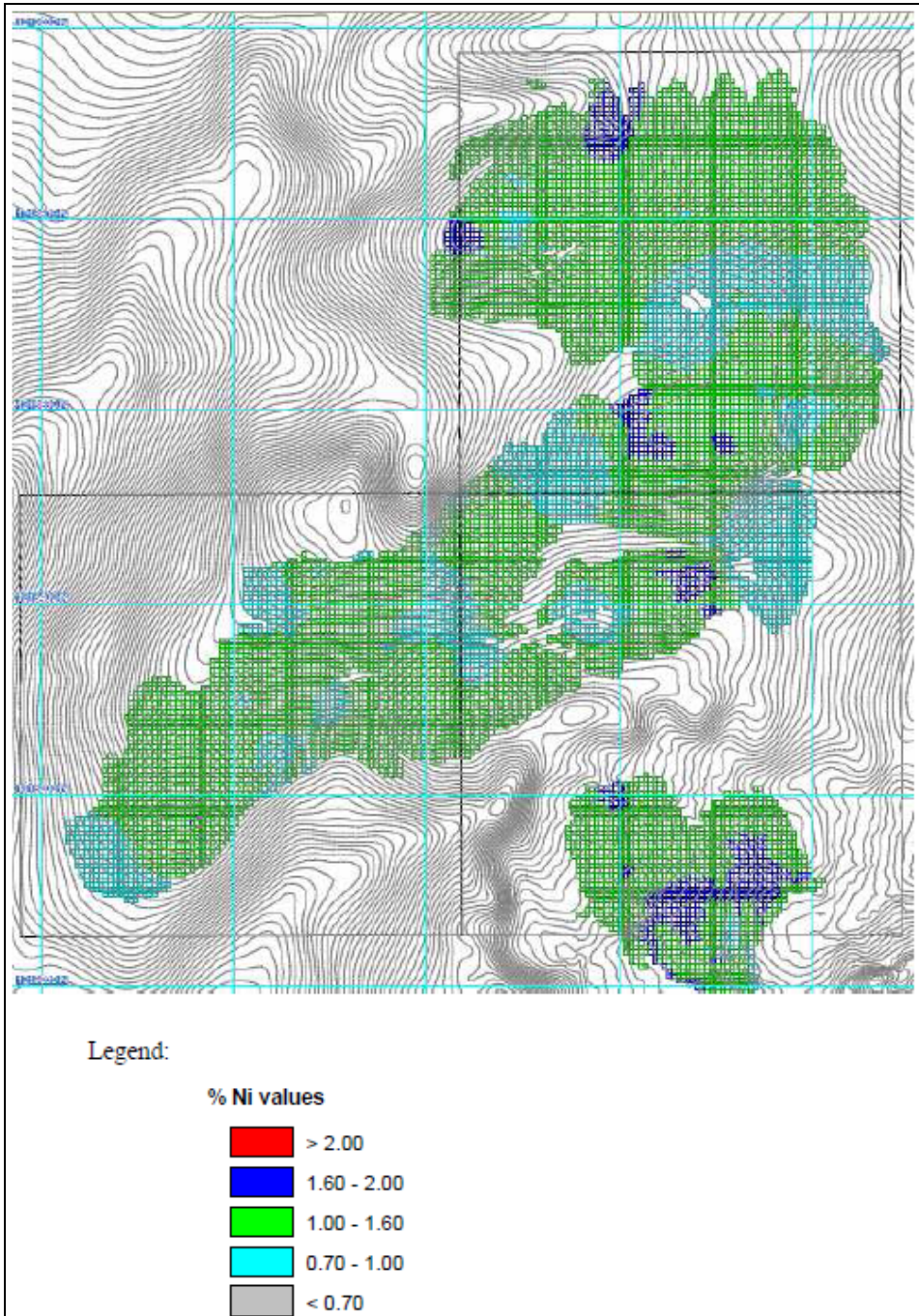


Figure 20: PLAN MAP: % Ni GRADE FOR LATERITE (Blood Red).

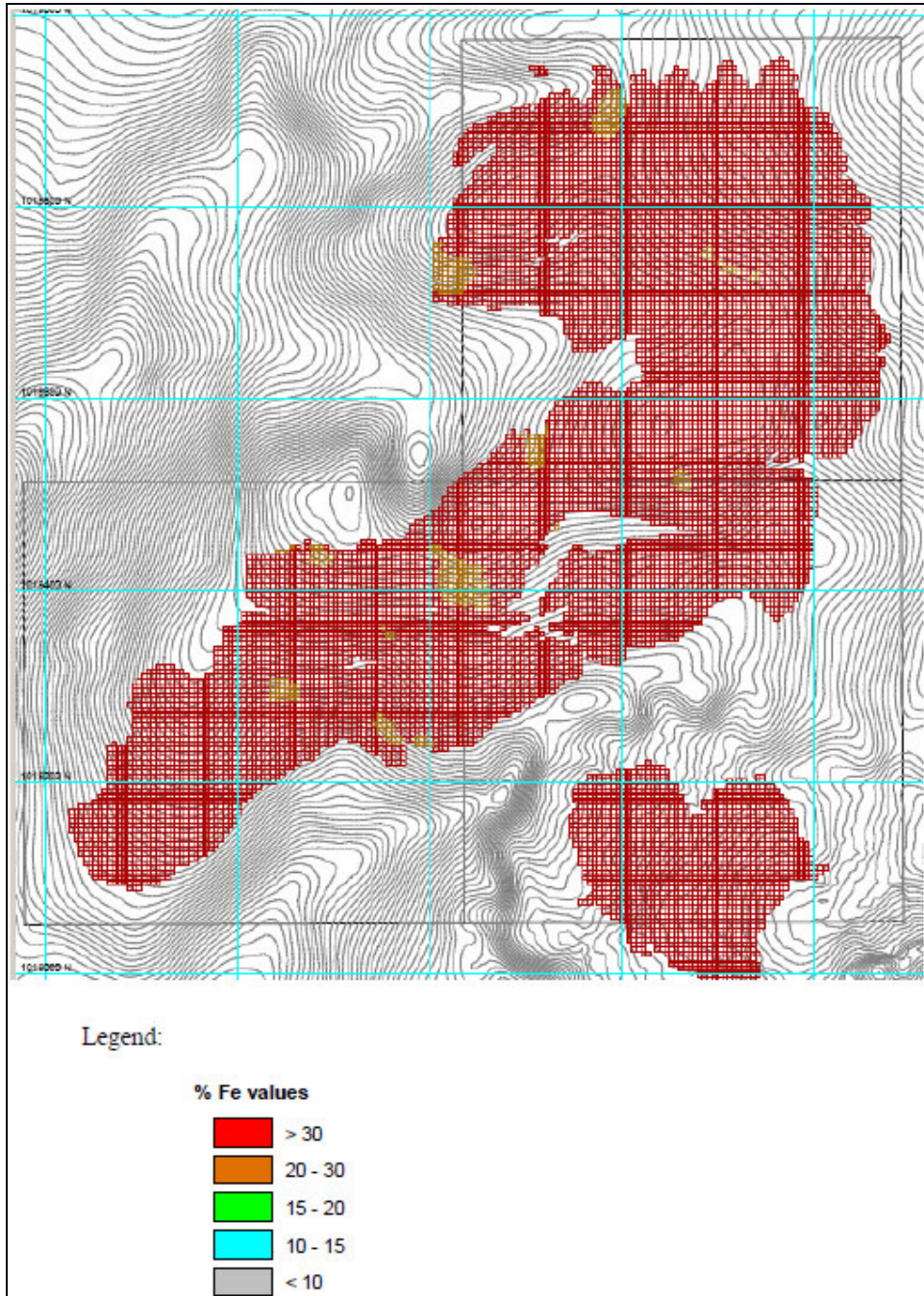


Figure 21: PLAN MAP: % Fe GRADE FOR LATERITE (Blood Red).

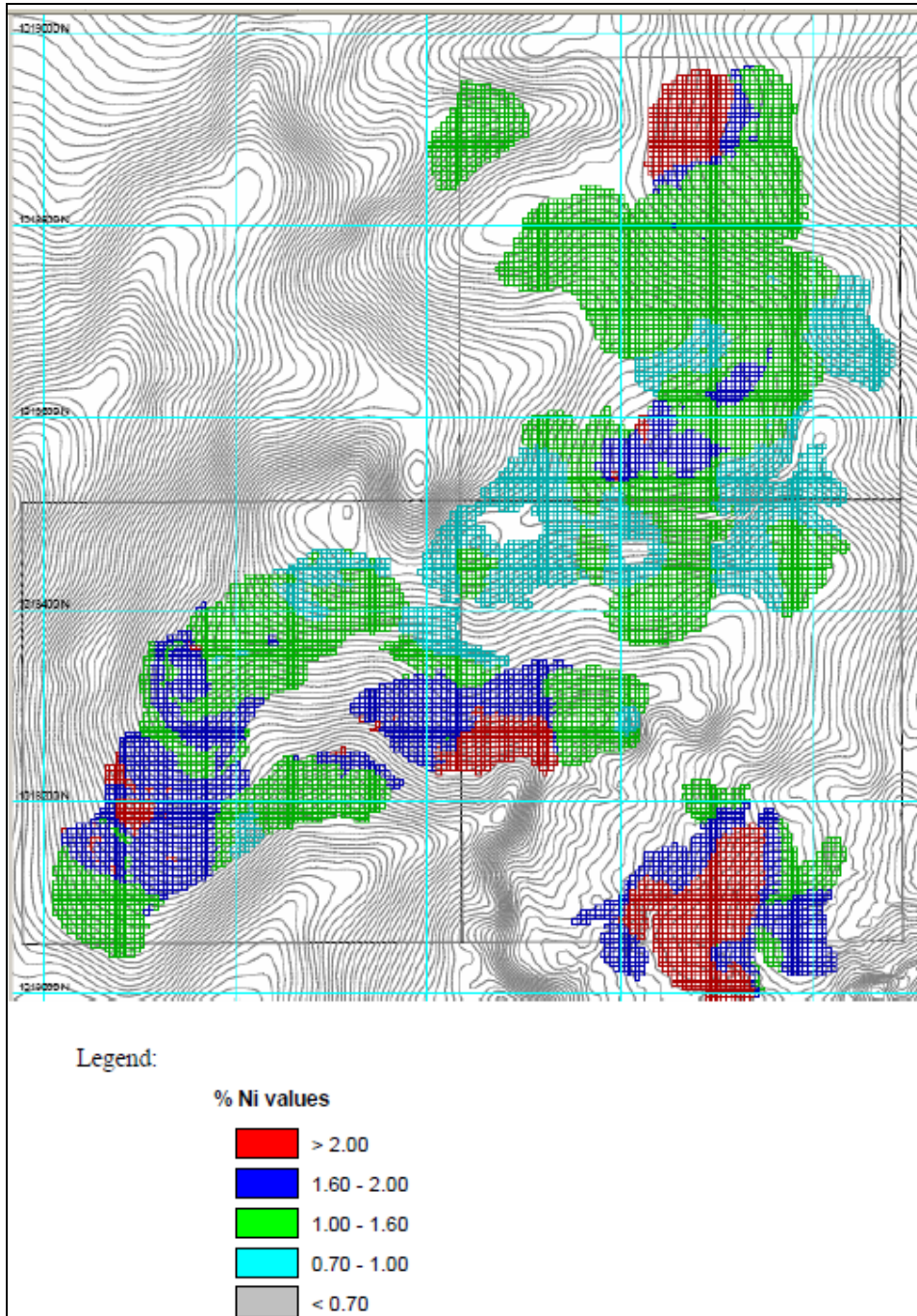


Figure 22: PLAN MAP: % Ni GRADE FOR LATERIZED SAPROLITE.

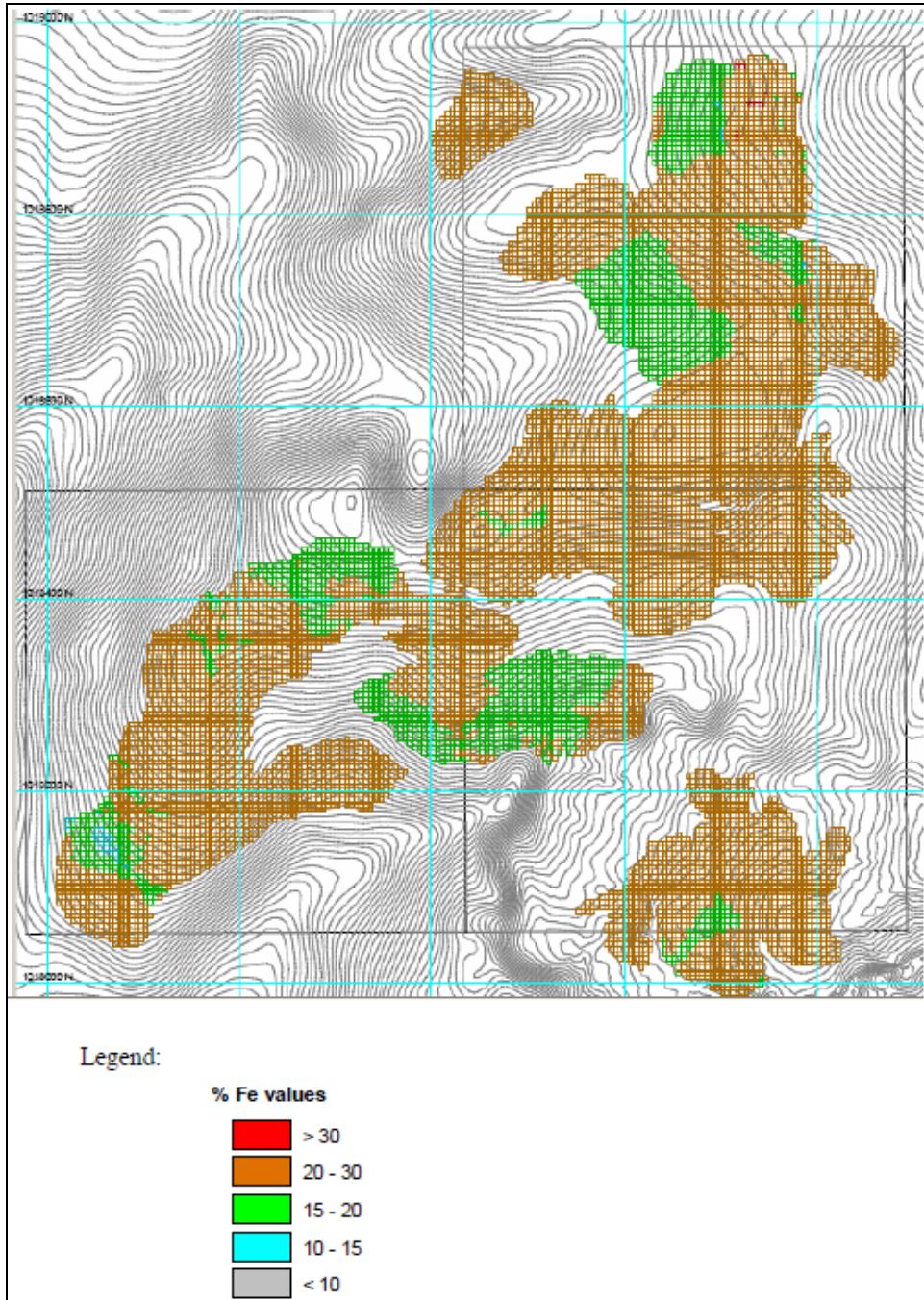


Figure 23: PLAN MAP: % Fe GRADE FOR LATERIZED SAPROLITE.

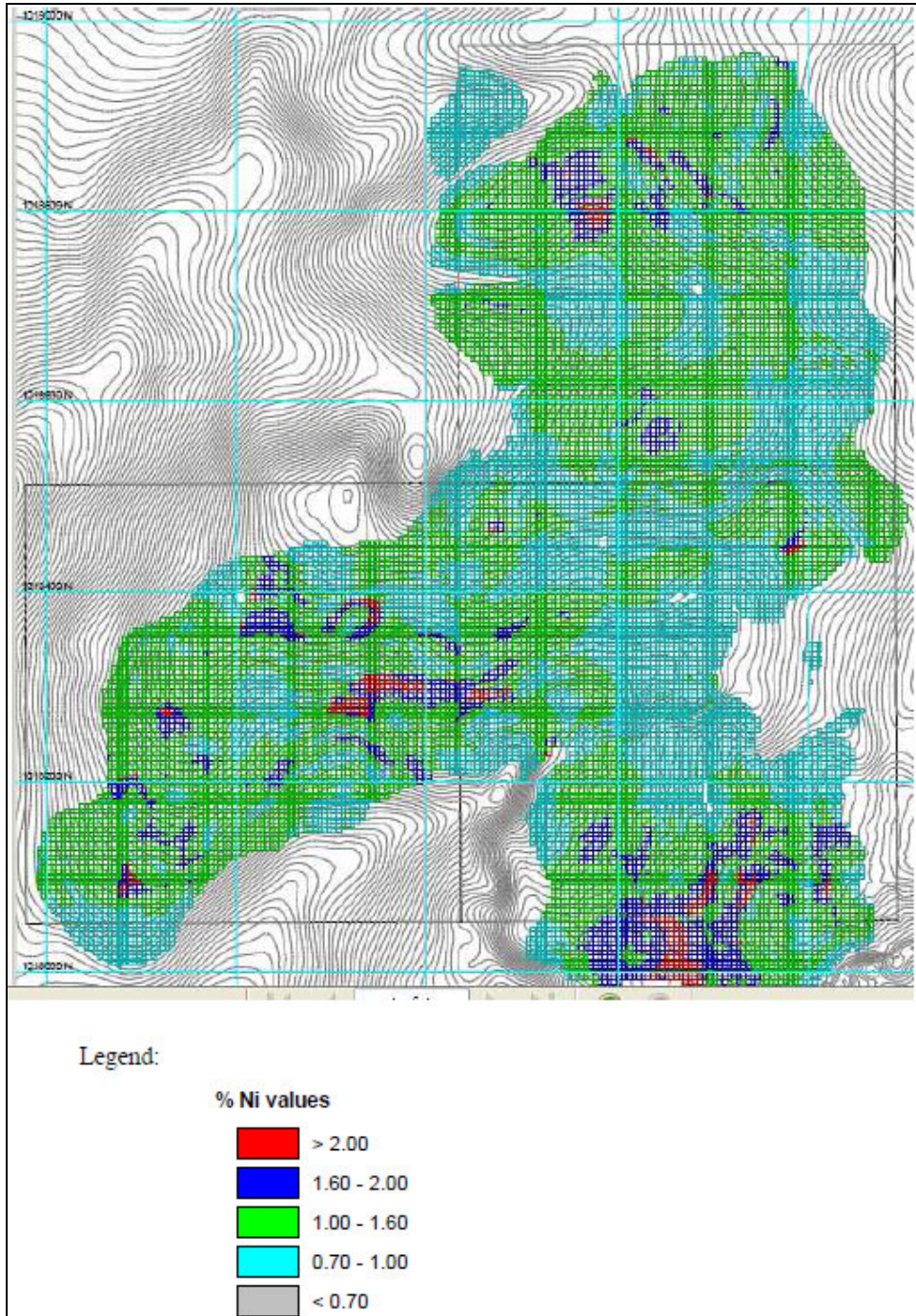


Figure 24: PLAN MAP: % Ni GRADE FOR SUPERGENE SAPROLITE.

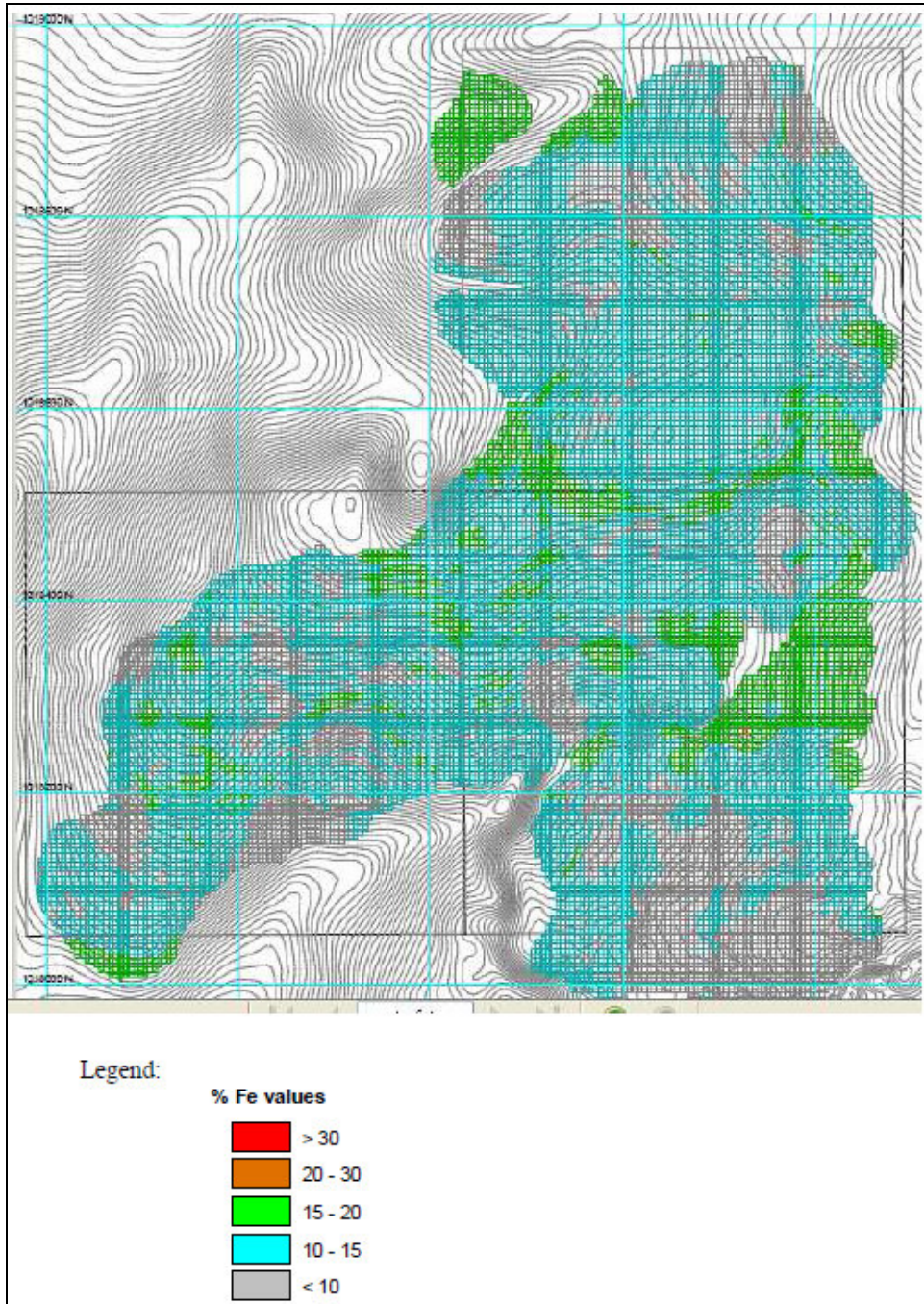


Figure 25: PLAN MAP: % Fe GRADE FOR SUPERGENE SAPROLITE.

## 19.2 LQS Mineral Resource Audit

Three Gemcom wireframes defined the mineralisation. No cutting or trimming of high grade values was performed on the 1m drillhole samples, which resulted in Ni grades higher than 5.0% being used in the estimate. Limited variographic work was provided by the practitioner; LQS agrees with the search ellipsoid parameters utilized.

Globally, the current blockmodel is a fair representation of the data. It is however poor locally, and thus inadequate for mine planning purposes. Swath analyses indicate that the blockmodels are, globally, a fair representation of the insitu resources for the Alpha Project.

The mineral resources were classified into Measured, Indicated and Inferred mineral resources by applying different search ellipsoids.

### 19.2.1 Resource Model Audit

The Alpha estimate was estimated into three mineralization wireframes using the Gemcom™ package. Drillhole samples were sampled regularly in 1m lengths but no cutting or trimming of high grade values was performed; thereby including Ni grades higher than 5.0% in the estimate. Variographic work was not provided yet LQS agrees with the search ellipsoid dimensions utilized.

The current blockmodel contains too much variability and thus, is considered as being insufficiently smoothed. Cross validation tests revealed that the block-estimated grades have no similarity to the grades contained within them. The practitioner has provided no cross validation work and has neither detailed nor substantiated any estimation parameters.

The current blockmodel is a fair representation of the data globally, but poor locally and thus inadequate for mine planning purposes. However, from the swath analyses, the author concludes that the blockmodels are, globally, a fair representation of the insitu resources for the Alpha project.

The resources were classified by applying a 35 x 35 x 6m search ellipsoid for Measured, 60 x 60 x 10m for Indicated, and a 75 x 75 x 16m search ellipsoid size for Inferred resources.

### 19.2.2 Information Received

A digital database was received from Mr. W Rosario, including a complete drillhole database (in Excel™ format), and blockmodels in ASCII format, as well as mineralization wireframes (in DXF format); see Figure 26.

A report by Mr. Rosario detailing the resource results was also received (Rosario W, 2007). This document served as a guide throughout this audit exercise; although the document contained little detail regarding the methodology for generating the estimates.

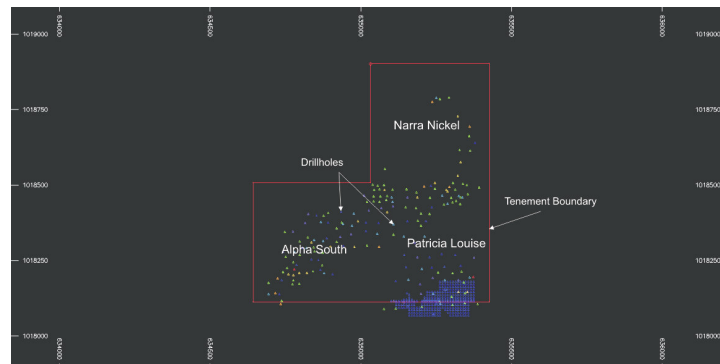
### 19.2.3 Approach

Wireframes were imported in Datamine™; three (3) separate solids were received;

- The laterite horizon,
- The laterized saprolite horizon,
- The enriched supergene saprolite horizon.

No problems involving triangulation crossovers were observed in any of the imported data.

Figure 26: Plan Plot of Study Area



The three blockmodels were imported into Datamine™ using the “ODBC” import facility. The PROTOM (project parameter file) was specified by Mr. Rosario in a separate document (Word document received from Mr. W. Rosario entitled “Block Model Setup.doc”). Once loaded, the blockmodels contained blocks with zero grade values in addition to overlapping blocks between the 3 models. The zero grade blocks were removed from the models and then the estimated blocks whose centroids were contained within the received mineralized wireframes were extracted. In this fashion, no block overlaps resulted in the final combined blockmodel, although a ROCK field was retained in order to denote in which mineralized horizon each individual block occurred. It would appear as if the block-overlaps were mainly due to the practitioner using partial blocks in his estimation.

The drillhole database consisted of three (3) worksheets, one with assays, and another with the drillhole collars and the third with drillhole surveys. All three files were imported

into Datamine™ using the “ODBC” facility, and three separate files were created, a collar file, a survey file, and an assay file. These separate files were then sorted and combined and finally desurveyed to produce a Datamine™ drillhole file. The holes were displayed against the wireframes and the blockmodels. All files imported without issue.

## 19.2.4 Data study

### 19.2.4.1 Naïve Statistics

The drillhole database was exported into GSLIB in order for detailed statistics to be done. Statistics focused on Ni, Co and Fe grades. The data were separated using the wireframes as controls; therefore, the individual mineralization horizons were utilized in generating files for the laterite, laterized saprolite and saprolite horizons.

The individual wireframed zones were then discretized into blocks of size identical to that used for the resource estimation; 5 x 5 x 3 (x, y, z). These blocks were then imported into GSLIB, and the drillholes parsed through it. Univariate statistics are presented Table 13 to Table 15 for Ni, Co and Fe respectively, for each of the mineralized horizons.

**Table 13. Naïve Statistics on Samples - Ni**

STATISTIC	Rocktype			
	Laterite	Lat/Sap	Saprolite	All
Number of (block) Data	343	229	3119	6625
Mean (%)	1.51	1.50	1.36	0.95
Standard Deviation	0.51	0.50	0.63	0.71
Coeff. Of Variation	0.34	0.33	0.46	0.74
Maximum (%)	2.85	2.98	5.14	5.14
Upper Quartile (%)	1.85	1.85	1.82	1.53
Median (%)	1.46	1.49	1.36	0.75
Lower Quartile (%)	1.14	1.13	0.87	0.29
Minimum (%)	0.51	0.38	0.15	0.01
Number of Holes	217	185	482	519

This data is also included as boxplots (Appendix 1).

**Table 14. Naïve Statistics on Samples - Co**

STATISTIC	Rocktype			
	Laterite	Lat/Sap	Saprolite	All
<b>Number of Data</b>	333	209	2776	5983
<b>Mean (%)</b>	0.07	0.05	0.02	0.02
<b>Standard Deviation</b>	0.05	0.02	0.03	0.03
<b>Coeff. Of Variation</b>	0.67	0.50	1.15	1.25
<b>Maximum (%)</b>	0.60	0.20	0.51	0.60
<b>Upper Quartile (%)</b>	0.09	0.06	0.03	0.03
<b>Median (%)</b>	0.07	0.05	0.02	0.01
<b>Lower Quartile (%)</b>	0.04	0.03	0.01	0.01
<b>Minimum (%)</b>	0.01	0.01	0.01	0.01
<b>Number of Holes</b>	207	165	419	456

The naïve statistics for Co demonstrate that values within the laterite and laterized saprolite are very similar; with saprolite containing higher value outliers (note the much greater coefficient of variation value);

**Table 15. Naïve Statistics on Samples - Fe**

STATISTIC	Rocktype			
	Laterite	Lat/Sap	Saprolite	All
<b>Number of Data</b>	343	229	3120	6621
<b>Mean (%)</b>	29.88	23.62	11.93	11.22
<b>Standard Deviation</b>	12.22	9.70	6.36	8.08
<b>Coeff. Of Variation</b>	0.41	0.41	0.53	0.72
<b>Maximum (%)</b>	50.53	50.06	50.76	50.76
<b>Upper Quartile (%)</b>	39.30	27.78	14.22	12.74
<b>Median (%)</b>	32.24	23.13	10.26	8.47
<b>Lower Quartile (%)</b>	19.77	16.74	7.83	6.23
<b>Minimum (%)</b>	5.34	6.37	1.16	1.16
<b>Number of Holes</b>	217	185	482	519

The naïve statistics for Fe reveals greater values within the laterite, followed by lesser values within the laterized saprolite, with much lesser values within the saprolite (Table 15).

Frequency distribution plots and cumulative probability plots were compared for Ni and Fe for each of the three mineralized horizons in order to substantiate what is revealed within the statistical tables.

Figure 27: Frequency Distribution Plot per Rocktype – Ni (%)

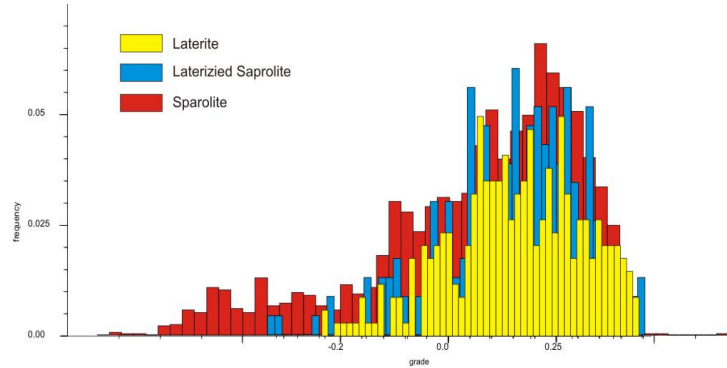
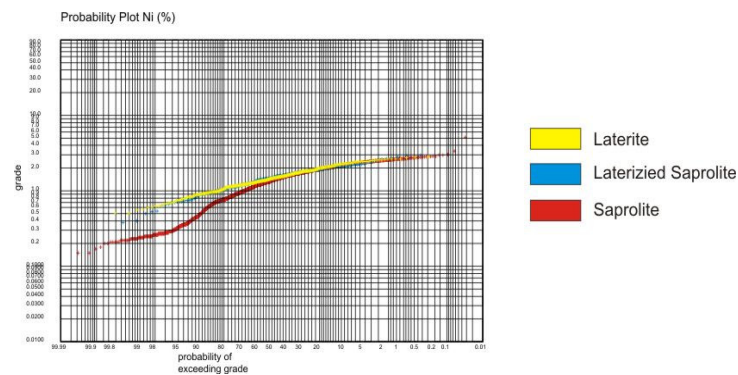


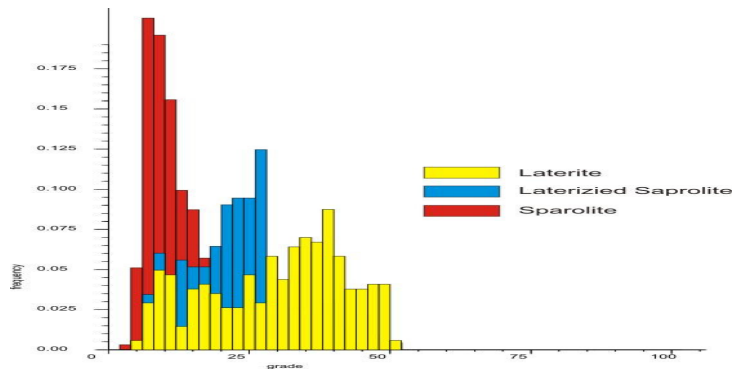
Figure 27 was plotted using Ni logarithms. When the three distributions are compared, the saprolite data reveals a slightly longer tail compared to the other datasets, whilst Ni distribution within the laterite and laterized saprolite appear identical. Logarithmic probability plots for each distribution were superimposed on one another and conclusively reveal that the Ni distribution is identical within the laterite and laterized saprolite but not in the saprolite horizon; see Figure 28. This demonstrates that laterite and laterized saprolite Ni datasets can be combined and thus preclude the use of a hard boundary between these two horizons. Ni occurring within the saprolite, however, must be estimated separately.

Figure 28: Logarithmic Probability Plot – Ni (%)



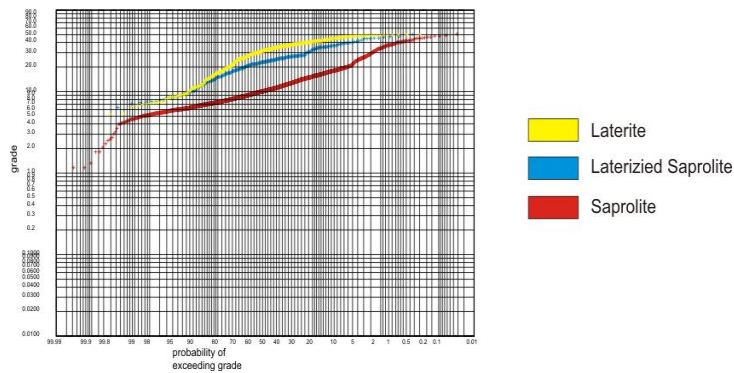
Frequency distribution plots were generated for Fe. When the three distributions are compared it reveals that all three populations are distinct and therefore cannot be concatenated (Figure 29).

Figure 29: Frequency Distribution Plot per Rocktype – Fe (%)



Logarithmic probability plots for each distribution were superimposed on one another and conclusively reveal that the Fe distributions are different within the laterite, laterized saprolite and the saprolite horizons (Figure 30). This demonstrates that the three datasets cannot be combined and thus suggest the use of a hard boundary between these three horizons.

Figure 30: Logarithmic Probability Plot – Fe (%)



Although a specific geological report did not cover this aspect, all three zones were differentiated in the drill logs.

### 19.2.4.2 Compositing

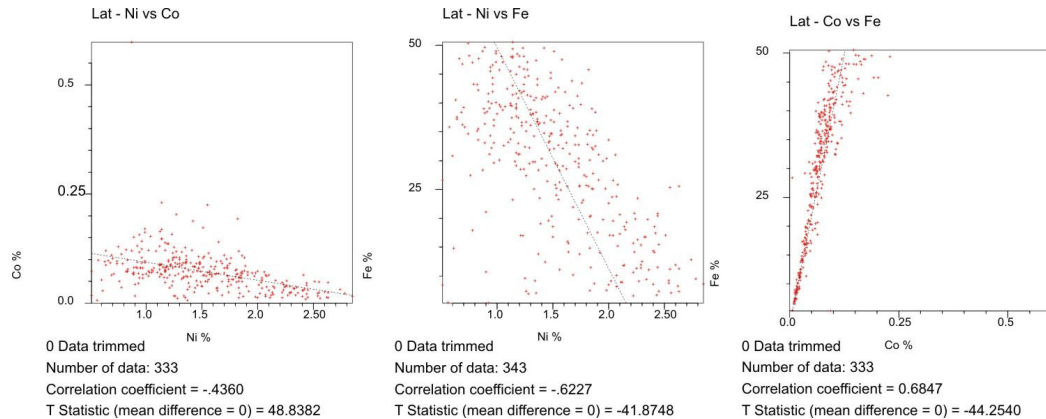
The received report did not allude to whether the datasets were composited or not. However, the drillhole database, contained within the mineralized wireframes were consistently sampled at 1m intervals; equivalent to regular 1m compositing.

### 19.2.4.3 Bivariate Statistics

The uncut 1m samples were then used to do comparative statistics between each metal for each mineralized horizon.

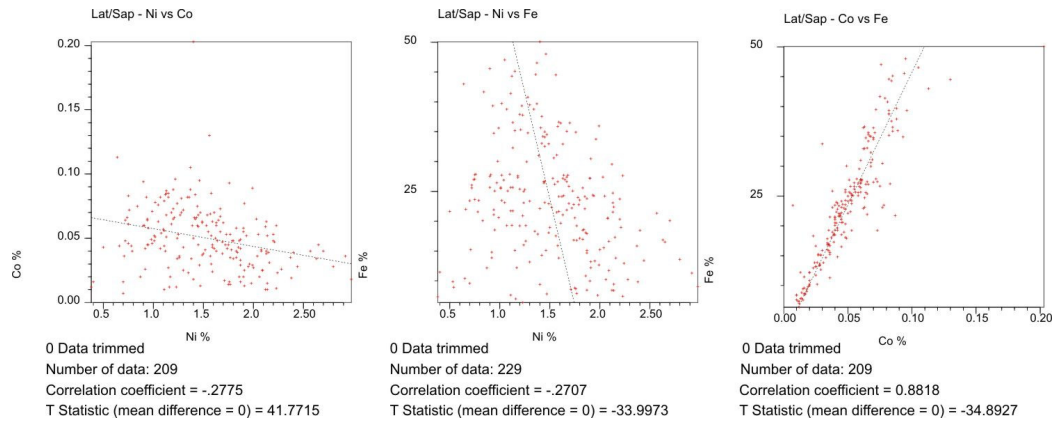
The comparative statistics revealed strong correlations between all metals for all horizons. Ni revealed little negative correlation with Co, and a greater correlation with Fe. Co revealed a strong positive correlation with Fe. The scatter plots are shown in Figure 31 within the laterite horizon.

Figure 31: Bivariate Scattergrams - Laterite



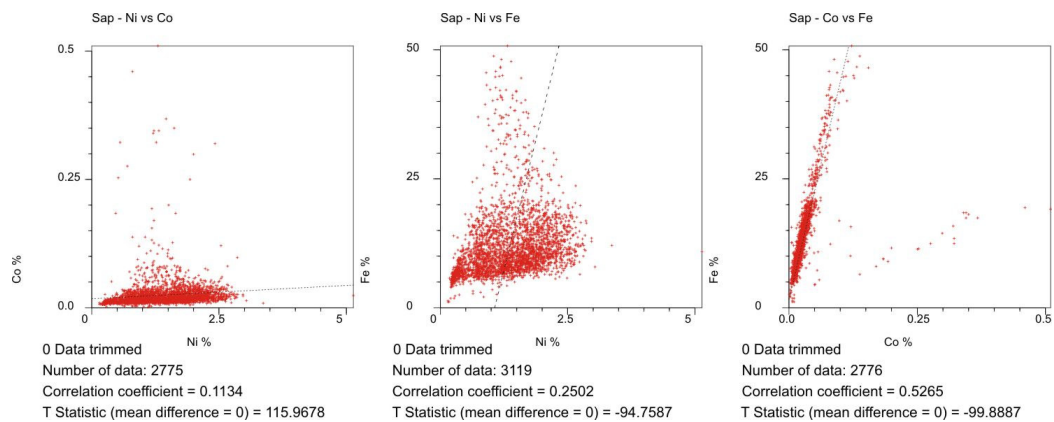
Within the Laterized saprolite horizon, Ni displays weak correlation with Co and Fe, whilst Co reveals a moderately-strong positive correlation with Fe (Figure 32).

**Figure 32: Bivariate Scattergrams - Laterized Saprolite**



Within the enriched laterized saprolite, Ni displays weak correlation with Co and a slightly stronger correlation with Fe. Co displays a strong correlation with Fe (Figure 33).

**Figure 33: Bivariate Scattergrams - Saprolite**



Within the enriched supergene saprolite (“saprolite”), Ni displayed weak correlations with Co and Fe, whilst a moderate correlation is revealed with Co and Fe.

#### 19.2.4.4 Cutting Statistics

Within the documentation received, it was stated that no cutting (“grade capping”) was done. No statistical support was provided in the documentation to substantiate this

decision and the author of this audit emphasizes that there are various sets of tools that allows one to assess appropriate cutting thresholds.

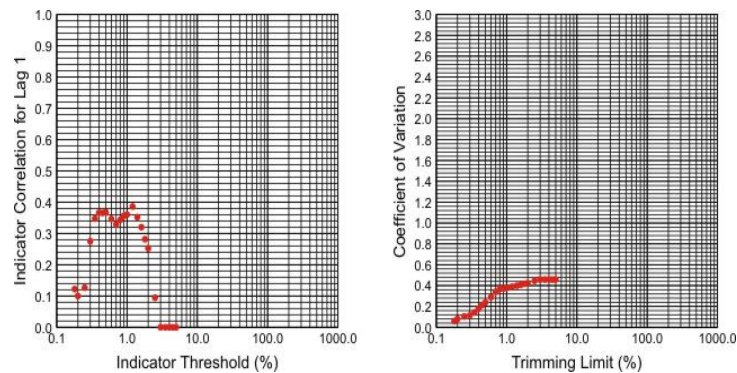
Although the practice of cutting or trimming values is a much debated point, the accepted norm in resource grade modeling is to cut erratic grade values. The basic fact is that regardless of what is done to the data in order to perform additional statistics (i.e. working with logarithms of the data); the outliers are still contained in the data and will have some sort of exaggerated influence on the result.

In this audit cutting statistics were performed with the help of cumulative log probability plots, indicator correlation for lag 1 plots, coefficient of variation plots and finally percent metal contained plots. It should be noted that these are merely guidelines and the data displayed in the following figures are for Ni within the saprolite horizon only.

The indicator correlation for lag 1 plots show the correlation between samples for the first lag set. Plotting this indicator against increasing minimum thresholds for Ni, Co or Fe grades leads to a line tending closer towards zero. In other words, at ever increasing thresholds of Ni, Co or Fe grades, there are fewer and fewer samples of similar grade. At this point, it indicates a lack of correlation between samples within the first lag set, and suggests an ideal cutting limit for assay values; see Figure 34, left plot.

The coefficient of variation plots shows the change in this coefficient with increasing Ni, Co or Fe grades. A rapid change in this coefficient indicates a rapid change in the standard deviation and/or a change in the mean; this suggests an ideal cutting limit for Ni, Co or Fe grades; see Figure 34, right plot.

**Figure 34: Cutting Statistics**

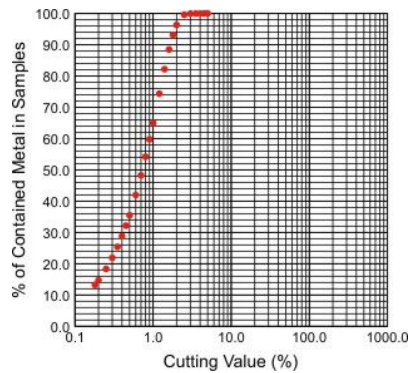


Kinks, plateaus and/or changes in the cumulative log probability plots also suggest changes in populations (perhaps subpopulations) and serve as a good indicator of cutting limits for Au grades. A slightly different plot is the percent of contained metal in samples versus increasing trimming levels for metal grades. This plot enables one to check how much metal is being lost to cutting at a certain Ni, Co or Fe grade thresholds.

The two plots above clearly show that 2.5% is an appropriate cutting threshold for Ni within the saprolite. The indicator of correlation for lag 1 shows the similarity of grade is practically nonexistent at grades greater than 3.0%. The coefficient of variation plot above supports this threshold by revealing a sudden jump, or gap, in the data at this limit.

In order to make a preliminary assessment on the impact of this cutting threshold (or any other for that matter), another plot was generated, similar to the probability plot (Figure 35).

**Figure 35: Contained Metal – Ni (%)**



The plot tells us what percentage of the contained metal (Ni) would be affected by cutting the data at a particular threshold. It shows that about 3% of the metal contained in the samples is greater than 2.5% Ni; thus a cutting limit of 2.5% would reduce the overall estimated amount of metal by a similar percentage.

Table 16 lists the effect of the cutting threshold suggested by all methodologies described.

**Table 16. Effects of Cutting**

Rocktype	Metal	Limit (%)	# of Original Data	# of Comps cut	% of Data
Saprolite	Ni	2.50	3119	100	3.31
	Co	0.35	2776	4	0.14
	Fe	50.00	3120	1	0.03

The cutting exercise reveals that the metals should have been trimmed prior to estimation within the saprolite horizon. The impact of not cutting grade outliers on the final estimates with regards to Co and Fe would be of little significance, although the author suggests that the final estimated Ni grade within the saprolite horizon might be over-estimated. Grade cutting determination plots are presented in Appendix 2: Grade Cutting Determination Plots).

### 19.2.5 Variography

Some variographic work was done by the practitioner, but details were not provided.

The author of this audit undertook some omni directional variographic analysis in order to assess the findings of the practitioner. In this audit, pairwise relative variograms were generated on the uncut enriched supergene saprolite dataset. The modelled omni-directional variograms fitted concur with a first range of 35m albeit they reveal a second range of about 125m; the practitioner used more conservative dimensions of 75 x 75 x 16m (major, minor and vertical) in the second pass of estimation.

The audit results concur with the search ellipsoid dimensions selected by the practitioner.

#### 19.2.5.1 Estimation Methodology

The blocks were estimated using an omni directional search strategy. The dimensions of the search ellipsoid used were 35 x 35 x 6m (major, minor, and vertical). No mention was made of the minimum and maximum number of samples required to complete an estimate. These dimensions were utilized for a first pass to denote “measured/indicated resources” (Word document received from Mr. W. Rosario entitled “Block Model Setup.doc”).

The search strategy used by the practitioner is fine with the exception that the practitioner provided no details on minimums and maximums. Typically, various estimates are calculated using various maximums and the mean kriging variances obtained. Therefore, as the number of maximum samples used in an estimate is increased, the decrease in the mean kriging variance becomes smaller. A point is achieved whereby adding more samples to the estimate has little effect on the overall estimate. This section of the received report was found to be lacking.

#### 19.2.5.2 Resource Modelling

The next step of the investigation was to load the resource model and compare their grade trends to those contained within the original samples.

A plan view of the resource blockmodel was captured, colour-coded by grade and aligned next to grade trends, for both the model and the samples, in order to allow for a better visual comparison. Figure 36 to Figure 38 shows these plots for Ni for the laterite, laterized saprolite and enriched supergene saprolite respectively.

Figure 36: Ni Grade Trends – Laterite. (Note that northings have been reduced in these plots [Figure 36 to Figure 41] by subtracting 1000000).

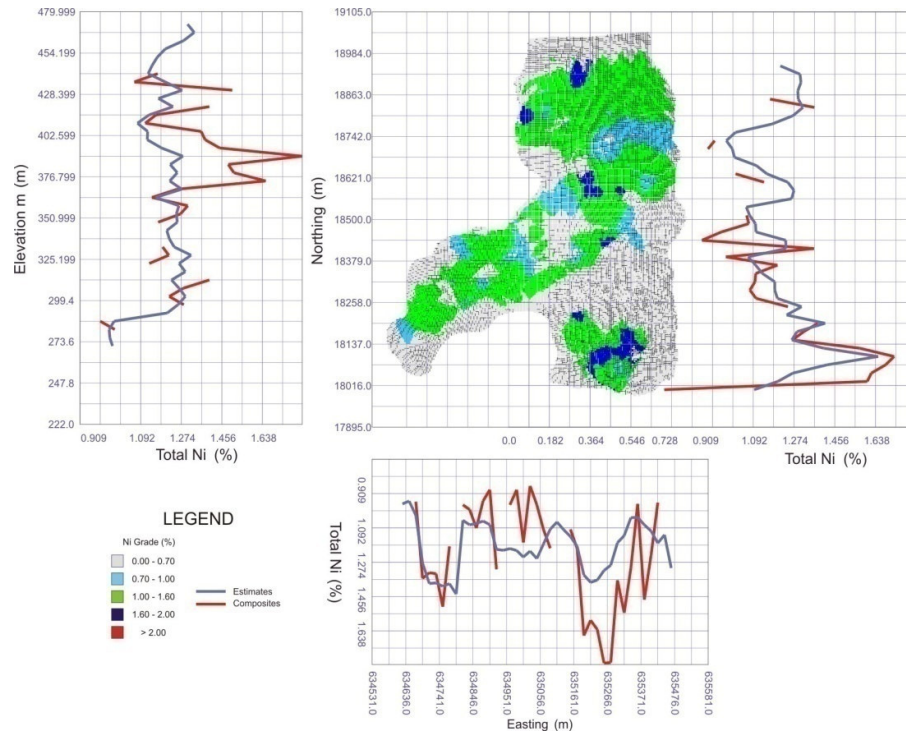


Figure 36 above reveals that the estimated blockmodel mimics the original sample fairly well in all three directions (North, East and Elevation). The eastern part reveals some over-smoothing (red line way above the blue line) whereas the elevation plot reveals considerable over-smoothing (under estimation) around the 385m elevation mark; in the eastern portion of the deposit.

Figure 37: Ni Grade Trends – Laterized Saprolite

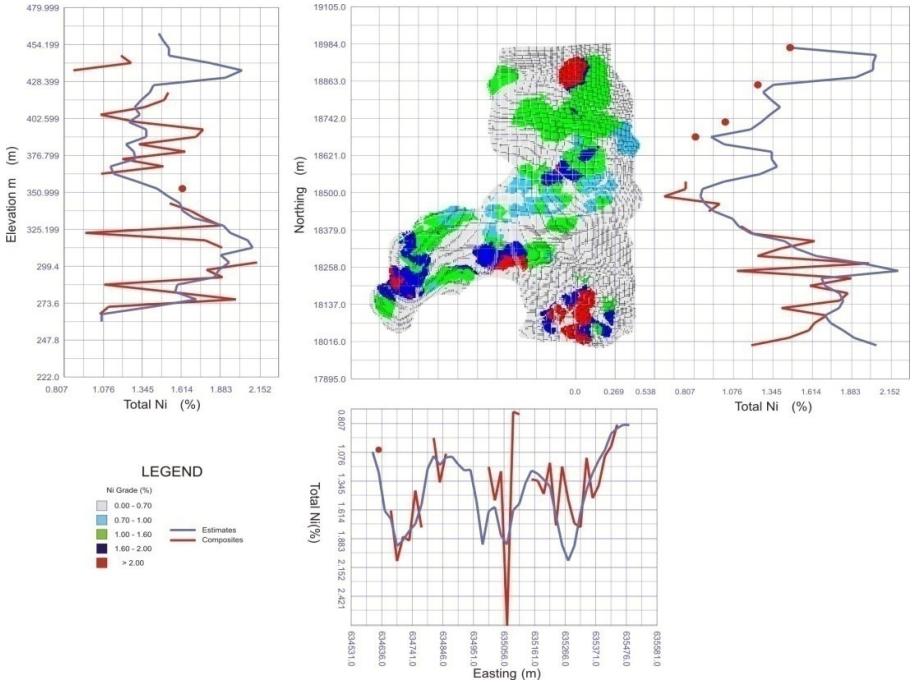


Figure 37 reveals that the blockmodel mimics the samples within the laterized saprolite fairly well although the grade model clearly appears to over-estimate Ni in the northernmost portion of the deposit (at higher elevations).

Figure 38: Ni Grade Trends - Saprolite

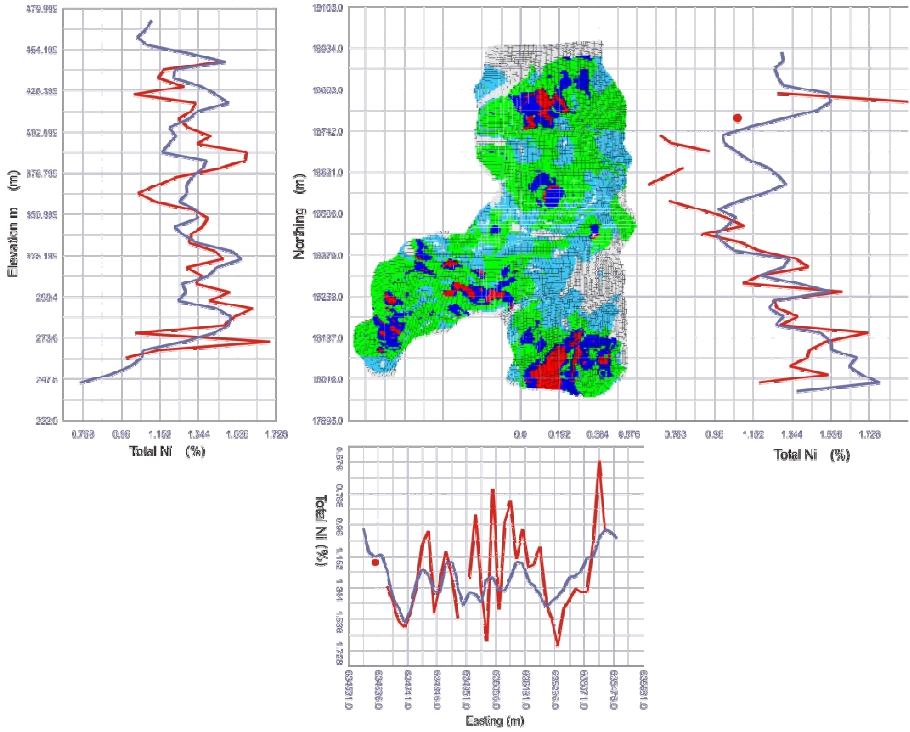


Figure 38 shows that the blockmodel appears to slightly over-estimating the Ni values within the saprolite; this is more evident in the Easting and Northing plots.

Figure 39: Fe Grade Trends - Laterite

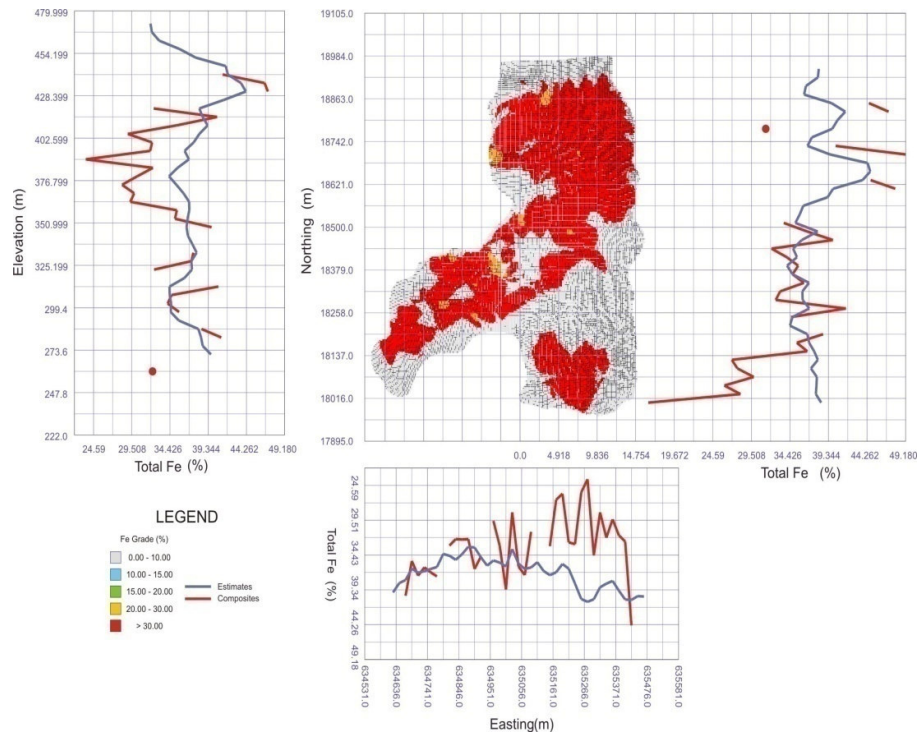
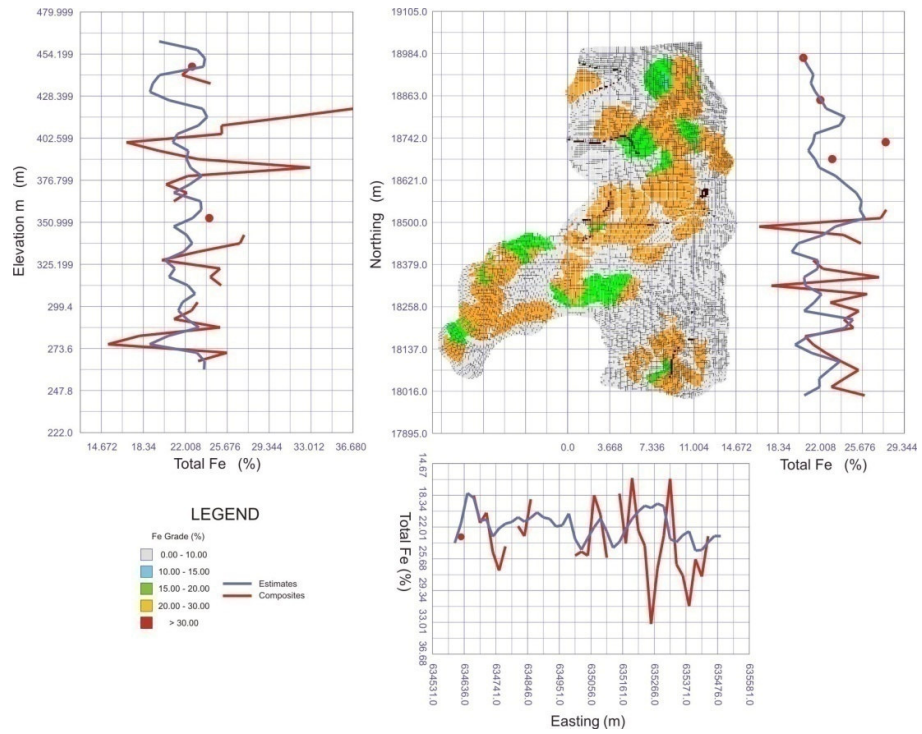


Figure 39 reveals that the model has seriously over-estimated Fe in the southern, most eastern portion of the deposit. The trend plots clearly reveal that Fe is over-estimated by at least 15% within this area.

Figure 40: Fe Grade Trends - Laterite/Saprolite



The trends shown in Figure 40 reveal that the blockmodel mimics the 1m samples within the laterized saprolite fairly well.

Figure 41: Fe Grade Trends - Saprolite

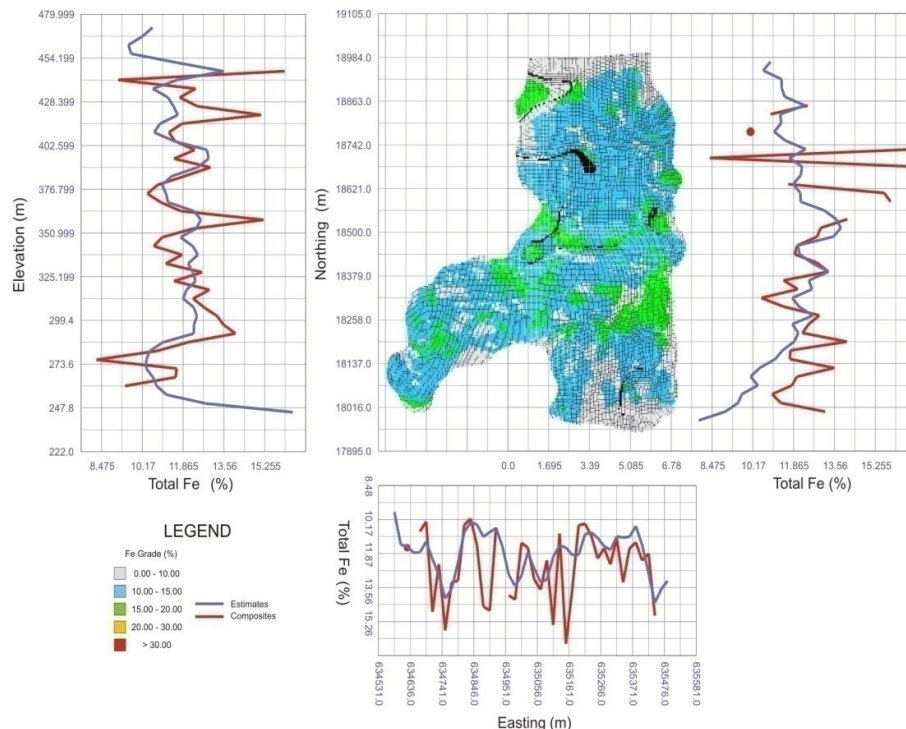


Figure 41 reveals that overall the blockmodel mimics the original sample dataset for the saprolite horizon. The Northing plot reveals over-smoothing in the southern-most portion of the deposit.

In summary, the trend (or swath) plots show that the estimated blockmodel mimics the original uncut samples fairly well although several problem areas have been highlighted and should have been investigated by the practitioner.

#### 19.2.5.2.1 Block Dimensions

The block size chosen by the practitioner was 5 x 5 x 3m (x, y, z), although the reason for this choice was not documented. A Euclidean spacing test was performed to determine the three dimensional spacing between samples. This showed that the block size chosen is appropriate given that the median spacing between samples in three dimensional space is less than 10m.

This author would suggest a narrower block dimension in the Z direction in order to more fully accommodate the narrowness of the defined mineralized horizons.

### **19.2.5.3 Validation**

There is no mention of any cross-validation test performed on the resultant block model in order to assess the robustness of the model. Other than mine reconciliation, cross-validation tests are the only tools a practitioner has to validate his/her model.

One of these tests would be naïve cross-validation. This technique consists of removing one sample and using the estimation parameters to estimate it, and then comparing it to the original sample. This should be done systematically for all samples with a final correlation, comparing estimates to actual values, being reported. This allows for the testing of the parameters utilized in the estimation process. This was not done.

If the above validation had been performed, one could assess the differences between the actual grades and the estimated grades (residuals). When plotted on a simple histogram, the mean of the differences would reveal whether the estimated blocks are biased or not.

Another test would be a simplified approach to the above, called simple cross-validation. In this case, all the samples that actually intersect an estimated block are weighted by length and then compared to the estimated block. This test allows one to assess the amount of variability and/or smoothing of the estimate. Obviously, samples occurring within a certain estimated block should imply a grade very similar to the estimated grade itself. This test was done for this audit, on per metal and rocktype basis, and the results are shown in Figure 42 to Figure 44 below.

Figure 42: Samples versus Block Estimates per Rock Type – Ni (%)

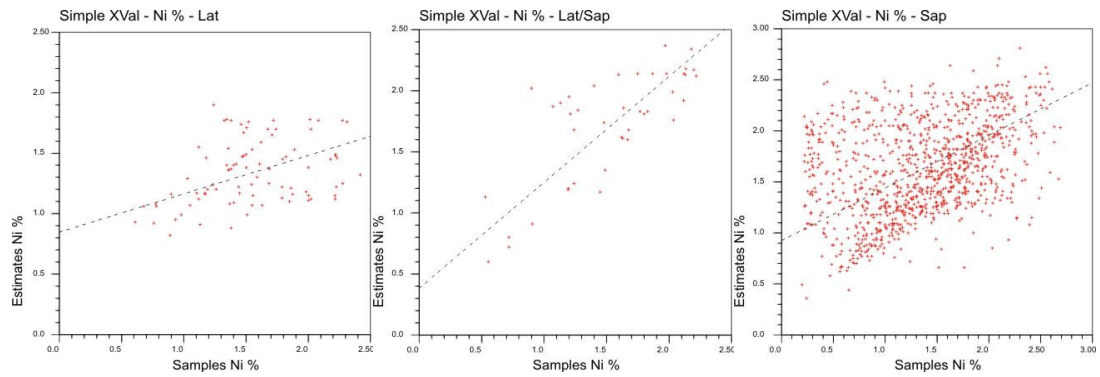


Figure 43: Samples versus Block Estimates per Rock Type – Co (%)

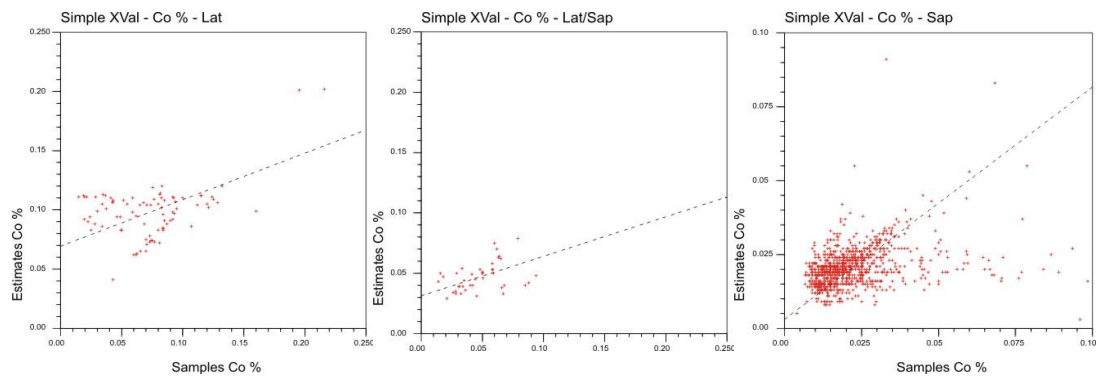
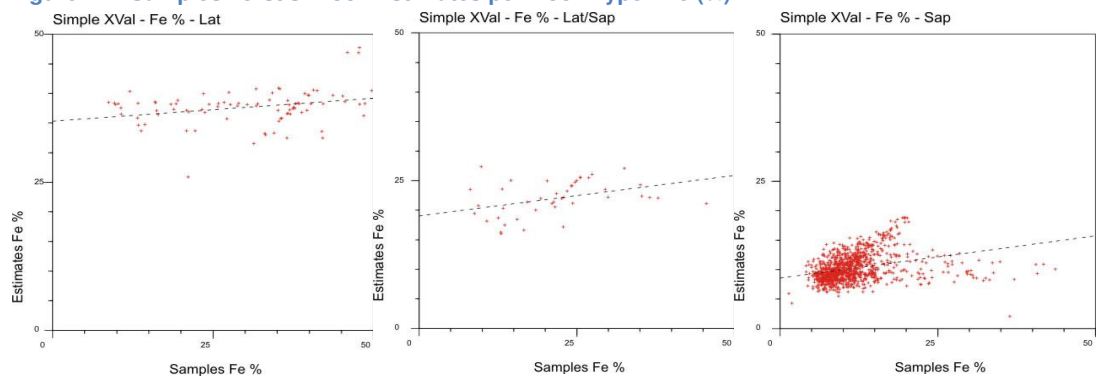


Figure 44: Samples versus Block Estimates per Rock Type - Fe (%)



The plots reveal that, in general, the estimated blocks poorly reflect the grades as intersected by the drillholes. The number of length-weighted drillhole samples, their grade and the block-estimated grades are shown in Table 17 below.

**Table 17. Simple Cross Validation Statistics**

Rocktype	Metal	Number of Data	Mean Sample Grade (%)	Mean Block Grade (%)	Correlation Coefficient
Laterite	Ni	87	1.551	1.338	0.349
Laterite/Saprolite		43	1.587	1.758	0.785
Saprolite		1044	1.357	1.625	0.375
Laterite	Co	87	0.073	0.098	0.459
Laterite/Saprolite		41	0.048	0.047	0.403
Saprolite		927	0.024	0.022	0.801
Laterite	Fe	87	30.331	37.662	0.272
Laterite/Saprolite		43	21.746	22.019	0.361
Saprolite		1044	11.665	10.247	0.276

These coefficients reveal that the blockmodel is insufficiently smoothed; it is too variable. This is suggested by the mean block grades typically being higher than the 1m samples contained within them. The author believes that this is a function of several poorly chosen parameters including the estimation methodology type (should investigate ordinary kriging in lieu of inverse distance squared), minimum and maximum number of samples being too low and lack of trimming of high grade outlier values.

The results indicated that the resource is plausibly over-estimated within specific horizons; most notably Ni within the laterized saprolite and saprolite horizons, and Fe within the laterite and laterized saprolite horizons.

It is possible that the practitioner utilized partial blocks in his determination of the resource. These partial blocks would have been imported into Datamine by the author as whole blocks. This would lead to some confusion over the statistics presented in this section, however, a field denoting these percentages was not contained within the ASCII blockmodel dump received and, given the thickness of the saprolite unit (and the number of data; Table 17), it is unlikely that the 'means' presented in Table 17 are not representative.

#### 19.2.5.4 Classification

The classification scheme adopted by the practitioner is based on search ellipsoid dimensions. Measured resources are based on an ellipsoid dimensioned 35 x 35 x 6m (major, minor and vertical), whereas Indicated resources are based on a 60 x 60 x 10m sized ellipsoid. A 75m x 75m x 16m ellipsoid was used for Inferred (75m x 75m x 16m) resources.

## 20 Other Relevant Data and Information

### 20.1 Direct Shipping Ore

There have been six parcels of NiLT ore sold to five different buyers during 2008. Three parcels of ore were obtained from the Patricia Louise SSMP and the other three were extracted from the Alpha South SSMP. Final figures for the Alpha prospect were not provided at the time of the visit.

Patricia Louise Mining and Development Corporation

SSMP Number 46

Allowed Quantity: 100,000 DMT

Table 18: Details of SSMP parcel Number 46.

Shipment	Provisional (WMT)	Provisional (DMT)	Final (WMT)	Final (DMT)	Ni% (p)	Ni% (f)	Buyer
1	53198.7	34701.5	53206.0	36334.4	1.87	1.90	Chinese buyer
2	49663.0	36750.6	49663.0	36735.6	1.69	1.70	Chinese buyer
3	35000.0	24108.0	35000.0	24108.0	1.87	1.87	Chinese buyer
Total	137861.7	95560.1	137869.0	97178.0			

p = Provisional and f = Final

Palawan Alpha South Resource Development Corporation  
 SSMP Number 45  
 Allowed Quantity: 100,000 DMT

**Table 19: Details of SSMP parcel Number 45.**

Shipment	Provisional (WMT)	Provisional (DMT)	Final (WMT)	Final (DMT)	Ni% (p)	Ni% (f)	Buyer
4	7517.4	4703.6	7517.4	4726.5	2.13	2.10	Japanese buyer
5	27822.6	17570.0	27851.0	18216.9	2.15	2.11	Japanese buyer
6	54914.4	34222.2	54953.9	34230.8	1.80	1.80	Chinese buyer
Total	90254.4	56495.8	90322.3	57174.2			

The final tonnage figures and grade for the Alpha South SSMP will be advantageous for reconciliation purposes. To obtain a better understanding of the Operations ability to schedule ore from the resource model, regular reconciliations should be undertaken between the grade control model and the final delivered (shipment) tonnes and grade.

Positive reconciliation results will be reviewed favourably when converting resource to reserve. The final pit pick-ups had not been completed at the time of the visit; hence a reconciliation of the models versus the final delivered could not be assessed. It was recommended during the visit that the pits be surveyed and the reconciliation be completed, taking into consideration the surface stockpiles at the Stock Yard and the material used for sheeting.

## **20.2 Maxwell Report on Alpha and Bethlehem projects; August 2008**

### **SUMMARY**

Maxwell GeoServices (Maxwell) conducted an updated independent data audit on the MBMI Resources Inc (MBMI) database in August 2008 to include the Bethlehem data.

All issues identified are related to missing or insufficient information (not collected?) for the majority of data for the Alpha and Bethlehem Projects in the Republic of Philippines, from which the MBMI database has been compiled. In the event that any additional information can be sourced it is highly recommended that this be added to the database promptly to fulfill recommendations in accordance with the National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI43-101).

## INTRODUCTION

As part of the Maxwell GeoServices (Maxwell) QAQC procedures, a series of audits covering database structure, database functionality and data content are performed for each client database developed and implemented. This audit constitutes the data content part of that process and needs to be read in conjunction with the spreadsheets 289\_MBMI\_DataAudit2008Aug.xls and 289\_MBMI\_AssayAudit2008Aug.xls.

This audit data auditing only, no data verification was performed.

The data audit covers the process of auditing the data for the requirements for statutory compliance and data integrity.

This data audit also did not cover the following areas:

- Database structure (separate report).
- Database functionality (separate report).Project documentation
- Data verification.

This updated audit was conducted in August 2008.

## CONCLUSION

The MBMI database has been reviewed for the purpose of general integrity and reporting compliancy.

There is no geological information recorded in the MBMI database. This data is crucial if any resource estimates are to be undertaken using the data currently stored.

The vast amount of other missing data identified is likely due to the lack of field procedures in place for the Alpha and Bethlehem projects, and several recommendations have already been made to MBMI by Consulting geologist, Steven Goertz. Maxwell GeoServices fully supports his recommendations and also wishes to highlight that the collection of more rather than less data is always best.

As a consequence any further drilling programs conducted on the Alpha and Bethlehem projects need to ensure that as much of the recommended data is collected as possible and entered into the MBMI database.

Lenore Jepsen

Auditor

August 2008

-End of Maxwell report-

## 20.3 Report by Allan A. Millare

(R.G.E. Department) of Narra Nickel Mining and Development Corporation

### **BRIEF DESCRIPTION OF METHODOLOGY USED FOR ESTABLISHING NNMDC'S MAIN CONTROL SURVEY STATIONS**

The following are a brief summary of the method used for establishing three main survey control stations. It should be understood that it, admittedly, is rather unconventional but under certain circumstances (like time constraints and lack of existing and reliable vertical and horizontal control stations) is very effective and accurate enough for mining purposes.

1. Three inter-visible control stations were identified and established on the ground.
2. GPS readings were taken on two of these stations that forms one side of the triangle.
3. Azimuth between these two stations was computed from the Easting and northings given by the GPS. This then is the geographic azimuth of the side of the triangle.
4. Azimuth for the rest of the sides of the triangle formed by these three stations were determined.
5. The triangle was closed and the angles and distances between these three stations corrected.
6. For verification, a cursory solar observation was performed on one of the stations where the initial azimuth was derived.
7. A control station was identified as a primary vertical control station. Its elevation from mean sea level was taken from the Digital Elevation Model (D.E.M) for this particular point.
8. Verification was performed by "carrying" (traversing) the elevation of this particular point to the coast where tidal observation was made.
9. Necessary adjustments were taken to correct the discrepancies in elevation.

These then comprises the steps taken to establish the three main control stations. The subsequent sub-stations were all derived from these three stations. It should be noted that in the establishment of subsequent stations, care was taken to always close the traverse so as to minimize errors.

The following are other relevant information used and are still being used for all surveys and mapping activities:

- *Projection:* Transverse Mercator
- *Datum:* Luzon
- *Spheroid:* Clarke 1866
- *Semi major axis:* 6378206.40
- *Semi minor axis:* 6356583.7999989809
- *Inverse flattening:* 294.97869820
- *False easting:* 500000
- *False Northing:* 0
- *Scale factor:* 0.9996
- *Central Meridian:* 117°

Geographic Information System (GIS) are being used extensively in all these activities. Indeed, most of what we have accomplished would not have been possible if we have done otherwise.

**ALLAN A. MILLARE** (*R. G. E. Department*)

-End of A. Millare report-

## 21 Interpretation and Conclusions

The QA/QC data that has been undertaken at the Alpha Project is limited to the 533 samples completed in May, 2007. The results for this campaign programme were very favourable, however, a formal QA/QC processes should be employed by the Narra Nickel Geology Department.

The geology is well understood at the operation and diligent effort has been made to map and sample the pit during the mining operation.

It is concluded from the audit of the Mineral Resource Estimate that the Ni and Fe grades are (locally) over-estimated within some mineralized horizons of the Alpha deposit. This audit has shown that drillholes intersecting estimated blocks within mineralized horizons have values that are dissimilar to one another. Although globally this is not visible in the resultant means (given that intersected blocks are merely a subset of the entire estimated population), it is an indication that either the blocks and/or drillholes are not in the correct location, or that locally, the estimate is non-representative.

The poor validation statistics suggest poor local estimates, however globally the resource model appears to be suitable for resource reporting, but not for mine planning.

Therefore, the author concludes that:

- LQS considers the received blockmodels as globally indicative of the insitu resources for the Alpha deposit,
- Although it appears as if no compositing took place, the data is adequately regularized correctly at 1m intervals (via sampling),
- Indicated mineral resources were not tabulated in the first report received. The subsequent application of relevant search ellipsoids (agreeable to LQS) better categorised the resources into Measured, Indicated and Inferred.
- LQS believes that the mineral resources are NI43-101 compliant but that improvements are achievable.

## 22 Recommendations and Further Work

The following QA/QC programme should be implemented to ensure the veracity of the Narra Nickel data:

1 standard in every 25 samples; 3 different standards should be used with grade ranges as follows:

0.5 to 1.0% Ni  
 1.25 to 1.75% Ni  
 >2.0% Ni

It is advisable the standards be customised and a matrix matched reference material from the Alpha Project be used. However, there are adequate quality NiLT standards available commercially from numerous suppliers.

One blank in every 25 samples; blanks should be a silica or feldspar material which is devoid of nickel.

Every 20th hole should be twinned to demonstrate the repeatability of the drilling.

This repeat hole should analyse an A and B sample, leaving no sample material at all.

The pulp of the A sample from the twinned hole should be sent to an alternate laboratory to be analysed for Ni and Co; and have the fraction size analysed to ascertain if a grind of 90% passing -75µm is being achieved.

Density measurements should be made on core where possible. Additional density measurements should be made in the pit during mining. Making comparisons between historical data, in pit measurements and core will increase the confidence level of the

data used to build the resource model. These values can then be estimated into the blockmodel.

Some suggested improvements to the laboratory:

- Upgrade laboratory equipment in line with the recommendations of Goertz, 2007.
- Use multiple Ni, Co and Fe standards instead of the single standard currently being used. Commercially available standards should be sourced.

Geological mapping and resource estimation suggestions:

- The geological mapping from the mining operation needs to be incorporated into the model.
- All drilling data should be used to build a single model. It is not necessary to have an Exploration model and a separate Grade Control model for reporting purposes. All available geological information should be included in every resource model. It is recommended that an Annual Resource model be built for reporting purposes, and a Grade Control model be built as additional information comes to hand. Eg: June 2009 Resource model is used for reporting. This will consist of all Alpha South geological information including updated geological wireframes based on pit mapping, grade control and exploration drill data. If a grade control drilling programme was completed in September 2009, this would be used to build the September 2009 Resource model, using all the historic information plus the new GC drill data. When it came to reporting in 2010, the June 2010 model would incorporate all information as of that cut off date.
- Routine survey pick-ups should be completed and this should be used to reconcile the performance of the most up to date resource model against production. This will allow all mine personnel to gain a better handle on the future mine planning and scheduling. It has been requested by the author to review a reconciliation between the Grade Control Model versus the Exploration Model and Production. The Production figures should include the final DSO numbers plus the stockyard stockpiles plus the material used for sheeting.

Recommendations for any further work on the Mineral Resource include:

- Ni, Co and Fe grade outliers must be investigated and dealt with accordingly. The dataset must be cut (trimmed) at the appropriate thresholds and substantiated by the practitioner. Outliers with grades greater than 2.5% Ni cannot reasonably be accommodated within the estimate especially given that

inverse distance squared was the estimation methodology chosen. LQS considers this bad practice but not a fatal flaw,

- Provide statistical analyses of the drillhole data (univariate and bivariate statistics),
- LQS believes that the methodology of inverse distance squared results in an overly variable estimate and suggests a parallel estimate utilizing ordinary kriging be done. The two models should then be compared on a block-by-block basis in addition to swath analyses to determine which methodology is better suited to the deposit. LQS believes that the current model is insufficiently smoothed,
- LQS believes that the deposit would be better estimated if narrower blocks were utilized in order to better discretise the thin mineralized horizon wireframes. The search ellipsoid's Z dimension should also be narrower which would allow less smearing of grade vertically through the deposit and allow for better definition of the inter-fingering supergene saprolite with the laterized saprolite units,
- Provide statistical substantiation with regards to parameters chosen such as nugget contributions, semi-variographic work (down-hole, directional and omni directional; include plots) and minimum and maximum samples required to generate an estimate. Naïve and bivariate statistics should also be produced,
- Provide cross validation statistics in order to demonstrate the robustness of the parameters chosen. The tests should include naïve cross-validation, simple cross validation and jack-knifing. It is common practice to run through these tests and state their results regardless of the practitioner's opinion on the matter. LQS considers this bad practice but does not see this as a fatal flaw,
- Substantiate specific gravity figures,
- Tabulate Measured and Indicated Mineral Resources separately,
- Tabulate Inferred Mineral Resources separately.

## 23 References

**Del Rosario, W. (2007).** *Resource Estimate for the three Small Scale Mining Areas.* Narra Nickel Mining and Development Corporation internal report dated 17 Nov. 2007.

**Del Rosario, W. (2008).** *Determination of Density.* Narra Nickel Mining and Development Corporation internal report dated 17 Apr. 2008. Ref. No. : MP – GC 2008-003.

**Goertz, S. (2007).** *Report on Field Investigation – Alpha Project, Palawan Province – Republic of the Philippines – September 2007: Geological Assessment & Technical Evaluation on behalf of MBMI Resources Inc. for the Period 27<sup>th</sup> to 29<sup>th</sup> September 2007.* NI43-101 Compliant Disclosure Report.

**Maxwell Geoservices, (2008),** *MBMI Resources Inc. Alpha and Bethlehem Projects, Republic of Philippines – Data Audit MBMI SQL Database, Rev. No. 1, L. Jepson, Aug. 2008.*

**Narra Nickel Mining and Development Corporation,** *BRIEF DESCRIPTION OF METHODOLOGY USED FOR ESTABLISHING NNMDC'S MAIN CONTROL SURVEY STATIONS,* Report by A. Millare.

**National Instrument 43-101, Standards of Disclosure for Mineral Resources,** *Item 19(c).* ([http://www.osc.gov.on.ca/Regulation/Rulemaking/Current/Part4/rule\\_20010112\\_43-101\\_notice.pdf](http://www.osc.gov.on.ca/Regulation/Rulemaking/Current/Part4/rule_20010112_43-101_notice.pdf))

**Websites used:**

<http://www.mkeever.com/philippines.html>

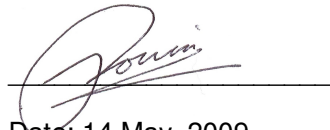
[http://www.businessmonitor.com/philippines\\_bfr.html](http://www.businessmonitor.com/philippines_bfr.html)

<http://www.marketresearch.com/map/prod/2065407.html>

<http://www.marketresearch.com/product/display.asp?productid=959597&SID=99210569-439031528-532857761>

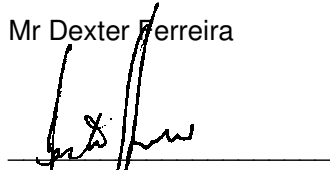
## 24 Date and Signature Page

Mr Pierre Fourie

A handwritten signature in black ink, appearing to read 'Fourie', written over a horizontal line.

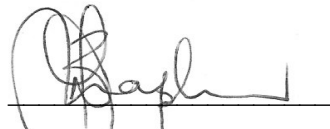
Date: 14 May, 2009

Mr Dexter Ferreira

A handwritten signature in black ink, appearing to read 'Dexter Ferreira', written over a horizontal line.

Date: 14 May, 2009

Mr Darryl Mapleson

A handwritten signature in black ink, appearing to read 'Mapleson', written over a horizontal line.

Date: 14 May, 2009

## 25 Additional Requirements for Technical Reports on Development Properties and Production Properties

Not applicable.

## 26 Illustrations

The following figures show aspects of the Ostrea laboratory and ore handling.



Figure 45: Digestion & West Chemical Area of Ostrea Site Laboratory in NNMDC Compound



Figure 46: 'Bico' Final-Stage Pulveriser Unit in Operation – Ostrea laboratory – NNMDC Compound.



Figure 47: Hitachi AAS Unit in Ostrea Laboratory – NNMDC Compound.



Figure 48: Grizzly in Operation at NNMDC Stockyard.



Figure 49: View of NNMDC Stockyard Looking South – Tarps Covering Material Ready for Shipment.

Location : Alpha South		Lat. 634732		ELEV 299.47		Long. 1018141		% Recovery: 100.00%				
DRILL HOLE # 3RDE54.5			DEPTH OF HOLE 24.05m			Geologist:						
D	Sample #	Graphic	Narra Code	Lithozone	Color	Fabric	Gr.-size	Alter	Wea	Lithocode Sequence	Events	Note
1	28		LS	FZ	Ye-Or	fine-cl	f	Lfc	M	Li / Ls /		
2	29		LS	FZ	Ye-Or	fine-cl	f	Lfc	M	Upd / mec /		
3	30		LS	FZ	Ye-Or	fine-cl	f	Lfc	M	go / sr		
4	31		SS	SP	Gy-Br	mec	m	Ls-Sr	W			
5	32		SS	SP	Gy-Br	mec	m	Ls-Sr	W			
6	33		LS	FZ	Ye-Or	fine-cl	f	Lfc	M			
7	34		LS	FZ	Ye-Or	fine-cl	f	Lfc	M			
8	35		LS	FZ	Ye-Or	fine-cl	f	Lfc	M			
9	36		LS	FZ	Ye-Or	fine-cl	f	Lfc	M			
10	37		LS	FZ	Ye-Or	fine-cl	f	Lfc	M		Oxidized	
11	38		SS	SP	Gy-Br	mec	m	Ls-Sr	W		Zone	
12	39		SS	SP	Gy-Br	mec	m	Ls-Sr	W			
13	40		SS	SP	Gy-Br	mec	m	Ls-Sr	W			
14	41		SS	SP	Gy-Br	mec	m	Ls-Sr	W			
15	42		SS	SP	Gy-Br	mec	m	Ls-Sr	W			
16	43		SS	SP	Gy-Br	mec	m	Ls-Sr	W			
17	44		SS	SP	Gy-Br	mec	m	Ls-Sr	W			
18	45		SS	SP	Gy-Br	mec	m	Ls-Sr	W			
19	46		SS	SP	Gy-Br	mec	m	Ls-Sr	W			
20	47		SS	SP	Gy-Br	mec	m	Ls-Sr	W			

Graphic Legend	Narra Code	Graphic Legend	Narra Code
	RD		LS
	SS		Upd etc.

NOTE: Most often Supergene Saprolite is interfingered w/ Lat Sap

43-101 Legend

Water	Weathering	Grain Size	Fabric			
D = dry M = moist W = wet S = saturated	S = strong M = moderate W = weak F = fresh	c = coarse m = medium f = fine	brx = brecciaed mas = massive fow = weakly foliated fom = moderately foliated	fos = strongly foliated sch = schistose myl = mylonitic shd = sheared	frx = fractured poy = porphyritic orc = orthocumulate mec = mesocumulate	adc = accumulate met = metasomatic oph = ophiitic

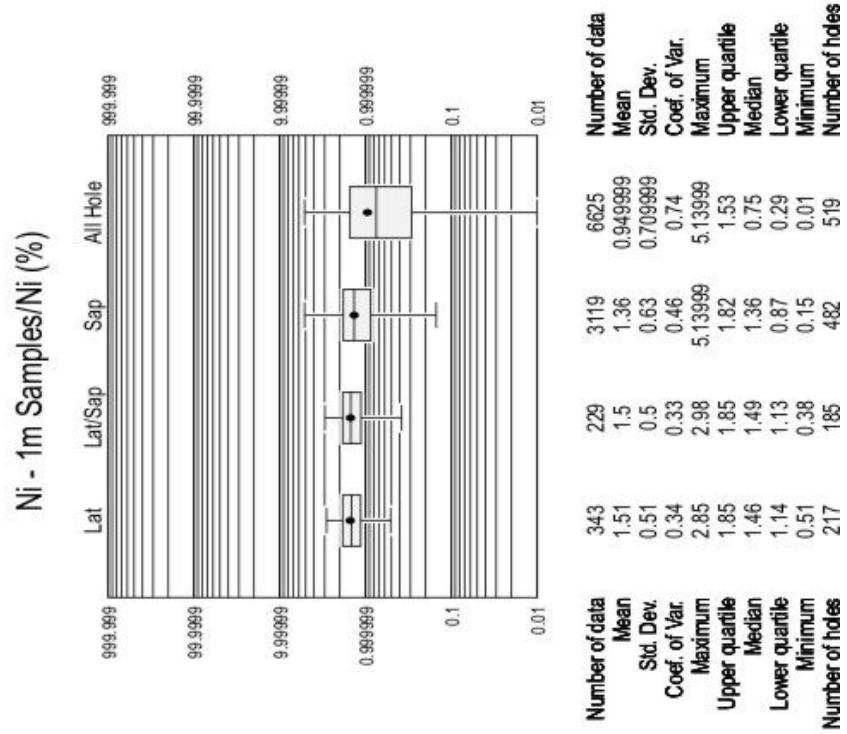
Events	Lithozone	Lithology
BOA = base of alluvium BOCO = base of complete oxidation WT = water table CL = lower contact CU = upper contact FZ = fault zone	OB = overburden CR = carapace (He) LT clay MZ = mottled zone FZ = ferralite (goethite) zone SP = saprolite SR = saprock	(Ultramafic) Uab = amphibolite Upx = pyroxenite Ulz = lherzolite (peri+clono+ortho) Uwh = wehrite (dillage = clinopyroxene) Uhz = harzburgite/saxonite (orthopyroxene)

Figure 50: Example of a drillhole log.

# Appendix 1: Boxplots



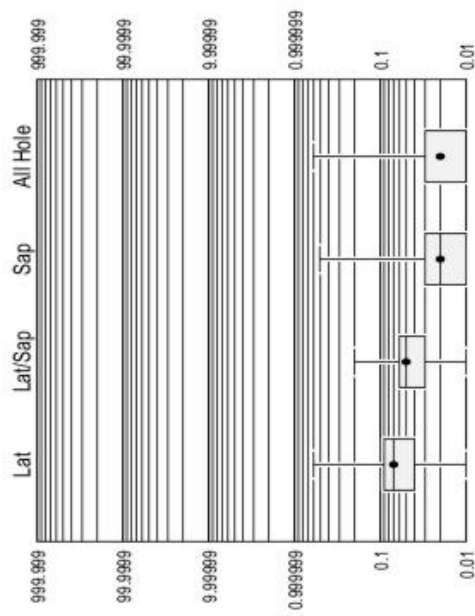
## Lower Quartile Solutions - Geostatistics





Lower Quartile Solutions - Geostatistics

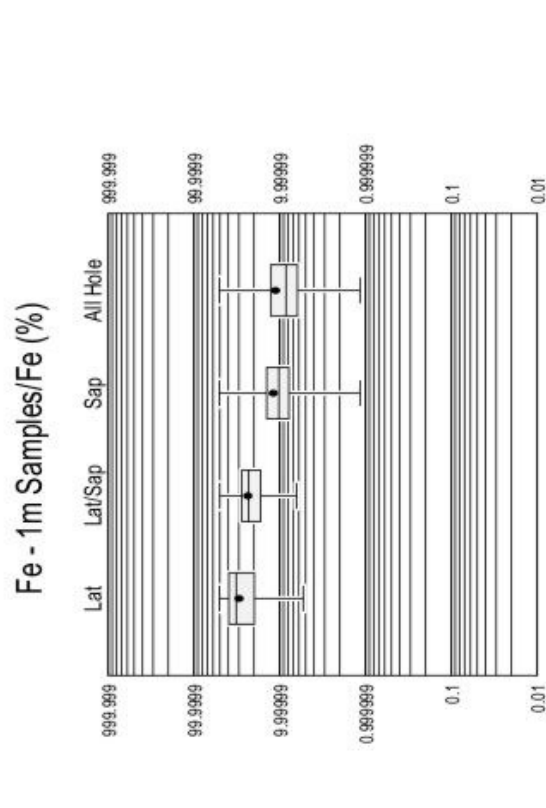
Co - 1m Samples/Co (%)



	Lat	Lat/Sap	Sap	All Hole	
Number of data	333	209	2776	5983	Number of data
Mean	0.07	0.05	0.02	0.02	Mean
Std. Dev.	0.05	0.02	0.03	0.03	Std. Dev.
Coef. of Var.	0.67	0.5	1.15	1.25	Coef. of Var.
Maximum	0.6	0.2	0.51	0.6	Maximum
Upper quartile	0.09	0.06	0.03	0.03	Upper quartile
Median	0.07	0.05	0.02	0.01	Median
Lower quartile	0.04	0.03	0.01	0.01	Lower quartile
Minimum	0.01	0.01	0.0	0.0	Minimum
Number of holes	207	165	419	456	Number of holes



Lower Quartile Solutions - Geostatistics

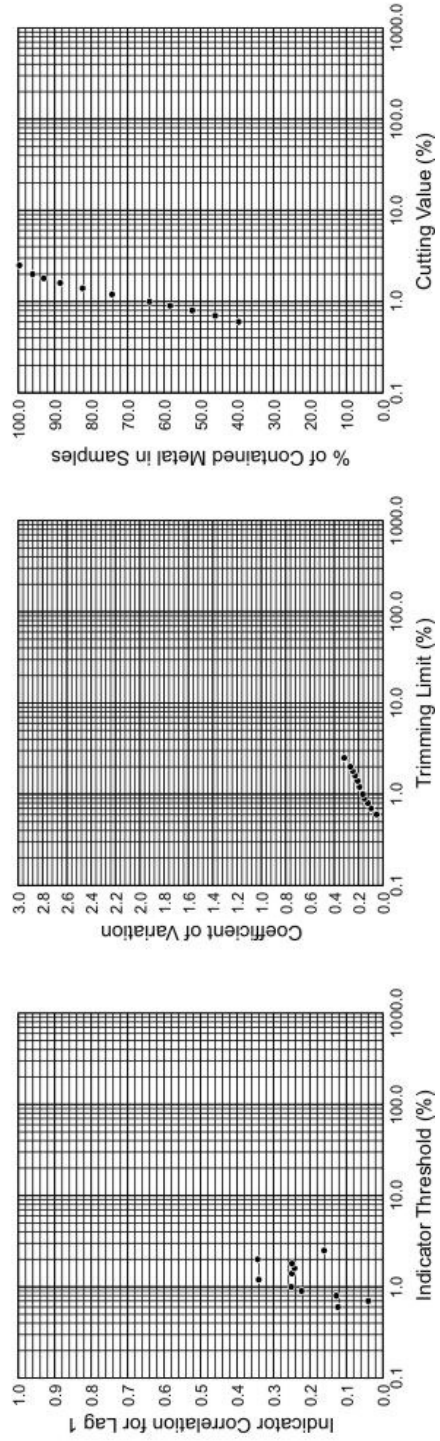


## Appendix 2: Grade Cutting Determination Plots

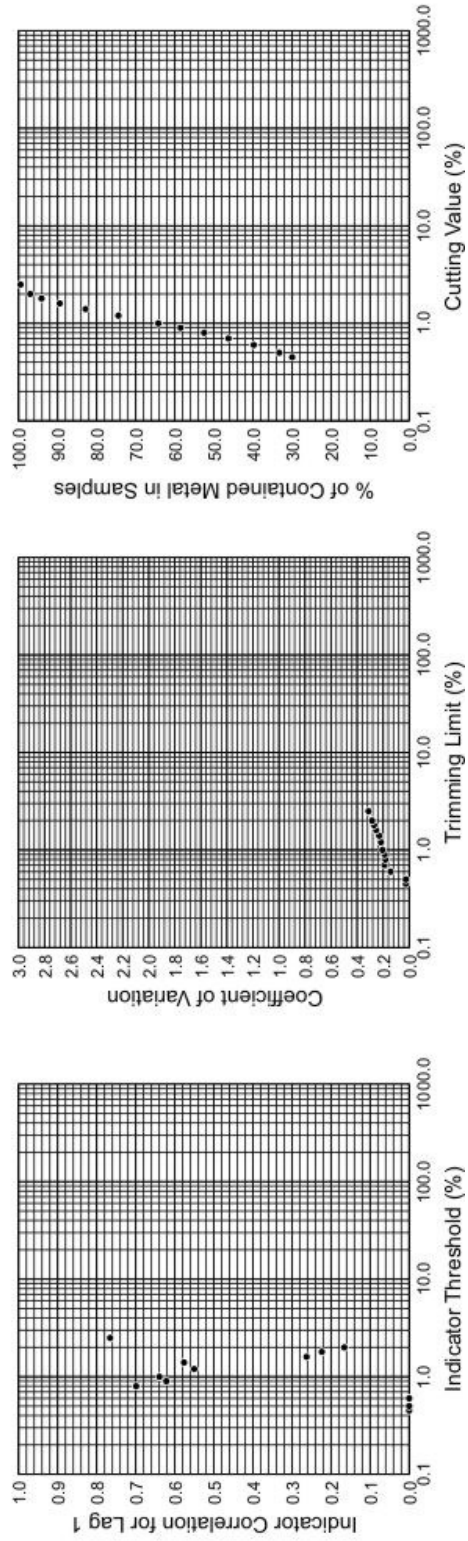


Lower Quartile Solutions - Geostatistics

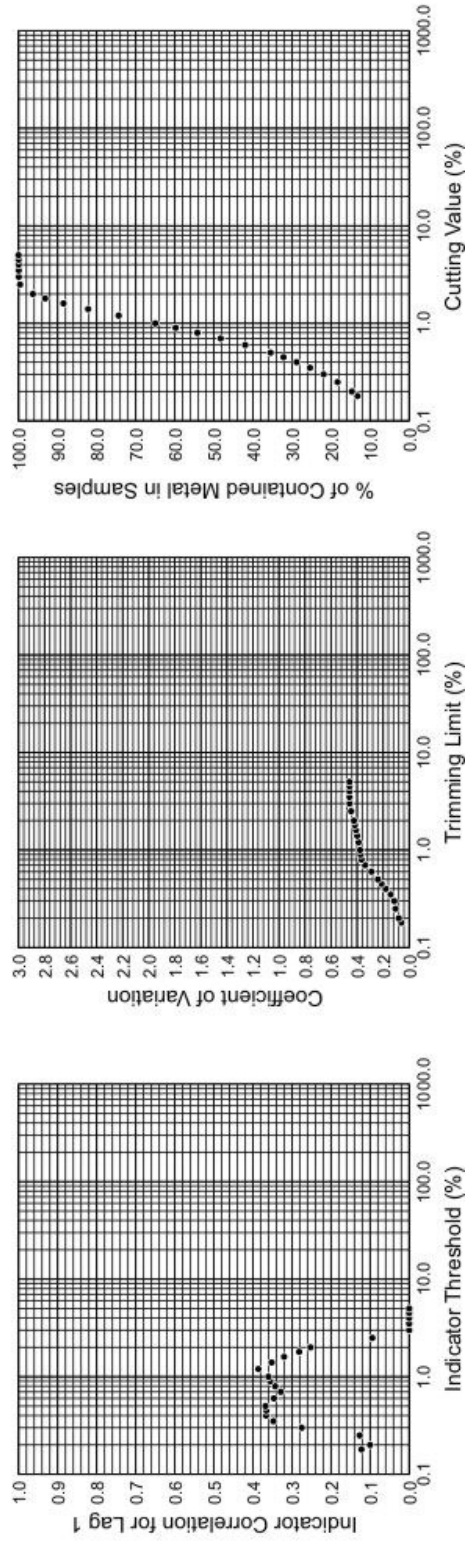
### Cutting Statistics MBMI - Ni (%) - Lat



### Cutting Statistics MBMI-Ni(%)-Lat/Sap

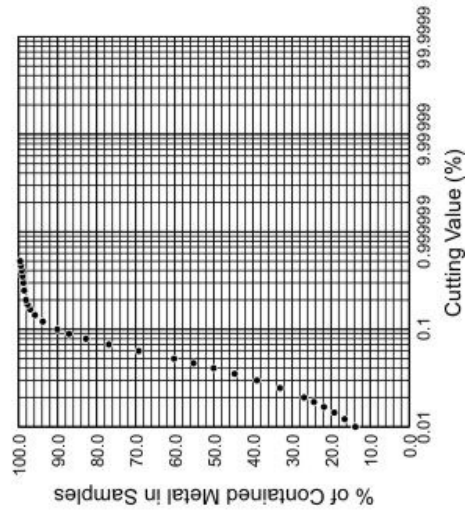
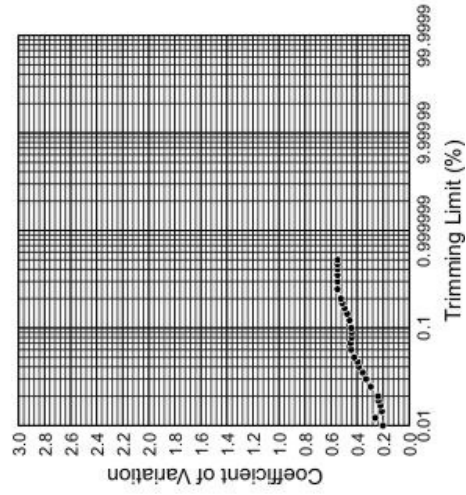
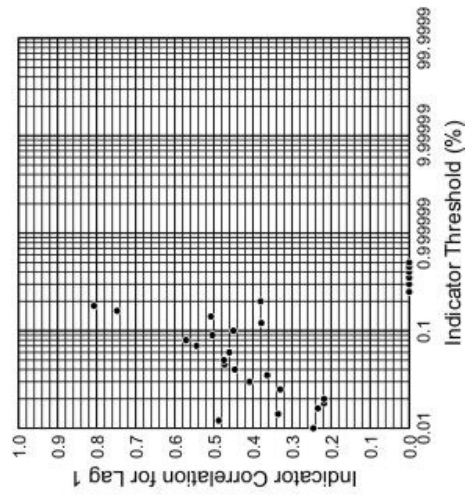


### Cutting Statistics MBMI-Ni(%) - Sap



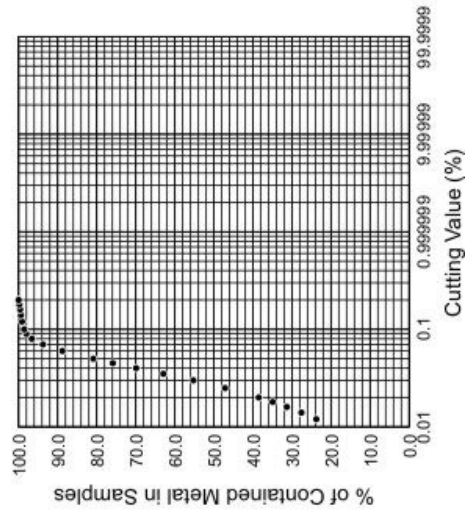
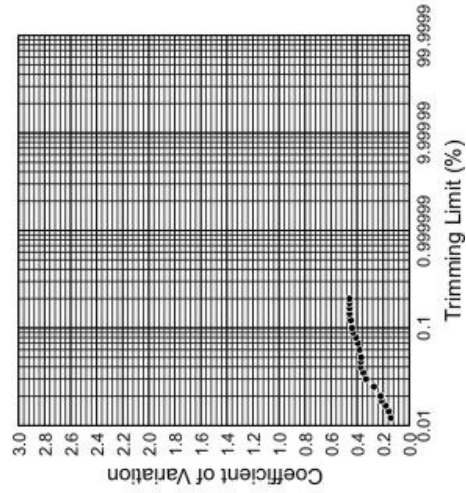
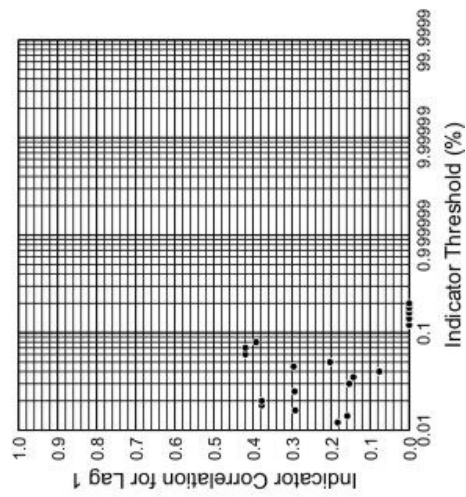


### Cutting Statistics MBMI-Co(%)-Lat



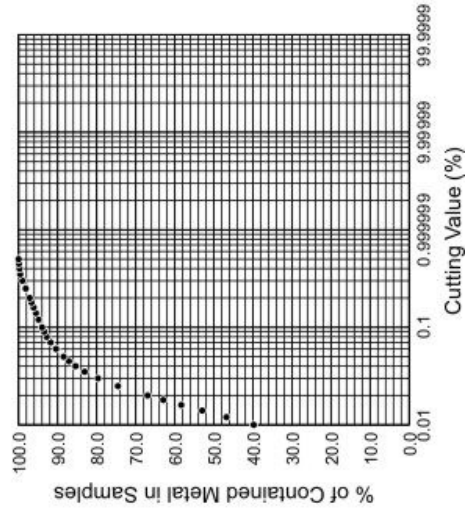
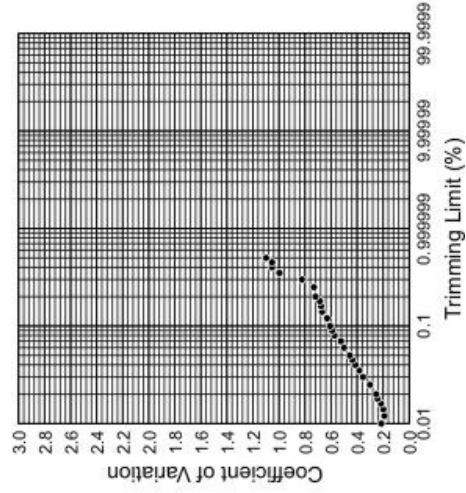
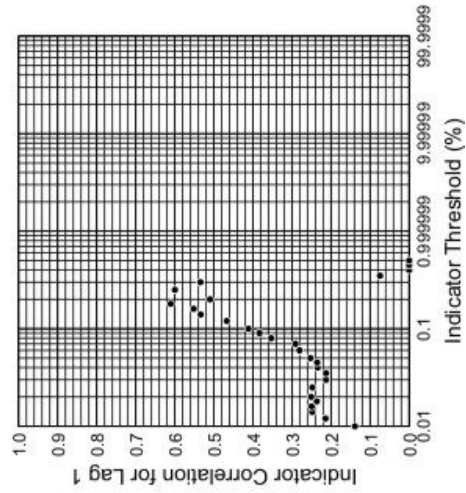


### Cutting Statistics MBMI-Co(%)-Lat/Sap



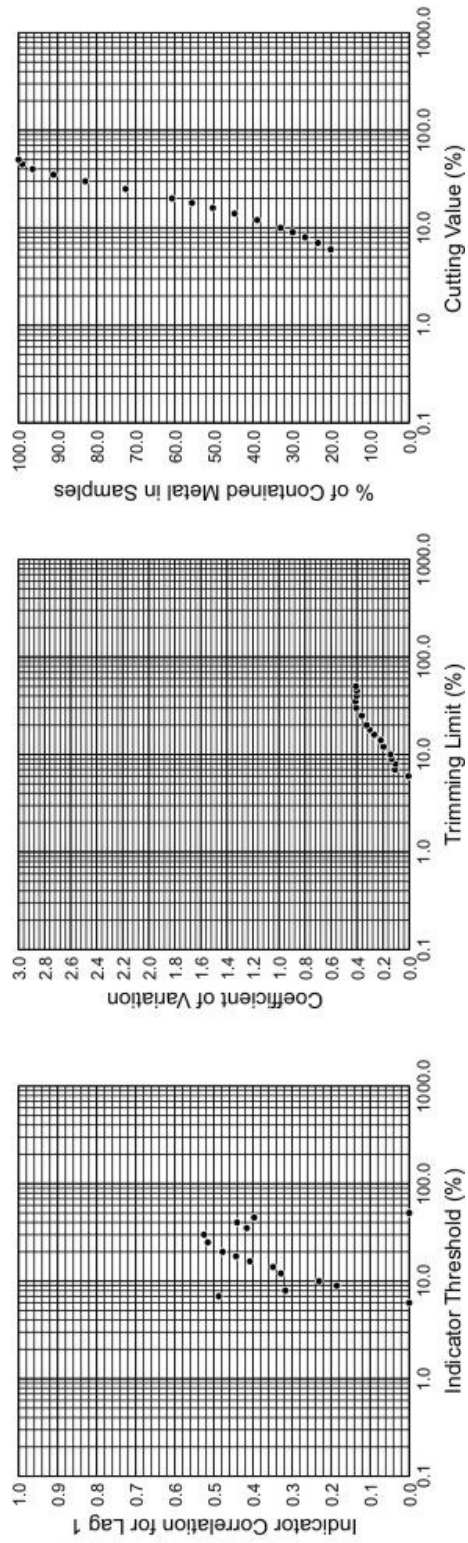


### Cutting Statistics MBMI-Co(%)-Sap

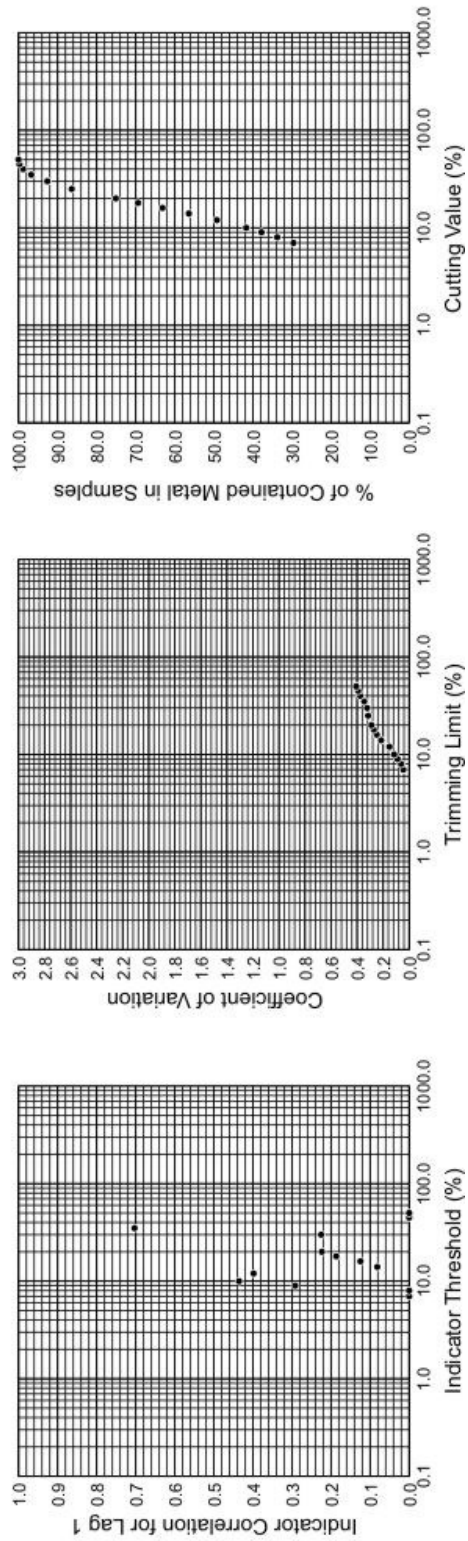




### Cutting Statistics MBMI-Fe(%)-Lat

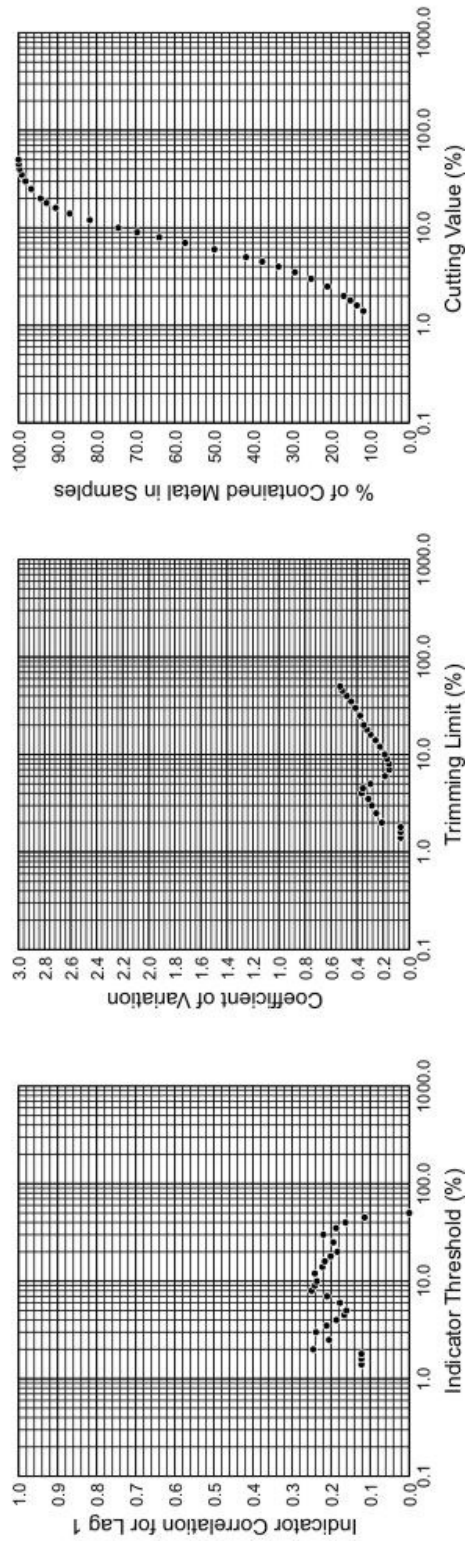


### Cutting Statistics MBMI-Fe(%)-Lat/Sap





### Cutting Statistics MBMI-Fe(%)-Sap



### Appendix 3: List of Check Assays collected at site on 27 September 2007 by Cedarwood Investments PL

<b>ASSAYING INSTRUCTIONS FOR CHECK SAMPLES AS AT 070927</b>				
<b>SAMPLE ID INFORMATION</b>				
HOLE-ID	GRID LINE	SAMPLE NO	MATERIAL SIZE	INSTRUCTIONS
AS0007	3RD-54.5		20M/864µ	1. Dry & Grind whole sample to -75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si
AS0008	3RD-55		20M/864µ	1. Dry & Grind whole sample to -75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si
AS0056	5RH-51.5		20M/864µ	1. Dry & Grind whole sample to -75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si
AS0063	5RH-54.5		20M/864µ	1. Dry & Grind whole sample to -75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si
AS0064	5RH-55		20M/864µ	1. Dry & Grind whole sample to -75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si
PL0010	2RBC48.5	1538	200M/75µ	1. Grind check & report % passing 75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si
PL0011	2RBC49	1903	200M/75µ	1. Grind check & report % passing 75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si
PL0101	6RJK51	719	200M/75µ	1. Grind check & report % passing 75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si
PL0105	7RK48.25	73	200M/75µ	1. Grind check & report % passing 75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si
NN0003	7RKL48	914	200M/75µ	1. Grind check & report % passing 75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si
GN-0039		7549	200M/75µ	1. Grind check & report % passing 75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si
GN-0039		7549	1/4"	1. Grind whole sample to -75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si
GN0042		6438	200M/75µ	1. Grind check & report % passing 75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si
GN0042		6438	1/4"	1. Grind whole sample to -75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si
GN-0045		8427	200M/75µ	1. Grind check & report % passing 75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si
GN-0045		8427	1/4"	1. Grind whole sample to -75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si
GN0077		6995	200M/75µ	1. Grind check & report % passing 75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si
GN0077		6995	1/4"	1. Grind whole sample to -75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si
GN0081		6411	200M/75µ	1. Grind check & report % passing 75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si
GN0081		6411	1/4"	1. Grind whole sample to -75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si
GN0109		7619	200M/75µ	1. Grind check & report % passing 75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si
GN0109		7619	1/4"	1. Grind whole sample to -75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si
GN-0114		8942	200M/75µ	1. Grind check & report % passing 75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si
GN-0114		8942	1/4"	1. Grind whole sample to -75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si
GN0115		6484	200M/75µ	1. Grind check & report % passing 75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si
GN0115		6484	1/4"	1. Grind whole sample to -75µ; 2. MAD & ICP-OES for: Ni/Co/Cu/Cr/Al/Mg/Mn/Ca/Fe/Zn/As/Si

REC ID	HOLE ID	AREA	YEAR DRILLED	SAMPLE NO	MATERIAL	MOISTURE	NI	%Ni UTL	ppm Co	ppm Co UTL	ppm Cu UTL	% Al UTL	% Mn UTL	ppm Ca UTL	ppm Zn UTL	ppm As UTL	FE	% Fe UTL	MG	% Mg UTL	CR	% Cr UTL	AL	% Al UTL	MN	% Mn UTL	SI02	% Si UTL
1	AS0007	AS	2005		MBMI Residue	NR	2.11		0.035								17.37		2.70		0.27		0.58		0.29		45.40	
2	AS0008	AS	2005		MBMI Residue	NR	2.49		0.022								5.75		14.02		0.50		0.60		0.16		35.16	
3	AS0056	AS	2005		MBMI Residue	NR	2.29		0.032								15.02		5.68		0.34		0.34		0.23		42.80	
4	AS0063	AS	2005		MBMI Residue	NR	1.75		0.040								18.03		14.59		0.49		0.66		0.32		31.44	
5	AS0064	AS	2005		MBMI Residue	NR	1.63		0.017								10.27		14.55		0.33		0.25		0.11		39.32	
6	PL0010	PL	2006	1538	Site Lab Pulp	NR	2.16		0.038								16.00											
7	PL0011	PL	2006	1903	Site Lab Pulp	NR	2.42		0.018								9.60											
8	PL0101	PL	2006	719	Site Lab Pulp	21.87	1.78		0.030								17.29		8.23		0.14							
9	PL0105	PL	2006	73	Site Lab Pulp	29.63	1.62		0.026								12.15		8.74		0.30							
10	NN0003	PL	2006	914	Site Lab Pulp	16.41	1.72		0.018								11.66		0.00		0.00							
11	GN-0039	PL	2007	7549	Site Lab Pulp	21.41	2.42		0.036								15.86											
12	GN-0039	PL	2007	7549	Site Lab Residue	NR																						
13	GN0042	PL	2007	6438	Site Lab Pulp	25.26	2.64		0.019								10.16											
14	GN0042	PL	2007	6438	Site Lab Residue	NR																						
15	GN-0045	PL	2007	8427	Site Lab Pulp	26.39	2.14		0.032								15.18											
16	GN-0045	PL	2007	8427	Site Lab Residue	NR																						
17	GN0077	PL	2007	6995	Site Lab Pulp	13.52	2.23		0.011								7.40											
18	GN0077	PL	2007	6995	Site Lab Residue	NR																						
19	GN0081	PL	2007	6411	Site Lab Pulp	10.11	2.30		0.011								6.96											
20	GN0081	PL	2007	6411	Site Lab Residue	NR																						
21	GN0109	PL	2007	7619	Site Lab Pulp	26.46	2.12		0.019								11.40											
22	GN0109	PL	2007	7619	Site Lab Residue	NR																						
23	GN-0114	PL	2007	8942	Site Lab Pulp	20.89	1.92		0.000								7.12											
24	GN-0114	PL	2007	8942	Site Lab Residue	NR																						
25	GN0115	PL	2007	6484	Site Lab Pulp	17.44	2.56		0.011								7.11											
26	GN0115	PL	2007	6484	Site Lab Residue	NR																						